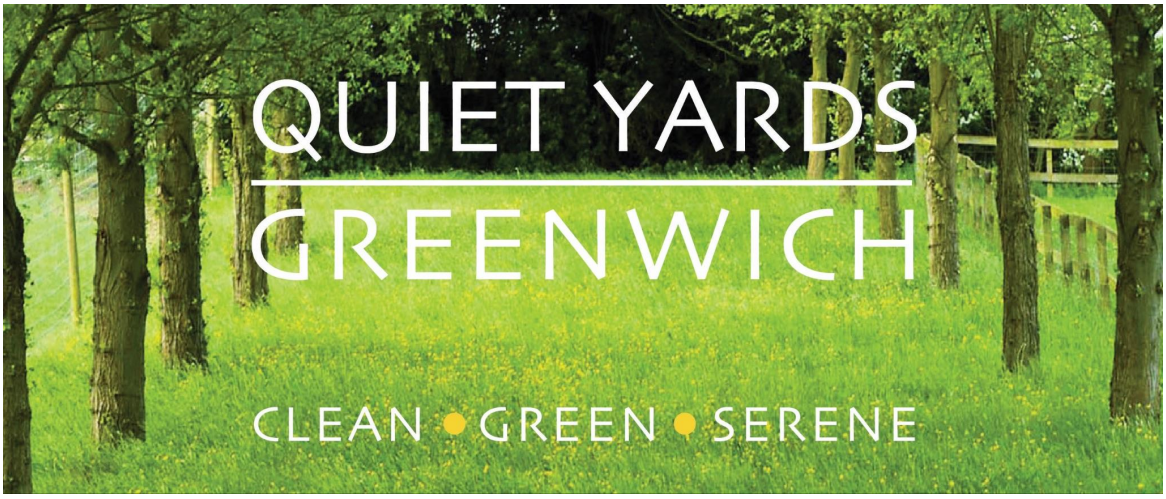

Addressing the Health, Environmental, and Quality of Life Impacts of Gas Leaf Blowers in Greenwich

Submitted by:

Quiet Yards Greenwich, March 2022

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Executive Summary

The use of gas-powered leaf blowers has grown rapidly in recent decades and the season for commercial leaf blowing has extended from the autumn leaf clean up to nearly year round. The negative impact of gas leaf blower use on residents, the environment, and the landscapers who use them daily cannot be ignored. The onset of Covid-19 necessitated many residents work from home and children attend school from home, reviving a thirty year struggle by Greenwich residents to seek relief from the deafening noise and other harmful impacts of gas-powered leaf blowers.

Quiet Yards Greenwich (QYG) formed in late 2021 in response to these concerns. It is a non-partisan, non-profit group of volunteers spanning many professions, Greenwich districts, and stages in life. In February 2022, QYG approached the Board of Selectmen with an overview of the problem and an offer to provide a white paper. The Board responded that they would like to receive a full report of our findings and agreed with the concerns about gas blowers.

Quiet Yards Greenwich's key findings are:

1. Gas leaf blowers pollute the environment and create excessive and dangerous noise levels that negatively impact landscapers', residents', and workers' health and the quality of life for residents, including students attending school remotely, people working from home, and residents trying to enjoy their time at home and in the community.

2. Gas leaf blowers are overused, particularly during the summer when they are used for jobs that could easily be handled by less damaging equipment. There are readily available alternatives to gas leaf blowers that are already in use commercially, such as battery-powered leaf blowers, mulching, and using a lawn sweeper. Electric leaf blowers address many of the downsides of gas leaf blowers since they are zero emission machines and produce significantly less noise. There are electric leaf blowers currently on the market which are cost-effective and sufficient for personal and professional use throughout the

majority of the year.

3. Many neighboring towns, as well as over 200 communities nationwide, impose restrictions on the use of gas-powered leaf blowers.

4. The vast majority of Greenwich residents surveyed would like to see a meaningful reduction in the use of gas-powered leaf blowers.

Section 1: Methodology:

For the production of this report, Quiet Yards Greenwich conducted extensive research which included the following:

A. Review of studies published in medical, toxicological, and environmental studies journals
B. A survey of over 680 Greenwich residents
C. A study of ordinances concerning gas powered leaf blowers nationwide
D. Attendance at events demonstrating electric lawn care tools
E. Interviews with manufacturers and suppliers of electric lawn care equipment
F. Interviews with dozens of landscapers serving Greenwich
G. Interviews with advocates in CT and NY who helped pass or are currently working on ordinances restricting gas leaf blowers

Section 2: Current regulations for use of leaf blowers in Greenwich

Greenwich's noise ordinance Section 6B-5 sets allowable noise levels in residential zones at 55 decibels during daytime hours. This is the limit set by CT's state statute on noise pollution control, and also the level that major health organizations such as the World Health Organization and the Environmental Protection Agency deem safe.[1] *However, gas powered leaf blowers, which operate at over 100 decibels at their source and 60-83 decibels at 50 feet away, are exempt from the Greenwich noise restriction*.[2]

Greenwich's noise ordinance limits the hours of allowable use for gas leaf blowers. Gas leaf blowers may not be used between the hours of 6:00 p.m. and 8:00 a.m. Monday through Friday and between 3:00 p.m. and 9:00 a.m. Saturday, Sunday, and Holidays. Further, commercial and/or residential property parcels of one-quarter (1/4) acre or less may only be serviced by one gasoline-powered leaf blower at any given time. Premises located in the Town of Greenwich may only be serviced by one gasoline-powered leaf blower, at any given time, from Memorial Day through Labor Day, inclusive.

In March 2020, to protect the quality of life for residents social distancing at home, First Selectman Camillo updated the Town's noise ordinance to limit gas leaf blowers to only one per property but that restriction has now lapsed.

By setting allowable daytime noise levels at 55 decibels and yet exempting gas-powered leaf blowers, our noise code implicitly recognizes that gas-powered leaf blowers produce dangerous levels of noise, and QYG believes it is time to end this exemption.

[1] https://noisefree.org/wp-content/uploads/2017/12/connecticut.pdf
[2] https://www.quietcleanpdx.org/wp-content/uploads/2019/07/ARUP-Leaf-Blower-Noise-Testing.pdf

Section 3: Impacts of gas-powered leaf blowers

Gas leaf blowers used by landscapers are extremely noisy, pollute the air and waterways, have an outsized greenhouse gas impact, and have negative health consequences for operators and residents, especially when used for long periods of time.

3A) Noise impacts:

The World Health Organization recommends general outdoor noise levels of 55 decibels or less. According to the Centers for Disease Control, any noise above ~70 decibels begins to cause hearing damage, while any noise above 120 dBs causes immediate hearing damage.[3] The CDC explicitly lists gasoline powered leaf blowers as a common cause of hearing damage on their website dedicated to hearing loss.

For context, the limit set for auditory torture in the CIA handbook is 79 decibels. Yet, most gas leaf blowers operate at 95-115 decibels at the ear of the operator, and at 50 feet, between 65-83 decibels.[4] A seminal acoustic study found that operating multiple two-stroke leaf blowers can produce noise loud enough to damage hearing from 50 feet away and to create an unhealthy environment from 800 feet away.[5] It is not hyperbole to say that lawn care companies and other users of this equipment are noise-torturing their clients and clients' neighbors.

It is important to understand how noise is measured. The decibel scale is logarithmic, which means that a 10-decibel increase means a 10-fold difference in sound intensity and a 20-decibel increase is a 100-fold increase in sound intensity (10 x 10). The human ear hears these sounds as changes in volume, and as a rule of thumb, an increase of ten decibels sounds twice as loud, and an increase of twenty decibels sounds four times as loud. *Thus, a 100 decibel leaf blower (at its source) has a volume that sounds 24 times as loud as the recommended safe maximum of 55 decibels.* Even at 50 feet away, the noise from gas leaf blowers is four times the noise level that the Greenwich ordinance deems safe.[6] Further, landscapers often deploy multiple leaf blowers on a property, which can magnify the sound.

Going inside is not a solution for evading leaf blower noise. A 2017 study in the *Journal of Environmental Toxicology* found that the low-frequency sound waves in the composition of two-stroke engine noise more readily transmit over longer distances and are able to penetrate walls and windows.[7] The same study found that leaf blower manufacturers frequently underestimated and under-reported the noise levels of their

[3] "What Noises Cause Hearing Loss?" Centers for Disease Control https://www.cdc.gov/nceh/hearing_loss/what_noises_cause_hearing_loss.html

[4] https://www.quietcleanpdx.org/wp-content/uploads/2019/07/ARUP-Leaf-Blower-Noise-Testing.pdf

[5] Journal of Environmental Toxicology, Stud. December 2017, Walker and Banks (See Table 2) https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6707732/ .

[6] Converting decibels to sound intensities, https://hearinglosshelp.com/blog/converting-decibels-to-sound-intensities/

[7] Ibid. See also https://www.quietcleanpdx.org/wp-content/uploads/2019/07/ARUP-Leaf-Blower-Noise-Testing.pdf

tools.[8]

The noise has been especially difficult for front-line workers during the pandemic. In a letter to the Town of Greenwich, three Yale School of Medicine physicians write:

> "As a front-line worker, I know that front-line workers do not want kudos from the public – they want to rest between shifts. If the community expects nurses, doctors, paramedics, fire, police, and all of the other front-line workers to be awake and ready to take care of people no matter what time they have an emergency, that can only happen if these essential workers can sleep during the day. Gas leaf blowers anywhere in a neighborhood emit a grating, low frequency sound that makes sleep impossible.[9]

In early 2022, Quiet Yards Greenwich conducted a residential survey asking, "Do you feel that the noise from leaf blowers has impacted your ability to enjoy your home and yard?" Of the 680 responses, 69% responded that they were extremely or very concerned.[10] Below are some of the comments made about noise by survey respondents:

> "The exhaust from leaf blowers in the fall has triggered migraine headaches that lasted 4-5 days. This is difficult to avoid since I now work from home permanently due to the pandemic. I also have to plan my calls around the daily landscaping schedule because there is nowhere inside the house I can go that avoids the noise."[11]

> "PLEASE do something about these hideous machines and their almost constant use. The noise on our street is unbearable approx. April-November. Several close neighbors mow/blow their lawns almost daily for hours each time. I suffer. Our dog suffers."

> " Every single day, the noise is intrusive. Even if you ask your own landscaper to minimize their use, you are subject to the properties around you. The noise is CONSTANT."

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[8] There are no federal requirements for sound reporting of leaf blowers. Manufacturers' specifications for decibels do not clarify whether the sound intensity reported represents an average of all throttle speeds, a maximum or a minimum.

[9] See Appendix B

[10] See Appendix A

[11] See Appendix A

“The incessant sound of leaf blowers has come to dominate my neighborhood’s soundscape 3-4 hours every day of the fall, spring, and summer. This has become a quality of life issue that impacts all but most directly those in our neighborhoods during the day (children, stay at home parents, retirees, remote workers, wildlife, etc.)”

“At my apartment complex they use multiple gas powered leaf blowers. ...The noise drives me insane and I can’t think straight. I called the GPD because there is an ordinance in Greenwich that says only one leaf blower can be used per property, regardless of the size of the lot. I call the police to enforce because the landscaper is supposed to receive a ticket and all I get from GPD is “due to COVID we’re having limited contact with the public on these matters.” So all Spring and Fall and Summer it’s nonstop racket every time the landscaping crew comes to work on the property.”

“It seems leaf blowing occurs at all hours of the day, every day of the week - even on weekends - making it annoying to be outside and difficult to schedule work from home calls.”

“The problem is that neighborhood landscapers come on different days--therefore we hear the blowing 6 days per week. It never stops. 1x/week would be tolerable, but the way we live and work in Greenwich makes this noise incessant....sometimes even on Sundays if a landscaper is bold enough to break the rules.”

“The noise pollution is just unbearable. The town does not enforce existing ordinances. I live in a zone of 0.1 to 0.4 acre lots and those are limited to one leaf blower between certain hours of the day. Yet many gardening companies that service other homes in my neighborhood use 2-3 leaf blowers at all times of the day.”

“I live in a part of Greenwich where properties are 1/4 to 1/2 acres. Landscapers will use up to 3 gas powered leaf blowers at one time with three landscapers. The noise level is so loud my family can't even be on the deck outside to eat a meal.”

“Thank you for taking up this issue! The noise and pollution from gas blowers make life in this 'quiet' town absolute hell!”

“Living on the water we get an unending cycle of leaf blower noise from all our neighbors on the cove. Sound travels amazingly well across water!”

A common misperception is that noise is merely an annoyance, a quality of life issue—something experienced only by the over-sensitive and having no real consequences. Decades of scientific research refute this. Loud, unusual, or pervasive noise triggers the release of the hormone cortisol, preparing the human body for "fight or flight." This is beneficial if one needs to escape immediate danger, but chronic exposure to environmental stress can lead to numerous physical and psychological harms. A meta-review of studies found that the evidence "clearly supports a causal link" between elevated noise levels and harmful cardiovascular outcomes like hypertension and coronary heart disease.[12] Noise pollution from gas leaf blowers has been shown in studies to increase the risk of hearing loss, ability to concentrate due to impaired cognition, increased stress, higher blood pressure, sleep disruption, and immune system suppression.[13]

Background noise also has a startling effect on children's learning. We have known this for a long time. As far back as 1975, a study examined reading scores of children in a school where classes were located adjacent to elevated train tracks and compared them with reading scores of students on the quiet side of the school. The researchers found that by sixth grade, the students on the noisy side of school tested one year behind those on the quiet side of the school. In a follow-up study in 1981, noise abatement had been provided by the Transit Authority, and the study found that reading scores between the two groups were now equal.[14]

Pediatricians have warned that the auditory systems of children are still developing and are more vulnerable to high intensity noise.[15] Among school children exposed to increased environmental noise, other researchers found specific deficits in attention, concentration, memory, reading ability, and performance on standardized tests.[16]

The greatest health risk, however, is to the people operating these machines for hours every day often without ear protection. The health of landscapers, many of whom do not speak English and do not have the option to choose a less harmful line of work, must be weighed when considering the benefits of an ordinance update.

The dangerous noise levels produced by gas-powered leaf blowers cannot be confined to a single property. The rights of landscapers to the choice of equipment that maximizes their profits must be balanced against the health of their workers and the rights of neighbors to enjoy their homes and properties without damage to their hearing, overall health, and quality of life.

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[12] Davies H, Kamp IV. Noise and cardiovascular disease: A review of the literature 2008-2011. Noise Health. 2012;14:287-91.

[13] Basner M, Babisch W, Davis A, Brink M, Clark C, et al. (2014) Auditory and non-auditory effects of noise on health. Lancet 383:1325–1332. See also Appendix B.

[14] https://www.nytimes.com/1982/04/26/nyregion/student-scores-rise-after-nearby-subway-is-quieted.html

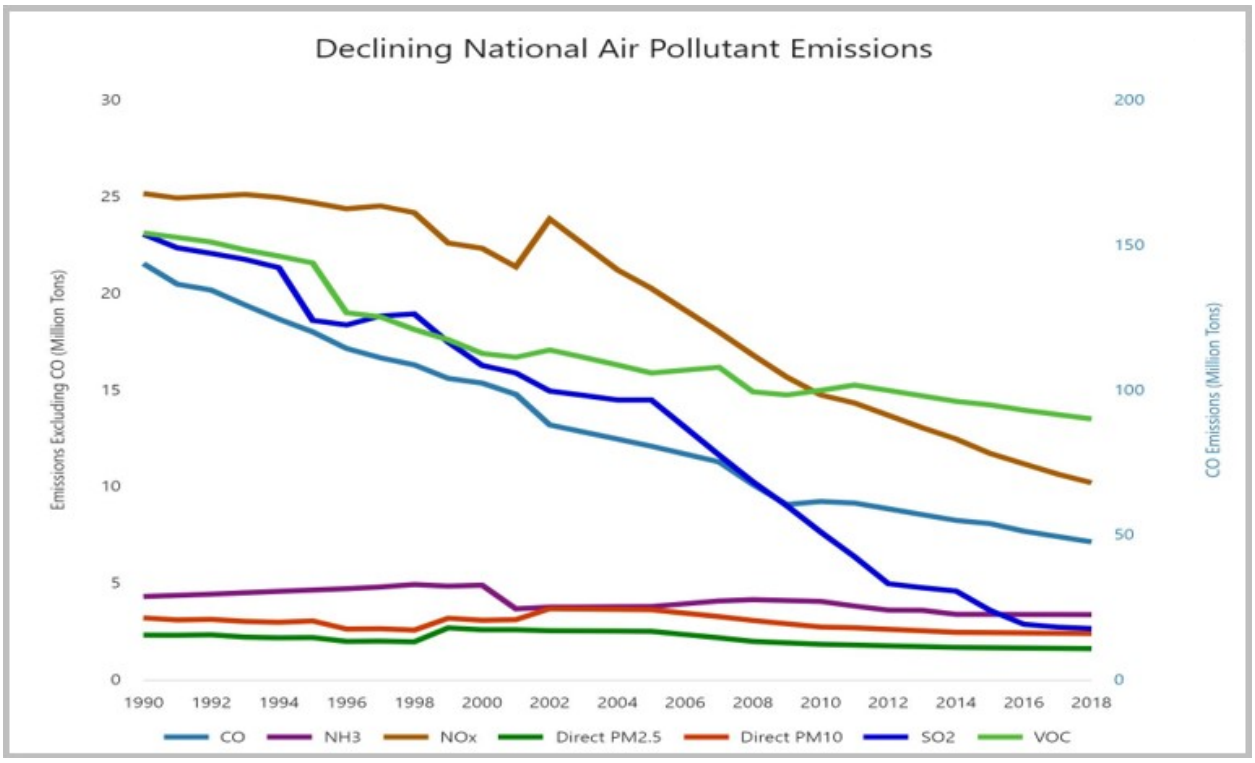
[15] See Appendix C, Pediatric Environmental Health Specialty Unit, Mount Sinai Hospital, *Medical Grounds for a Restriction on Internal Combustion Power Tools and Leaf Blowers*

[16] Passchier-Vermeer, W, Passchier, W F. Noise exposure and public health. Environmental Health Perspectives. 2000 Mar; 108(Suppl 1): 123–131.

3B) Toxic Air Pollution and Climate Impacts:

"Using a two-stroke engine is like heating your house with an open pit fire in the living room—and chopping down your trees to keep it going, and trying to whoosh away the fetid black smoke before your children are poisoned by it."
--James Fallows, The Atlantic

The 2 - stroke engine powering gas leaf blowers was invented in 1879, over 140 years ago, and has not changed much since. It has been referred to as the "dirtiest engine still in legal use."[17] Over the past 50 years, gasoline engines for trucks and automobiles have become so much more efficient that they have reduced their emissions per mile by about 95 percent. The following EPA chart shows the overall emissions decrease since 1990.[18]



Source: Environmental Protection Agency. Definitions: CO=carbon monoxide; NH3=ammonia; NOx=nitrogen oxide; Direct PM2.5=size of inhalable particles; Direct PM10=size of particulate matter; SO2=sulfur dioxide; VOC=volatile organic compounds

Unlike cars and trucks, the engines used by gas leaf blowers are not subject to the same restrictions imposed

[17] https://fallows.substack.com/p/gas-powered-leaf-blowers-the-end?utm_source=url
[18] https://www.epa.gov/clean-air-act-overview

by the Clean Air Act. They persist mainly in lawn equipment.They operate using an obsolete technology that incompletely combusts a combination of fuel and oil and releases as much as 30% of that unburned fuel as aerosols that people, pets and wildlife inhale. These aerosols contain toxic pollutants and greenhouse gasses, including carbon monoxide (which contributes to ground-level ozone), nitrous oxide (a 300x more powerful greenhouse gas than carbon dioxide), and hydrocarbons (a carcinogenic gas that also causes smog).[19] In 2020 the California Air Resources Board found that small 2-stroke engines produced more ozone pollution than all of CA's tens of millions of cars and trucks combined.[20]

At a time when over 300 climate scientists for the UN International Panel on Climate Change are warning that we have "a brief and rapidly closing window of opportunity to secure a livable and sustainable future for all," we cannot ignore the outsized carbon impacts of these small engines.[21] **A study by the auto research group Edmunds found that in terms of hydrocarbon emissions, using a gas leaf blower for a half hour is the equivalent of driving a 6,200 lb. Ford Raptor pick-up truck for 3,900 miles, the distance from Texas to Alaska.**[22]

Ozone pollution in CT is a persistent problem. The American Lung Association's 2020 "State of the Air" report found that every county in Connecticut continued to earn failing grades for ozone pollution.[23] The report found Fairfield County the most polluted county in the New York City metro area with the highest ozone readings in the eastern U.S. According to Jane Reardon, MSN, Pulmonary Clinical Nurse Specialist and Volunteer for the American Lung Association in Connecticut, "Ozone pollution can harm even healthy people, but is particularly dangerous for children, older adults and people with lung diseases like COPD or asthma. ...Breathing ozone-polluted air can trigger asthma attacks in both adults and children with asthma, which can land them in the doctor's office or the emergency room. Ozone can even shorten people's lives."[24] In 2021, the EPA found that Greenwich exceeded the 0.070 parts per million (ppm) eight-hour average ozone standard *eleven times in the first nine months of the year*.[25]

In addition to the ozone, smog, and carbon impacts, gas leaf blowers pose significant health risks stemming

[19] https://www.epa.gov/sites/default/files/2015-09/documents/banks.pdf

[20] https://www.arb.ca.gov/msprog/offroad/sm_en_fs.pdf?_ga=2.61118636.1050289964.1646093911-1513478005.1643061157

[21] https://www.ipcc.ch/report/ar6/wg2/

[22] https://www.edmunds.com/about/press/leaf-blowers-emissions-dirtier-than-high-performance-pick-up-trucks-says-edmunds-insidelinecom.html

[23] https://www.lung.org/media/press-releases/state-of-the-air-connecticut

[24] Ibid.

[25] https://www3.epa.gov/region1/airquality/o3exceed-21.html#ct

from both the chemical composition of emissions and the airborne particulates whipped into the air by their high velocity air jets.

The wind speeds of both electric and gas leaf blowers —150-280 mph—kick up ground particulate matter of 2.5 microns or less, which are small enough to be inhaled into the lungs and passed through cell membranes into the bloodstream. These ground particulates may contain animal fecal matter, pesticides, herbicides, fertilizers, allergens, tire particles and other toxins. Because they are so small, they are easily stirred up and can linger in the air long after the work is done. **One hour of leaf blower use can blow up to 5 pounds of particulate matter into the air, and this particulate matter can stay suspended for up to 5 days.**[26]

A recent study by the Harvard School of Public Health found a clear link between long-term exposure to fine particulate matter and elevated death rates from Covid-19.[27] According to epidemiologist Jo Kay Ghosh, "The basic idea is that the smaller the particle, the deeper it can be inhaled into the lungs, and the more potential it has then to cause health problems " such as lung cancer, heart disease, strokes, asthma and other respiratory ailments.[28] Only HEPA masks like the N-95 can filter the particulates from the air, and it is exceedingly rare to see workers, or residents, wearing these masks in areas where leaf blowers have recently been used. Bystanders and pets taken for walks have no protection from breathing these invisible carcinogenic particulates.

The benzene, butadiene, and formaldehyde that gas leaf blowers emit are listed among the four top ranking cancer-causing compounds in the United States.[29] Ground level ozone (formed by the volatile organic compounds and nitrous oxide released, in the presence of sunlight) and fine particulate matter cause or contribute to early death, heart attack, stroke, congestive heart failure, asthma, chronic obstructive pulmonary disease, and cancer.[30] Growing evidence suggests these pollutants also

[26] https://www.epa.gov/sites/default/files/2015-09/documents/banks.pdf

[27] https://www.hsph.harvard.edu/news/hsph-in-the-news/air-pollution-linked-with-higher-covid-19-death-rates/

[28] https://www.fairwarning.org/2017/09/leaf-blower/

[29] Loh MM, Levy JI, Spengler JD, et al. "Ranking Cancer Risks of Organic Hazardous Air Pollutants in the United States," Environ Health Perspect 2007; 115:1160–1168. See also https://nepis.epa.gov/Exe/tiff2png.exe/P100GDP7.PNG?-r+75+-g+7+D%3A%5CZYFILES%5CINDEX%20DATA%5C00THRU05%5CTIFF%5C00001983%5CP100GDP7.TIF

[30] American Heart Association. Facts: Danger in the Air -Air Pollution and Cardiovascular Disease, American Lung Association. State of the Air 2014., Integrated Science Assessment for Particulate Matter- Final Report, US Environmental Protection Agency, December 2009, EPA/600/R-08/139F. Provisional Assessment of Recent Studies on Health Effects of Particulate Matter Exposure, US Environmental Protection Agency, December 2012, EPA/600/R-12/056F,.Integrated Science Assessment for Ozone and Related Photochemical Oxidants, US Environmental Protection Agency, 2013, EPA/600/R-10/076F. Air Pollution and Cancer, K Straif, A Cohen, J

contribute to developmental and neurological disorders, including autism.[31] Children, seniors, and persons with chronic illnesses are especially vulnerable to the negative health impacts of gas leaf blower emissions.[32]

A 2015 paper by professor of anesthesiology Richard Levy reported that the developing brain is extraordinarily vulnerable to carbon monoxide exposure, at levels and durations vastly lower than once thought.[33] Professor Levy found neurologic disruptions in children from exposure of just 4 parts per million of carbon monoxide.[34] A carbon monoxide test performed across the street from where a leaf blower was operating in Montclair, NJ found a *carbon monoxide reading of 39 ppm,* exceeding National Institute for Occupational Safety and Health, U.S. Environmental Protection Agency, and World Health Organization exposure limits for adults.[35]

In a joint letter to the Town of Eastchester, NY in support of proposed restrictions on gas powered leaf blowers, the doctors of the Mt. Sinai Hospital Pediatric Environmental Health Center wrote, "Internal combustion power tools and leaf blowers pose multiple hazards to human health. Children are the most susceptible members of our population to these hazards because they breathe more air per pound of body weight per day than adults, and thus inhale more of any pollutants that are thrown into the air by this equipment. Children's vulnerability to the health effects of this equipment is further magnified by the fact that they are passing through the stages of early development, and thus their lungs, ears, eyes and other organ systems are inherently more sensitive to environmental hazards than the organs of adults."[36]

In 2005, Dr. Barry Boyd, an oncologist at Greenwich Hospital testified to the Greenwich Board of Health that, "Connecticut has one of the highest rates of cancer. It is critical that we eliminate pollution from gasoline-powered engines where we can."[37]

Our survey asked residents how concerned they are about the respiratory impacts of leaf blowers, as well as

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Samet (Eds), Scientific Publication 161, International Agency for Research in Cancer, World Health Organization, Lyon Cedex FR:IARC, 2013

[31] Raz R, Roberts AL, Lyall K, Hart JE, Just AC, Laden F, Weisskopf MG. "Autism Spectrum Disorder and Particulate Matter Air Pollution Before, During, and After Pregnancy: A Nested CaseControl Analysis within the Nurses' Health Study II Cohort," Environ Health Perspect. 2015 Mar;123(3):264-70.

[32] State of the Air, 2014, American Lung Association

[33] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4568061/

[34] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5344786/

[35] https://www.montclairlocal.news/2022/03/20/at-least-protect-montclairs-children-from-gas-leaf-blower-pollution-letter-to-the-editor/

[36] See Appendix 3

[37] https://patch.com/california/monrovia/leaf-blowers-are-not-healthy-for-children-and-other-living-things

the climate impacts. Of the 680 respondents, 68% said they were extremely or very concerned about the human health effects, and 75% said they were extremely or very concerned about the climate impacts.[38]

3C) Worker Health Safety:

"Each time I see these crews, I think to myself: 10 years from now, they'll be on the path to premature deafness."
--Robert Meyers, ENT specialist, University of Illinois at Chicago

The daily use of small gas-powered engines is overwhelmingly a health issue, and the people whose health is most at risk are the lawn crews using this machinery.

The Occupational Health and Safety Act (OSHA) requires hearing protection for any workers using equipment that generates noise over 85 dB. Robert Meyers, an ENT specialist at the University of Illinois at Chicago, commented, " I know the decibel level of their machines will ultimately result in deafness for them. The closer to the sound source, the more decibels affecting the user, the more the damage. The leaf blower [operator] gets about 100 decibels of constant noise. The home-owner gets 70 decibels of intermittent noise. What does this mean in damage? For every 3 decibel increase in sound, the ear gets twice as much potential damage. So when you increase the decibels, from 70 to 100 which is what the leaf-blower operator is getting, the 'sound damage' to the ear is 1000 times greater to the poor leaf blower's ear."[39]

Because of their proximity, landscaping crews are also at highest risk of inhaling the particulate matter the leaf blowers are whipping into the air. *A study of landscapers wearing monitoring devices revealed that ultrafine particle levels are 50 times higher around a gas leaf blower than at a clogged intersection at rush hour.*[40] Landscape workers put in long days, breathing and inhaling contaminants deep into their lungs due to their physical exertion.

Leaf blower manufacturers and professional associations recommend the following PPE when using blowers:

- Safety goggles to protect the eyes from stones or twigs that can turn into projectiles when blown with speeds of up to 200 miles an hour;
- Earmuffs or earplugs;
- Dust masks such as N95 to filter out particulates[41]

[38] See Appendix A
[39] https://www.quietcleandc.com/qcdc-in-the-news/2020/10/14/uhi6a72rvjnd0ujrtxss2mmklaqait
[40] https://www.fairwarning.org/2017/09/leaf-blower/
[41] https://www.landscapeprofessionals.org/riskmgmt/ssense/June14.pdf

Yet even casual observations around Greenwich show very few workers wearing the recommended protection. Further, according to the American Academy of Otolaryngology, half the wearers of hearing protectors do not get the expected benefit, due to improper fit or failure to wear them continuously.

While gas leaf blower noise is an occasional problem for neighbors, it is a constant occupational safety risk for lawn crews. Landscaping is often an entry level job attracting economically disadvantaged workers who speak little English, have little education, and are in no position to speak up or change jobs. Workers often don't have a say in the equipment they're required to use. And while most residents have the benefit of health-insurance coverage, not as many of the lawn workers do. The price for long-term use of this harmful machinery falls overwhelmingly on the shoulders of the low-wage crews operating it.

3D: Damage to soil and wildlife:

"Leaf blowers, whether electric or gasoline-powered, dislodge the leaf litter that is so essential to insect life — the insect life that in turn is so essential to birds and other wildlife."
--Margaret Renkl, author of Late Migrations: A Natural History of Love and Loss

All leaf blower use—both gas and electric—contributes to the degradation of lawn health and the biodiversity of our community. The high velocity air jets of leaf blowers—150-280 mph—desiccate the soil (which negatively impacts the lawn and then requires more watering), destroy nests and small animal habitats, kill insects, and disturb pets as well as animals in the wild.[42] Leaves are essential habitat for hibernating pollinators and other small organisms that are themselves food for birds, frogs and mammals. Scientists report that 40% of insect species are threatened with extinction.[43] The leaf blowers in our backyards are part of the problem.

Soil and plant health is also damaged by leaf blowers. The strong winds erode beneficial topsoil and mulch, spread soil-borne diseases, and rob plants of nutrients. The hurricane strength air jets expose the crowns of plants and damage the roots close beneath the surface. Bare ground left by blowers allows soil to become compacted, and dries out plant roots. Compacted soil makes it difficult for oxygen to circulate or water to permeate the surface, causing a host of problems for the lawn.The compacted soil contributes to rainwater run-off and soil erosion.

These problems then have to be corrected by injecting fertilizers and pesticides into the soil at customer expense. Fertilizers and pesticides cause further damage when they are blown or washed into storm drains, leading to algal blooms and toxic pollution in our ponds and waterways.

The reason that gas leaf blowers are used so pervasively by lawn care companies is not because they create healthy yards, but because they allow companies to maximize their earnings. Lawn care companies typically

[42] https://www.sciencedirect.com/science/article/abs/pii/S0169534709002614
[43] https://www.sciencedirect.com/science/article/abs/pii/S0006320718313636

charge a flat rate for each property they service based on the lot size. The faster they can service a property, the more customers they can serve, the more money they can earn. The damage caused by leaf blowers is a further revenue stream requiring fertilizers, mulch, and irrigation to correct.

Lastly, gas leaf blowers have to be filled with a gas-oil mixture, and inevitably there are spills, which leach into the soil. It is estimated that 17 million gallons of gas are spilled annually while refilling lawn equipment.[44] In contrast, the Exxon Valdez spill was just under 11 million gallons.

In our survey to Greenwich residents asking if the impact of gas leaf blowers on habitat loss and biodiversity concerned them, 71% stated that they were extremely or very concerned.[45]

Section 4: Alternatives to gas leaf blowers

To understand the alternatives to gas-powered leaf blowers, Quiet Yards Greenwich attended two electric lawn equipment demos in Rye Brook and Larchmont, spoke with dealers of Ego, Stihl, Husqvarna and Makita, interviewed over 50 landscapers, had numerous conversations with CT-based companies that utilize electric lawn equipment, and read many on-line articles.

4A: Electric leaf blowers:

> *"[On switching to electric blower] It's not like you have to convince someone to go vegetarian, they're gonna get meat and potatoes just by switching. It's not trading off but trading out."*
> *Jeff Cordulack, Owner, Organic Ways and Means*

Electric leaf blowers are a good alternative to gas leaf blowers. They provide sufficient air power and are significantly quieter and less disturbing to residents. Electric leaf blowers release zero emissions at the point of use. They emit no toxic fumes around the user and into the environment. They do not need to be filled with gas and oil, thus reducing spillage risks, and do not require regular maintenance since they do not have an engine. Commercial electric leaf blowers create sufficient airflow to efficiently handle yard work for most of the year. We know that electric leaf blowers are entering landscapers' tool arsenals because we created a "Green Guide" listing 21 landscapers already offering electric leaf blowing to Greenwich residents.[46]

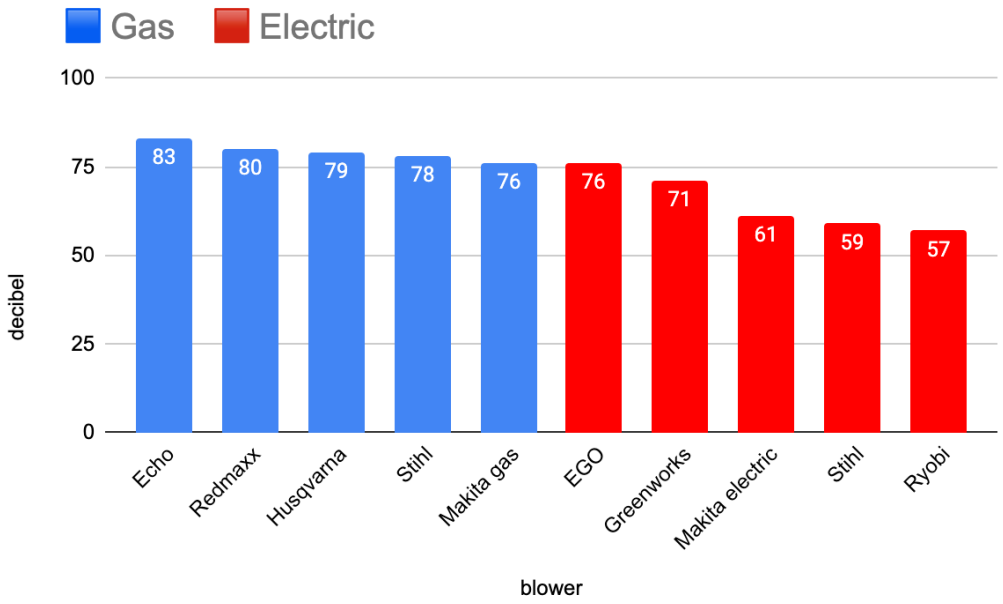
4A.1: Noise comparison

To compare gas and electric models of leaf blowers, we selected ten of the most powerful models in the

[44] https://afdc.energy.gov/files/pdfs/52423.pdf
[45] See Appendix A
[46] See Appendix E

market, based on on-line reviews.[47] The chart below compares their noise levels, as reported on manufacturers' websites. The five gas leaf blowers range from 76-83 decibels (as measured from 50 feet away) and the electric models range from 57-76 decibels at 50 feet away. If that difference does not seem significant at first blush, consider that the decibel scale is logarithmic, so that a 10 decibel difference is felt as a doubling of loudness (volume), and a 20 decibel difference is felt as a 100-fold increase in loudness.

Noise Comparison of Gas vs Electric blowers

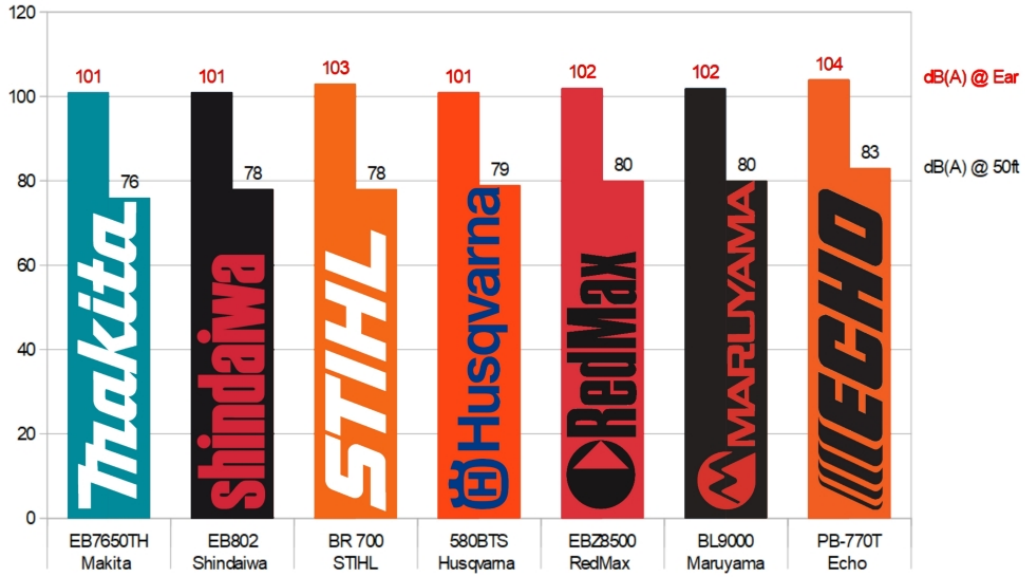


Source: As reported on manufacturer website

Manufacturers report noise measurements following ANSI specs, which are required to be measured at 50 feet away from the source. While this standard may be useful for reporting the impact to bystanders, it omits the impact on the user's ear. *A landscaping tool review website measured the sound at the operator's ear and found the noise louder by over 20 decibels.* Following the logarithmic scale, that means the sound is 100 times as loud at the operator's ear than how it sounds at 50 feet away. OSHA rules require that in a 100 decibel environment, workers cannot work for more than 2 hours without ear protection. Yet even a casual observation of landscape crews in Greenwich will show very few wearing it.

[47] Models compared are: Gas blowers: RedMaxx EBZ8560, Stihl BR-800X, Husqvarna 580BTS, Makita EB7660TH and Echo PP770T. Electric blowers: Ego LB7650, Greenworks GBB700, Makita XBU04PT, Ryobi 40V HP, and Stihl BGA200.

Noise at Ear Compared to Noise 50 Feet Away



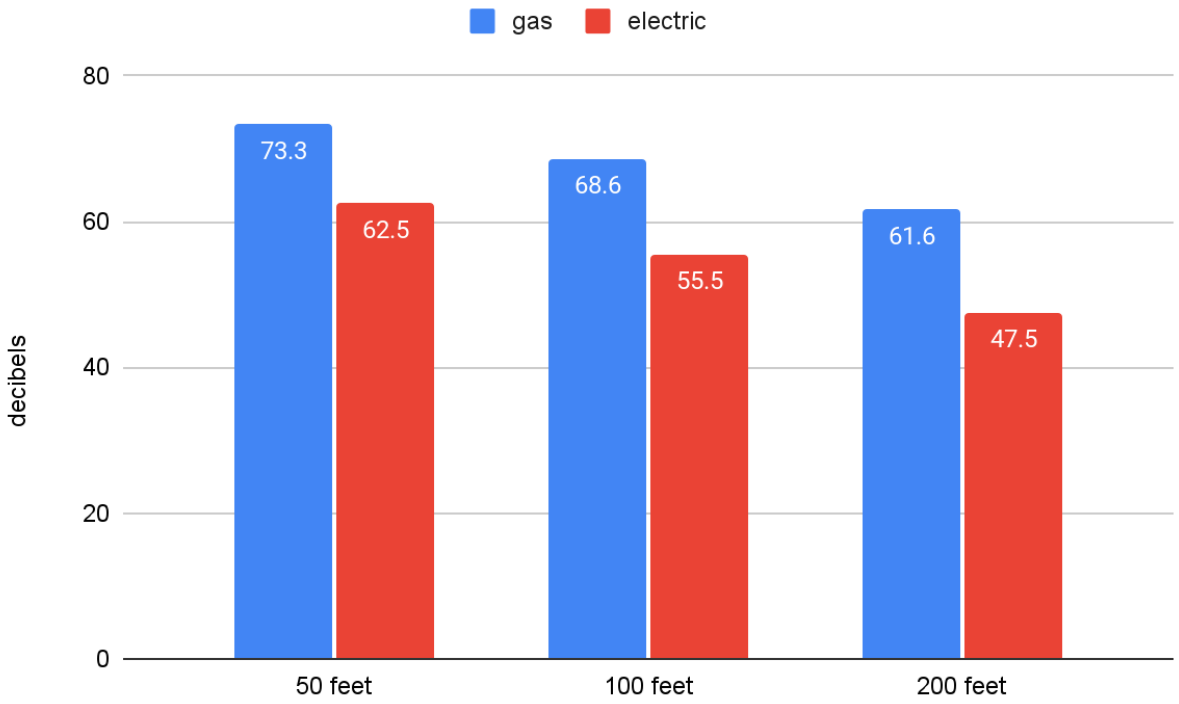
Source: https://opereviews.com/landscaping/leaf-blowers/best-backpack-blower-shootout/

It is also important to compare the noise from gas and electric leaf blowers at different distances. Many residents in our survey complained about noise coming from houses more than 50 feet from their own. In 2018 a leading acoustic firm was hired to test blower noise at various distances. They operated seven popular models of gas and electric leaf blowers and then tested sound from 5, 50, 100, 200, 400 and 800 feet away.[48] They found that at greater distances such as 100 feet, the gas leaf blowers still operated in the 64-73 decibel range, while the electric blowers dropped to the 48-58 decibel range, blending with background noise. The discrepancy continued at longer ranges.

48

https://www.quietcleanpdx.org/wp-content/uploads/2019/07/ARUP-Leaf-Blower-Noise-Testing.pdf

Noise from Gas vs Electric Leaf Blowers at Various Distances



Source: Subject Bill No. B22.234, the Leaf Blower Regulation Amendment Act of 2017 -Written Statement by Arup

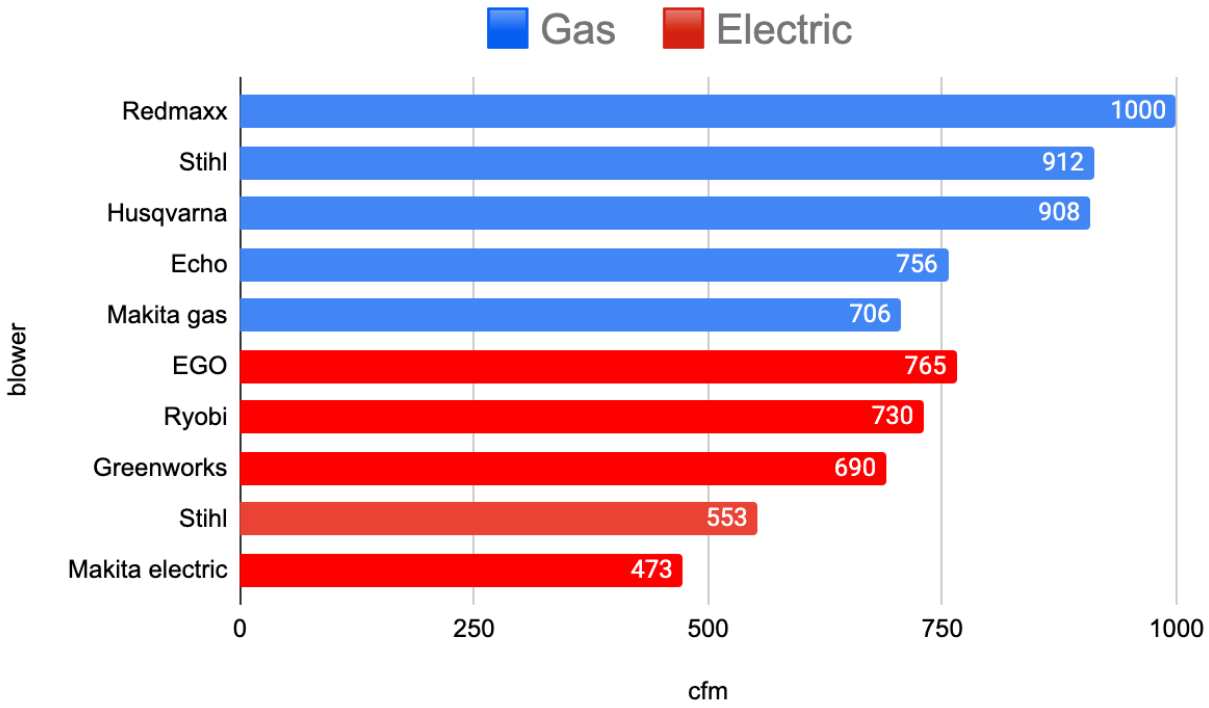
The reason that gas powered leaf blowers can be heard from farther away, and even through walls and windows, is because they emit lower frequency sound waves than electric leaf blowers.[49] The difference might be compared to the sound emitted by whales, which can travel for thousands of miles in the ocean, to the sound of a mosquito, which is very annoying when right up against one's ear, but cannot be heard once you are more than a few feet away from it. Similarly, electric leaf blower noise dissipates over a much shorter distance and does not penetrate walls and windows the way gas blower sound waves do.

4A.2: Power Comparison:

The power of leaf blowers is reported in cubic feet of air moved per minute (CFM). This is a more accurate measure than wind speed, because the blower's mph can change depending on the width of the blowing tube and the kind of nozzle attached to it. We compared the same ten models of gas and electric blowers based on CFM and the results are reported in the chart below. All the gas blowers exceeded the electric blowers in cfm. If maximum power is the objective, there are electric blowers available that rival the cfm of gas, such as the Ryobi 40V HP, which has a CFM of 730 or the EGO LB7650 with a CFM of 765. On average the electric blowers we compared are 75% as powerful as gas blowers.

49 https://www.sciforschenonline.org/journals/environmental-toxicological-studies/article-data/JETS-2-118/JETS-2-118.pdf

Power comparison gas vs electric blowers, cubic feet per minute



Source: As reported on manufacturer websites

The more important question is whether such high wind speeds are necessary. For most of the year, the bits of debris, twigs, petals, and dried leaves are more than adequately handled by electric leaf blowers. The American Green Zone Alliance, which tests electric lawn equipment for commercial and municipal use, finds that the power of electric blowers is adequate for ten months of the year in the Northeast.[50] The landscapers familiar with electric equipment interviewed by Quiet Yards Greenwich reported that they only find gas blowers necessary in the fall when dealing with heavy wet leaves.[51]

Landscapers and residents interviewed agreed that gas leaf blowers are overused. Some of the most common forms of overuse that were described in interviews included:

- using gas blowers in the summer and winter months when there is very little leaf litter
- walking around with the blower left on, even when it is not needed (because there are many steps to starting a gas leaf blower[52], crews sometimes find it easier to leave it running)

[50] https://agza.net/

[51] See Appendix D

[52] Steps may differ for different models. For Stihl blower starting involves turning switch on, pushing primer button 4-5 times, moving choke lever, squeezing throttle trigger and pushing throttle lock button, pushing down housing, pulling

- standing in one place, as if lost in thought, with blower running
- using the blowers to move leaves across large distances rather than moving leaves with a tarp
- using gas leaf blowers for jobs that can just as easily be done with a broom or rake, such as blowing dust and debris off hard surfaces
- using leaf blowers on grass clippings
- blowing leaves into the street where they clog storm drains
- blowing leaves onto neighbors' properties, then requiring a different team to blow those same leaves off

Aside from the wet leaves of late fall, landscapers who use electric equipment find that they do not need the 200 mph wind speeds provided by gas leaf blowers for most of the year.[53] Owner of Organic Ways and Means Landscaping reported, "I think it works as well as a gas blower. There are higher speeds in some of the gas ones, but once you move the leaf, do you need to push it 10 feet or 12? I'd say [the electric blower] is 95% or 99% as good. I don't see the gas helping. If you use one blower and a tarp and a rake, you can get it done, as opposed to blowing all the way across the property. It's not efficient."[54]

4A.3: Price Comparison:

There are two costs to consider when comparing the costs of gas and electric blowers: upfront costs and operating costs.

Upfront costs:

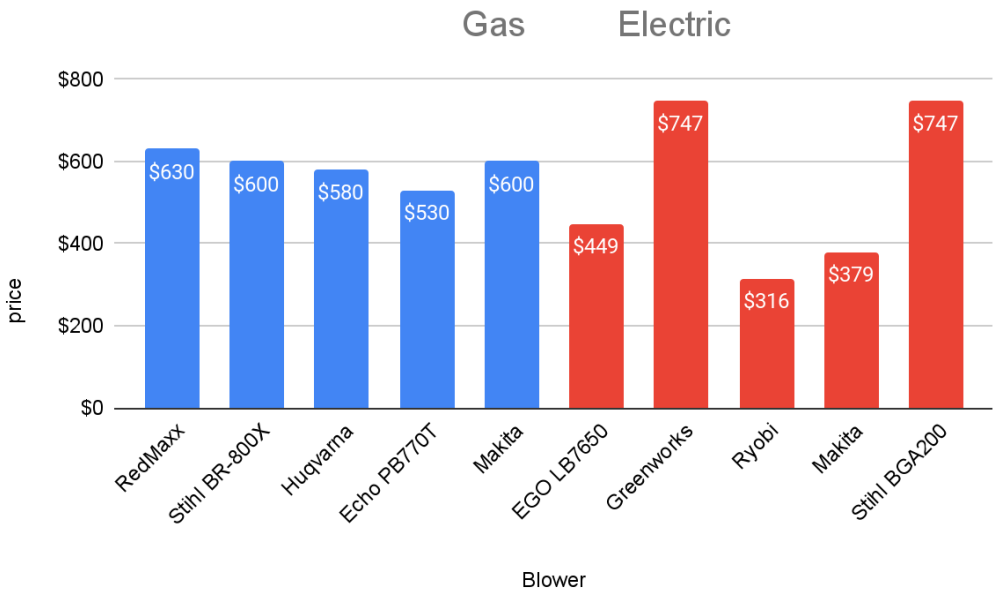
The chart below compares the upfront costs of our 10 models of blowers. Prices for electric blowers include the blower, one battery, and a charger. On average, the electric blowers in this comparison are $85 more expensive than the gas blowers. To be able to use them throughout the day, an extra battery will be needed. Prices for batteries for these models range from $145 for off label brands to $299 for name brand batteries.

starter rope, returning choke to run position, cranking the engine, and squeezing the throttle engine to release the trigger lock

[53] Interview with Jeff Cordulack, Organic Ways and Means, and Dan Delventhal, MowGreen.

[54] Quiet Yards Greenwich interview with Jeff Cordulack.

Cost comparison gas vs. electric blowers



Source: As reported on distributor or manufacturer websites. The reason some electric models are much less expensive than others is because these can work with off label batteries. The higher priced electric models only work with the same brand batteries.

Operating costs:

While electric blowers may cost more than gas blowers up front, they provide significant savings over their lifetime.

Best practices for landscapers using battery powered equipment is to charge at residents' properties. Eversource's on-peak cost per Kilowatt hour is $0.14.[55] Electric landscapers we interviewed reported that the cost for each battery charge is less than $0.20. On average, gas leaf blowers need to be refilled after every hour of use.

The American Green Zone Alliance, which tests and reviews electric lawn equipment conducted a three year cost comparison. Operating costs for the electric blower for 950 hours of annual use cost $171/year. Operating costs for the gas blower came to $807/year. Over the 4-year lifespan, the electric blower provided $1,444 savings (see Table below)

55 https://www.eversource.com/content/ct-c/residential/account-billing/manage-bill/about-your-bill/rates-tariffs/electric-supply-rates

AGZA lifetime cost comparison, electric vs. gas leaf blower

Electric BGA 100 blower+AR3000L Battery+ AL300 Charger			
Based on 950 hours of annual use	Upfront cost	Operating Cost	Lifetime Cost
Year 1	$1700	$171	$1,871
Year 2	0	$171	$2,042
Year 3	0	$171	$2,213
Year 4	0	$171	**$2,384**
Gas Echo PB770T			
Year 1	$600	$807	$1,407
Year 2	0	$807	$2,214
Year 3	0	$807	$3,021
Year 4	0	$807	**$3,828**

Source: Presentation by American Green Zone Alliance, Low-Impact Landscaping practices, Larchmont, March 1, 2022

MowGreen, a CT based landscaper operating with electric equipment, also reports savings with a 52% ROI in the first year of operation.

Operating Cost and ROI of electric vs gas blowers

MowGreen® *Clean & Serene, No Gasoline!™*

650 CFM						
3 hrs/Day 8 mos.	Cost/hour	Hours/Season	Cost/Season	Savings	Cost Unit	Added Cost
Eblower	$0.25	516	$129	$387	$1,250	-$750
Gblower	$1.00	516	$516		$500	
ROI						
Investment:	-$750					
Savings/Year	$387					
Year 1 ROI	**52%**				5 Foot riding Mower:	

Source: Presentation by MowGreen, Conservation Commission webinar, March 1, 2022

Similar results have been found in other studies. In 2017, the University of Arkansas conducted a side by side comparison of its ground crews' use of gas vs battery lawn equipment to determine the capital, environmental, and societal benefits to their campus.[56] For leaf blowers, they found that with a ROI of 3.26 years the electric blowers were significantly cheaper than the fuel powered versions. They concluded, "After reviewing the current equipment that our grounds crew utilize, we've determined that they're not only more expensive and have higher emissions but they are bad for the health of students, faculty, and staff on campus."

The above studies were done before gas costs exceeded $5/gallon, so savings with electric would be even greater in current conditions.

In addition to the cost of fuel, gas leaf blowers require significant maintenance and repair. Maintenance tips by professional organizations include:[57]

- Cleaning spark plugs and replacing when they get worn
- Draining used oil and adding fresh oil
- Disposing of used oil properly
- Cleaning and replacing air filter
- Replacing the fuel filter
- Cleaning the outside of the carburetor and fan blades
- Examining the fuel line, fuel filter, cables and connections
- For long term storage, draining the fuel system or adding a fuel stabilizer

[56] https://sustainability.uark.edu/outdated/get-involved/ofs_ua_battery_grounds_tools_report_20170927.pdf

[57] https://www.lowes.com/n/how-to/leaf-blower-maintenance#:~:text=dirt%20and%20debris.-,Monthly%20Maintenance%20for%20Gasoline%20Leaf%20Blowers,and%20replace%20it%20if%20needed.

In addition to the costs of the above maintenance, we must also consider the labor costs for time spent filling up at gas stations, mixing the fuel/oil mixture, and refilling gas blowers. The repairs required to keep gas-powered lawn equipment running are so extensive, that repairs alone have become the bread and butter that dealers rely on. In an interview with Pro Landscape Supply Co, the owner expressed concern that once electric tools become more mainstream, his business would suffer because such a large part of his supply business comes from the repair end.[58]

Because they do not have an engine and have fewer parts, electric leaf blowers are easier to maintain. Recommended maintenance includes:[59]

- Checking the air intake for dirt, debris and anything that might block air flow
- Removing the battery from the charger once it's at full capacity and storing the battery at a specific level of charge or periodically charging it during the off season. Some batteries have cooling vents that need to be kept clear of dirt and debris.

4A:4: Battery life and best practices:

There are many kinds of battery combinations available for electric leaf blowers. Generally speaking, the longer the battery lasts, the heavier it is, the more expensive, and the longer it takes to get a full charge. Landscapers we interviewed who use electric leaf blowers daily prefer smaller batteries ranging from 2.5 amps to 7.5 amps. The 5.0 amp, such as the one pictured below, lasts about 20 minutes, takes about 30 minutes to charge, costs $100-$150 and weighs just over a pound. Jeff Cordulack of Organic Ways and Means suggested having two such batteries per blower as a good rule of thumb. Cordulack charges one battery while working with the second one, and he keeps switching between the two. Cordulack charges at clients' outlets, and at current electricity prices the cost to the client is about $0.20 per service visit.

Landscapers who purchase the Ford F150 electric or hybrid pickup trucks or the Rivian truck will have the additional advantage of being able to charge from the back of the truck.[60]

Landscapers who prefer to have a battery that will last the entire day without requiring a recharge could look into the Makita ConnectX system releasing in 2022.[61]

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[58] March 6 interview, Pete Masi, Pro Landscape Supply Co, LLC

[59] https://www.lowes.com/n/how-to/leaf-blower-maintenance#:~:text=dirt%20and%20debris.-,Monthly%20Maintenance%20for%20Gasoline%20Leaf%20Blowers,and%20replace%20it%20if%20needed.

[60] https://www.businessinsider.com/electric-f150-lightning-hybrid-charge-other-electric-cars-bidirectional-2021-12

[61] https://www.youtube.com/watch?v=5u1tZWUEpQ0

4A.5:Environmental impact comparison

The environmental harms posed by gas leaf blowers have already been discussed in sections 3B and 3C and can be summarized as follows:

- More polluting than cars or trucks
- ½ hour of use produces greenhouse gas equivalent to driving 3,800 miles in a pickup truck
- Degrade topsoil, destroy habitat, and require greater use of fertilizer to repair soil
- Noise harmful to wildlife

Like gas leaf blowers, electric leaf blowers also degrade topsoil and destroy habitat. Mulching, a method of removing leaves that enriches soil rather than depleting it will be discussed in Section 4B.

Electric leaf blowers do not have any carbon emissions because they do not burn fuel. They are powered by electricity. In 2020, 56% of CT's electricity generation came from natural gas, a fossil fuel, and 40% came from clean sources including nuclear, solar and wind. Eversource has pledged to reach carbon neutrality by 2030 and is currently building an offshore wind farm whose renewable energy will provide 20% of total energy transmission in CT.[62]

The lithium batteries powering not only leaf blowers, but everything from cars to computers to smoke alarms and cell phones, pose environmental risks. Just like any mining operation, lithium extraction has polluted soil and streams, destroyed local habitat, and killed fish and livestock. It is also a water intensive process. For every ton of lithium produced, 500,000 gallons of water is used. A report on lithium by the Friends of the Earth Europe said: "The extraction of lithium has significant environmental and social impacts, especially due to water pollution and depletion."[63]

A further problem with lithium ion batteries is the current inability to adequately recycle them. The highly bonded materials in these batteries, such as cobalt, copper, nickel, thallium, and silver are not easily separated. Most retailers will take the batteries back for recycling, but the most common procedure for

[62] https://www.eia.gov/state/?sid=CT#tabs-4

[63] https://www.nsenergybusiness.com/features/lithium-ion-battery-environmental-impact/

recycling the batteries is to shred the cells, which creates a mixture of metal that can then be separated using burning techniques. Unfortunately, a lot of the lithium is wasted using this method.

The world's commitment to mitigate climate change by reducing emissions in the transportation sector is creating great demand for battery production, and research into reducing the environmental impact of battery extraction and disposal is proceeding rapidly. The DOE has committed $15 million over the next three years to support the ReCell center, a collaboration between national laboratories, the private sector, and universities "to develop advanced technologies that will dramatically improve recycling rates and improve national security by reducing our foreign reliance on supplies of critical battery materials such as lithium and cobalt."[64] Private sector research, such as that by NuEnergy has found a way to recover much of the structure and composition of used cathodes, along with cobalt and lithium.[65] Elsewhere, researchers are working on new battery chemistries that replace cobalt and lithium with more common and less toxic materials. UK researchers are investigating alternative disposal techniques, including biological recycling where bacteria are used to process the materials.

The production and recycling of lithium-ion batteries has environmental challenges, and solutions are being sought. But to use the existing mining and recycling limitations to argue that we should continue to use gas leaf blowers is absurd. If Ford and GM and others believe they can switch their entire automotive fleet to electric, then how can we justify continuing to use an obsolete and far more polluting technology such as gas leaf blowers?

Even if 100% of CT's electricity came from dirty fuel sources such as coal, battery powered leaf blowers would still have a lower carbon impact than their gas counterparts. Several studies have conducted life cycle assessments to examine whether electric cars are greener than internal combustion engine cars.[66] These studies take into account not only emissions but everything from material extraction, manufacturing, packaging and transportation, use and disposal. The International Council on Clean Transportation found that in the US, electric vehicles have 66%-68% of the climate impact as a similar gas-driven car.[67] Considering that cars have far fewer emissions than gas-powered leaf blowers, it is safe to say that electric leaf blowers are far cleaner than gas leaf blowers.

It is important for municipalities to have clear rules on disposal of lithium ion batteries. Otherwise, they can end up in landfills, where metals from the electrodes and ionic fluids from the electrolyte can leak into the environment. There have been a number of fires at recycling plants where lithium-ion batteries have been stored improperly, or disguised as lead-acid batteries and put through a crusher. These problems are

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[64] https://www.anl.gov/article/doe-launches-its-first-lithiumion-battery-recycling-rd-center-recell

[65] https://nuenergy.net/

[66] https://www.forbes.com/wheels/news/electric-cars-cleaner-than-gas-cars/

[67] https://www.epa.gov/greenvehicles/electric-vehicle-myths#:~:text=charging%20station%20locations.-,Myth%20%235%3A%20Electric%20vehicles%20are%20worse%20for%20the%20climate%20than,even%20when%20accounting%20for%20manufacturing.

not specific to battery leaf blowers, of course, since lithium ion batteries are used in everything from cell phones to smoke alarms.

Disposal of gas leaf blowers poses problems as well. They are not recyclable, and fuel left in the gas tank creates a fire hazard. Electric leaf blowers last longer than gas blowers because they do not have an engine that requires maintenance or repairs.[68] The longer longevity means that electric blowers do not have to be discarded and replaced as frequently as gas blowers.

4B: Mulching and Lawn Sweeper:

Mulching is the practice of shredding leaves to facilitate decomposition and natural fertilization of lawns and garden beds. Mulching has the benefit of providing free natural fertilizer while eliminating the need to blow leaves.[69] It also saves landscapers money by freeing them from the cost of driving the leaves to Holly Hill and paying the $95/ton tip fee. For example, by using mulching and sweeping rather than leaf blowing and hauling, Organic Ways and Means was able to eliminate 44,000 pounds of leaves from an 11 acre estate in back country Greenwich from being dumped at Holly Hill.[70]

In addition to being healthy for lawns, mulching also dramatically reduces the need to blow leaves. Mulching reduces leaves to a ratio of 16:1, which can be left on the grass to fertilize it, eliminating the need to blow leaves across the lawn. Some landscapers we interviewed who rely heavily on mulching do not even use leaf blowers. Leaves can be mulched by running a lawn mower over them, but to get a finer product more efficiently, landscapers buy a mulching blade ($20-$40) to attach to their lawn mower.

Excess leaves that are not mulched can be simultaneously picked up by a sweeper, a roughly $350 device that attaches to a lawn mower and can be set to collect debris of a certain size and above. Some landscapers we interviewed manage lawns without leaf blowers at all by using mulching and sweepers in combination.

According to Jeff Cordulack of Organic Ways and Means, “Instead of blowing everything from one side of the property to the other, I drive my sweeper over the lawn and every 5-10 minutes I dump a basket (from the sweeper) onto a plastic tarp. That sweeper is a game changer. It reduced my staff need in the fall, and I can spread my crew out. I don’t need 3-4 at an estate. I can use 1-2 at an estate now.”[71]

[68] https://bestofmachinery.com/how-long-do-electric-leaf-blowers-last/
[69] https://archive.lib.msu.edu/tic/mitgc/article/199822a.pdf
[70] Interview with Jeff Cordulack.
[71] Interview with Jeff Cordulack

Section 5: Landscaper concerns:

For the preparation of this report, Quiet Yards Greenwich attempted to reach every landscaper working in Greenwich, and was successful in speaking with 50 companies (see Appendix D). Of those 50, twenty-one already have and use electric leaf blowers. Seven landscapers said they would like to learn more about transitioning to electric. Those that do not use electric leaf blowers raised the following concerns:

1) Battery time on electric blowers is not sufficient to complete large properties
2) It would take longer to complete their work
3) Electric leaf blowers not as powerful as gas
4) Upfront cost of buying electric equipment
5) Would have to pass cost of new equipment to customers

Quiet Yards Greenwich also spoke with landscapers that work exclusively with electric equipment, who explained how they use the equipment profitably in their fast growing businesses. They shared their experience with landscapers in a conference organized by Greenwich's Conservation Department on March 1.[72]

Section 5a): Addressing landscaper concerns

Among the companies we interviewed, we found two types. There are the landscapers that offer design and maintenance services, along with select options like organic service, vegetable gardens, or meadow

[72] https://youtu.be/QSeTRkSI8EU

design. Then there are the lawn care companies that provide a commodity service--"mowing and blowing"-- in a highly competitive environment with narrow profit margins. The latter, many of whom have been in business for decades, are wary of any changes, *even when asked by their own clients to reduce their use of gas leaf blowers*.

Education:
Providing education and trial uses of electric equipment to landscapers will be essential to helping them transition. Organizations like the American Green Zone Alliance, which tests electric lawn equipment, also offers training to landscapers on using it. Greenwich is also fortunate to have local landscapers using electric equipment year-round who offered to provide such training.[73] Local company Pyoor, which is both a distributor for Husqvarna equipment and a platform for offering low-impact landscaping services, has offered to allow landscapers to borrow electric equipment to try out on their jobs.

It is also important to educate landscapers about the whole-life costs of electric equipment vs gas equipment. While some balk at the upfront prices, information should be provided to landscapers about the savings over time once the cost of fuel, maintenance and repairs are factored in. By phasing in any restrictions, Greenwich can allow landscapers to complete the useful life of their investments, and buy electric equipment on a replacement basis. Lastly, landscapers should be informed about the cost savings that can be achieved by purchasing a suite of electric tools (such as blowers, trimmers, saws) to realize economies on batteries, since most product lines allow batteries to be interchanged across tools.

In the webinar hosted by the Conservation Commission in March, landscapers using electric equipment explained how offering clients quiet, clean non-polluting lawn care could be an opportunity to charge a premium, and help lawn care companies distinguish themselves from the "mow and blow" competition. Asked whether electric landscaping costs his customers more, Jeff Cordulack of Organic Ways and Means replied, " I didn't know what to charge when I started. But I found you don't have to charge differently. I offered to match whatever clients were paying for the traditional service. Using those guidelines I was able to build a business that keeps me busy 6 days a week, 8 hours a day. The company doesn't cost more to run than a gas company. Same number of guys, just different pieces of equipment."[74]

The lawn care business is a highly competitive industry. A regulation that levels the playing field will mean that price will be determined by the competitive marketplace.

Transition time:
Commercial gas leaf blowers are replaced roughly every three years. In order to protect investments that have already been made, Quiet Yards Greenwich suggests phasing in restrictions. This way

[73] Conversations with Organic Ways and Means, Mow Green, and Pyoor
[74] Interview with Jeff Cordulack.

landscapers can get the full value from their current equipment, and plan to make their next purchases electric.

Financial support:
Despite their savings over time, complete electric leaf blowing sets can be a significant cost up front, especially for smaller companies. Larger communities that have banned gas leaf blowers have provided financial support. The state of California set aside $30 million in rebates for landscaping companies to change out their equipment. In Washington, DC, banks agreed to provide zero-interest loans to landscapers switching their equipment to electric.

Quiet Yards Greenwich has begun investigating financial help for landscapers. We reached out to the major distributors of lawn equipment in the area: SiteOne, DLTC, Bethel, and Pyoor to ask about the possibility of offering discounts for bulk purchases. All indicated that they were amenable to such a discussion, but could not provide specific discount percentages until they understood the size of the orders. An intermediary organization, such as the CT Groundskeepers Association, could coordinate purchasing among its members in order to take advantage of such discounts.

Cost to Customers:
Based on our conversations with landscapers currently offering all-electric lawn care, QYG believes the landscaper's claims that their work will take twice, three times or four times as long to complete, which will lead to vastly higher prices for customers, is vastly overstated.

For example, the owner of a landscaping business testified in Washington, DC, that, "We've been using only battery-operated blowers for the past two years, and have had no trouble keeping up with the work in a timely manner. We've had no complaints from clients that our services are taking more time, and have heard nothing but compliments on low noise levels from the battery blowers."[75]

Electric equipment operators in CT say the same thing. In testimony to New Haven, Dan Delventhal, founder of Mow Green explained:

> "People seek us out because they want a quiet non-polluting service, so we serve a larger area than normal for lawn care companies. And we do everything with quiet electric power, not just blowing. Our email is dinging and our phone is constantly ringing. People call us from all over Westchester and Fairfield counties seeking a sane service that doesn't disrupt cognition, raise blood pressure and damage hearing and nerves the way gas leaf blowers do. Changing to electric leaf blowers is the easiest first step for today's landscapers to remain viable and expect to keep their customers, especially with the backdrop of a global pandemic and climate crisis. We currently care for 50-60 acres per week and our business has grown 30% annually for eight

[75] https://www.quietcleandc.com/testimony

years straight--with happier customers and healthier workers."[76]

Section 6: Ordinances adopted by other towns:

Cities and states are increasingly taking action to limit the harms from gas leaf blowers to their communities. Over 200 municipalities nation-wide have restricted them. The California Air Resources Board found that small lawn care engines contribute more to CA's air pollution than all cars and trucks combined and outlawed them starting in 2024.[77] Restrictions on gas leaf blowers are commonplace in neighboring Westchester and throughout NY. Twelve Westchester towns have imposed a moratorium on GLBs during the summer months when clean up is light and many children are home from school. Another nine Westchester towns adopted a moratorium in summer and winter, when cleanups are lighter. Two Westchester towns have banned gas leaf blowers year-round, and a number of others are considering the same. Appendix G lists the kind of ordinances in place in Westchester and other nearby communities.

The NY State legislature is considering a bill this session that would require all in-state sales of new lawn care and landscaping equipment be zero emission by 2027. Similar bills have been filed in New Jersey, Maryland, Illinois, Oregon, and Rhode Island.

Connecticut towns are also beginning to take action. On March 3, the New Haven Board of Alders held a hearing on a year-round ban of gas leaf blowers.[78] A gas leaf blower ban came before the Stamford RTM in February of this year. In January, the West Hartford Sustainability Committee held a public hearing on banning gas leaf blowers. The Westport RTM is currently reviewing a moratorium that would allow gas leaf blowers only during spring and fall months.

Any restrictions adopted by Greenwich should not come as a shock to landscapers. Our interviews with landscapers revealed that most have clients in multiple towns, and many already operate in municipalities with gas leaf blower restrictions.

Section 7: Past attempts in Greenwich to restrict leaf blowers:

Greenwich residents have been beseeching the Town for relief from gas leaf blowers for three decades. In

[76] Resolution calling for a public meeting on phasing out gas-powered leaf blowers in the City of New Haven, August 25, 2021

[77] https://www.latimes.com/california/story/2021-12-09/california-regulators-phaseout-new-gas-powered-lawnmowers-and-leaf-blowers

[78] https://yaledailynews.com/blog/2022/03/07/city-hears-public-testimony-about-phasing-out-gas-powered-leaf-blowers/

1992, filmmaker Dick Roberts started a group called Project Quiet Yards.[79] In 1992, Bob Wiley, who lived in the back country explained, "It's a persistent and pervasive kind of irritating noise that really is against the quality of life." Surrounded by neighbors with four-acre properties, Mr. Wiley said some days were marred by continuous blower racket. "It is undeniable," he said, "that the noise transcends properties." At that time, Dr. James Lieberman, health director for the Town of Greenwich, said that the Town's position would have to be one of educating people about using such equipment considerately.

In 1996, Project Quiet Yards appeared before the Board of Health to ask for a summer restriction on gas-powered blowers and were turned down. However, the town amended its noise ordinance in the mid-1990s to include gasoline-powered leaf blowers, limiting their use to 8 a.m. through 6pm weekdays and between 9am and 3pm weekends and holidays. Comments received in response to our residential survey indicate that these limits are frequently ignored and seldom enforced.[80]

In 2012, a group called CALM tried to adopt a summer moratorium on the use of gas-powered leaf blowers. The town's Board of Health assigned a subcommittee to study the issue, which concluded that there is not enough scientific and medical data that the use of gas-powered leaf blowers is linked to health risks. The board decided that the decision to ban leaf blowers during summer is a quality-of-life issue and not a health issue.[81] The proposed summer moratorium nevertheless came before the RTM in 2012 where it was defeated by a vote of 76 to 93 with four abstentions at 11:15 p.m., three hours into its meeting at Central Middle School.[82]

Ten years later, and the only things that have changed are that gas leaf blowers are used even more months of the year, the number of studies proving the health and environmental impacts of their use have multiplied, and the number of residents crying for relief has swelled.[83] Greenwich would be hard pressed to find another issue on which nearly 90% of residents agree that action needs to be taken.[84] Between 2002 and 2016, the number of professional ground maintenance workers in the US grew by 85 percent to 1.6 million.[85] After thirty years of resident appeals, it is time for the Town of Greenwich to take meaningful action.

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79 https://www.nytimes.com/1992/07/17/nyregion/our-towns-the-committee-to-defend-rakes-meets-here.html?searchResultPosition=46 See also https://www.nytimes.com/1993/05/07/nyregion/our-towns-one-voice-tries-to-quell-chorus-of-leaf-blowers.html

80 See Appendix A

81 https://dailyvoice.com/connecticut/greenwich/news/greenwich-health-board-no-leaf-blower-ban/468860/

82 https://www.greenwichtime.com/news/article/RTM-rejects-leaf-blower-ban-3626160.php

83 See Appendix A

84 See Appendix A

85 https://static1.squarespace.com/static/57e80a57414fb52bddd431f1/t/5b633e99575d1ff87ab65897/1533230746436/JamesFallowsSubmissionCOWJuly16.pdf

Section 8: Residents' views about gas leaf blower use in Greenwich:

From February-March 2022, Quiet Yards Greenwich conducted a survey of residents's views and preferences concerning leaf blower use in Greenwich. In order to ensure that a representative sample was collected, the survey was posted and shared widely by Greenwich neighborhood associations, Greenwich-related Facebook sites, the Greenwich Free Press, and other groups who agreed to share our survey with their mailing lists. The survey was completed by 680 respondents. An e-mail was required to login to the survey, in order to prevent the same individuals from taking the survey multiple times. The full survey can be found in Appendix 1. Key takeaways from the survey are:

Current practices:

- 83.7% of respondents said leaf blowers are used on their property
- 71% said that gas leaf blowers are used on their property and 20% said that electric blowers are used on their property
- 88% of respondents said they would consider switching to electric leaf blowers or asking their landscapers to switch. 12% said they would not.

Concerns:

- 69% said that their ability to enjoy their home and yard have been extremely or very impacted;
- 68% said they are extremely or very concerned about the respiratory and toxic impacts of gas leaf blowers;
- 75% said they are extremely or very concerned about the impact of gas leaf blowers on our air quality and climate;
- 71% said they are extremely or very concerned about the impact of leaf blowers on biodiversity and habitat destruction
- **89.6% said they would like to see gas leaf blower use reduced in their neighborhood**

Section 9: Recommendations

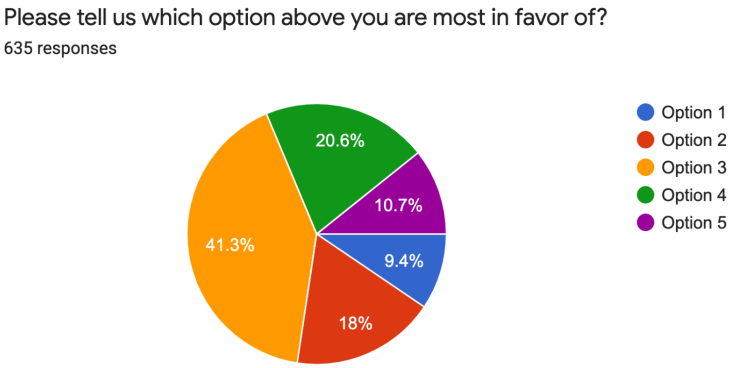
Unlike builders, landscapers face relatively light regulations, and yet their professional practices impact all of us in major ways. In the current policy landscape, lawn care businesses operate according to incentives that do not align with public health or quality of life.

Although many people accept leaf-blowers as commonplace, this is not the first time simple policy shifts could improve the collective experience. Like building codes, which have made homes safer, more energy efficient, and more predictable, leaf-blower ordinances can improve life for the public.

Our survey polled respondents about preferences among 5 options for regulating leaf blower use. The

options were:

1) BLUE: Allow use of gas leaf blowers on residential properties only in the spring and fall, but allow electric leaf blowers year round.
2) RED: Allow gas leaf blowers to be used on residential properties only in the fall, but allow electric leaf blowers year round.
3) ORANGE: Ban gas leaf blowers on residential properties year round, but allow electric leaf blowers.
4) GREEN: Ban all leaf blowers, gas and electric
5) PURPLE: No change to the current ordinance



Source: Quiet Yards Greenwich survey results

Survey respondents strongly favor a full ban on gas leaf blowers (41.3% support) and the second most preferred option would ban both gas and electric blowers (20.6%) Given the lack of familiarity among landscapers with electric equipment, the large size of some properties in Greenwich, the investments that landscapers have made in their current equipment, and delays in the supply chain, Quiet Yards Greenwich recommends the following phased plan for **residential** properties:

1) Year 1: no changes to allow landscapers and homeowners time to buy needed equipment
2) Year 2: gas blowers allowed April 1 - May 1 and October 15 - December 15
3) Year 3: gas blowers allowed April 1 - April 21 and November 1 - December 15
4) Year 4 and thereafter: gas blowers allowed April 1 - April 15 and November 15 - December 15

Additionally:

- If a commercial property is within 100 feet of a residence, then same rules as for residential use should apply
- In comments to the survey, residents expressed strong preference for quiet weekends without gas leaf blower use. However, recognizing that many homeowners tend their own yards on weekends, QYG recommends that Town lawyers investigate whether *commercial* use of leaf

blowers can be prohibited on weekends, but *homeowner* use be permitted during designated hours on Saturdays, Sundays and holidays.

- In order to give residents one quiet day each week, we propose restricting homeowner use of gas leaf blowers to either Saturday OR Sunday, not both days, remembering that they can use an electric blower on any day.
- Our recommendations are meant to address *residential* complaints about noise and other health impacts of gas leaf blowers. However, we urge commercial properties and the Town's Parks and Rec and Department of Public Works to adopt these recommendations voluntarily for the health of their employees.
- Based on the latest available annual report, the Town spent $614,000 on residential leaf removal. Of that, $225,390 was the tipping fee cost and the remainder the labor and materials cost for 32 days of DPW staff chasing after windblown leaves with frontloaders and backhoes from 10,000 parcels. Armonk was able to preserve their leaf pickup program and reduce costs by asking residents to bag their leaves. Other towns, such as New Rochelle, also require bagging leaves. The leaves can then be more quickly removed with a compressor truck, which can hold more bags. QYG recommends that the Town require residents to bag their leaves so as to cut down on DPW use of gas powered leaf blowers and to save the Town money, while preserving this popular amenity.

<u>Section 10: Enforcement:</u>

The impact of any ordinance change is only as good as its enforcement. The Greenwich Police Department has an important job in crime prevention, and QYG does not expect police to patrol neighborhoods looking for illegal leaf blower use. Nevertheless, police should be familiar with the ordinance, and responsive to citizens who call to report violations.

Fortunately, cell phone cameras make enforcement much easier. Recorded videos allow residents to report violations with concrete evidence. Municipalities are shifting away from regulations that require decibel readings in favor of regulations that depend on a single yes/no question: Was anyone using a gas-powered leaf blower during a prohibited period? This makes enforcement more straightforward.

Our research into other municipalities' ordinances reveals the following options for enforcement:

A. Residents with video or sound recording report observations to police
B. Police on routine patrols be willing to enforce ordinance if they observe a violation

<u>Penalties:</u>

The objective of penalties is not to financially cripple any landscaper, but to encourage them to comply with Town rules. Municipalities with restrictions have found that if a fine is too small, it is dismissed as the cost of doing business by larger landscaping companies, but if a fine is too large, then it

disproportionately impacts smaller landscaping companies.

One way around this is to require landscapers operating in Greenwich to register with the Town and to display a registration sticker on their vehicles. Just as Greenwich requires a trade permit for electrical work, plumbing work, HVAC work or generator work, Greenwich could require a permit for lawn care work. This is something Westchester towns require.[86] Re-registration is then dependent on compliance with Town ordinances. The first violation could be a warning, along with information explaining Greenwich's rules. A second violation could result in a suspension for several months from being able to register with the Town.

Registration also makes enforcement easier because it allows residents to report a photo or video violation along with a photo of the registration sticker, without having to confront the worker.

Another way to use penalties without disproportionately harming small landscapers is to impose penalties on the homeowner, in the same way that building code violations are administered. Homeowners must comply with building codes or face fines, stop-work orders and insurance consequences. Homeowner fines for gas-leaf blower violations are used in Bronxville and Larchmont, and create an incentive for homeowners to hold their contractors accountable.

As with speeding tickets, officers can exercise judgment in issuing penalties. A first infraction can result in a warning. Officers should have flyers available explaining the new rules which they can share in order to raise awareness.

A schedule of escalating fines is another way that municipalities incentivize landscapers to comply with new rules. An initial small fine that serves as a warning and educational opportunities, can become a more substantial penalty upon repeated violations.

Section 11: Conclusion:

"Ten years from now, people will marvel that these things were ever used."
--James Fallows, The Atlantic

The speed at which municipal restrictions on gas powered leaf blowers are being adopted is dizzying. Two hundred cities and towns, four counties (one each in Arizona, California, Maryland and Virginia) have done the same. Hawaii has statewide restrictions and is considering banning them entirely, as have California and Illinois most recently. The manufacturers of lawn equipment know that the future is electric. Makita announced that it will discontinue production of all engine products in March of this

[86] See Westchester County Code of ordinances Sec. 863.314 and Section Sec. 863.327. Westchester also requires all leaf blowers to meet EPA Phase 2, 2007 exhaust emission standards. See for example: https://www.irvingtonny.gov/DocumentCenter/View/9875/Landscaper-Registration-Form

year.[87] A Stihl sales representative recently confided that he expects to be selling only electric equipment within ten years.[88]

Big-campus universities including Harvard, Yale, Florida State, NC State, Cal State, and University of Texas, Austin are transitioning from gas to battery-powered equipment. In 2016, South Pasadena, CA became the first city in the nation to maintain all municipal lands and some routine work on its golf courses, year round with battery-powered equipment. The National Association of Landscape Professionals named battery-powered equipment among its top trends for 2018.[89]

The climate emergency we face, the extraordinary pollution spewed by these archaic machines, the meticulously researched and documented health risks posed by these 2- stroke engines, the pleas of residents to be able to enjoy their homes and yards in peace and quiet, and the ready availability of alternatives for yard care management all point to the urgency of taking decisive action.

Many people moved to Greenwich and invested in expensive homes to enjoy the quality of life afforded here. That quality of life is under attack every day, many months of the year. Greenwich residents have waited long enough for relief.

All historically mandated steps toward cleaner technology have been met with alarm. This ranged from banning DDT, to unleaded gas and catalytic converters for cars, to smokestack controls on factories and power plants.[90] There is no reason to think anything different will apply in this case. Greenwich residents will be happier; workers will be safer and healthier; and landscapers will be able to do their job with less friction for everyone involved.

There was a time not so long ago, when smoking in restaurants was commonplace. A ban on smoking in restaurants was introduced in California in 1995, to great outrage. Smokers claimed their rights were being violated and restaurant owners howled that they would be driven out of business. That did not happen. Instead, bans on smoking in restaurants swept across the nation in the ensuing decade. Non-smokers were able to enjoy their food without being forced to inhale someone else's carcinogenic smoke. Even smokers marveled that they could now smell the perfume of a woman walking in the door.[91] Today's gas leaf blowers are yesterday's restaurant smokers.

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[87] https://www.makita.biz/ir/upload_file/tdnrelease/6586_20201029412045_P01_.pdf

[88] New Haven Board of Alders public hearing on leaf blowers, March 6, 2022

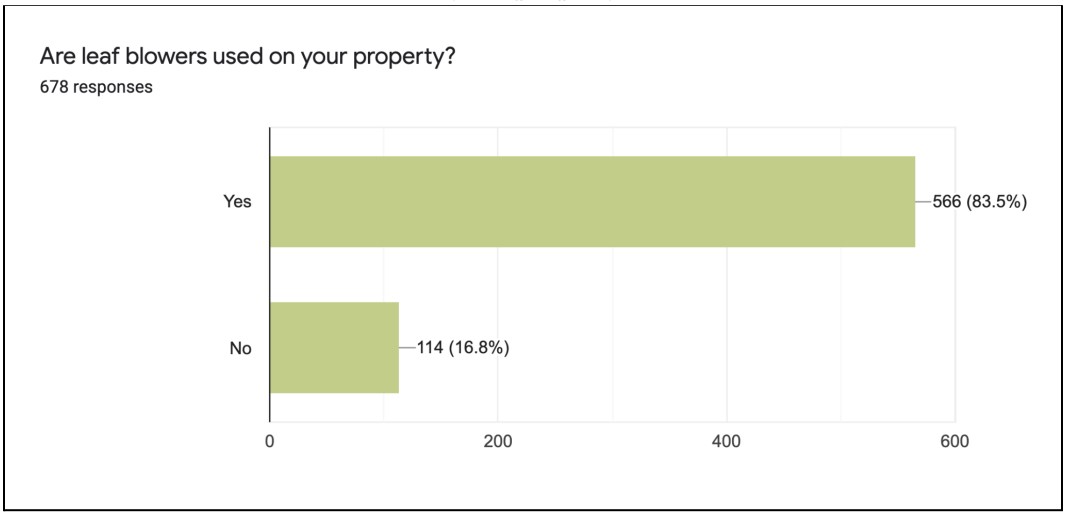
[89] https://www.quietcleandc.com/testimony/banks

[90] https://static1.squarespace.com/static/57e80a57414fb52bddd431f1/t/5b633e99575d1ff87ab65897/1533230746436/JamesFallowsSubmissionCOWJuly16.pdf

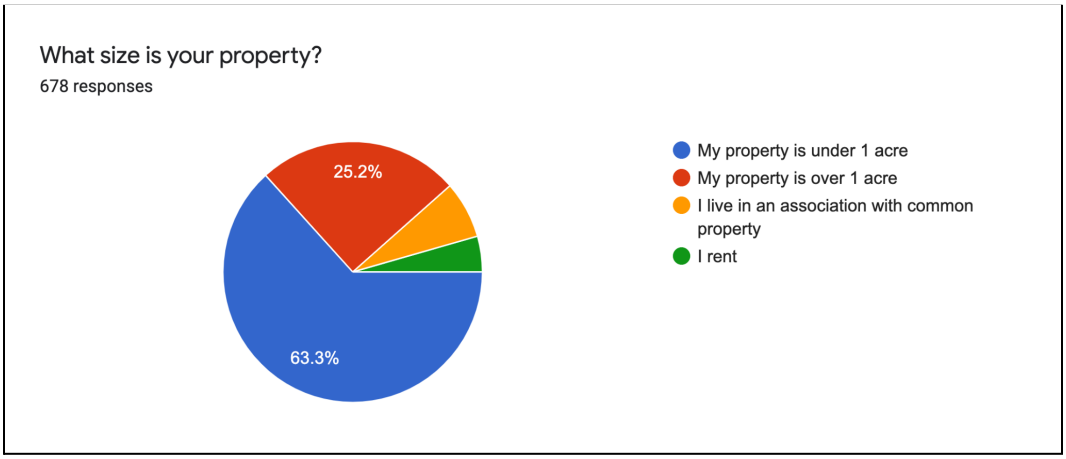
[91] https://scholarship.law.nd.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1117&context=jleg

Appendix A: Results of Quiet Yards Greenwich Survey

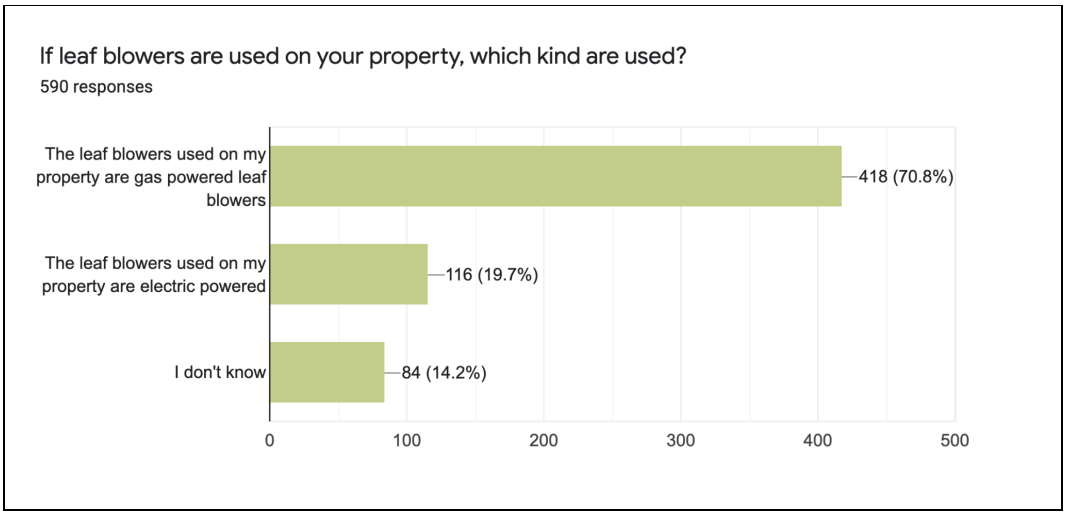
Question 1: Are leaf blowers used on your property?



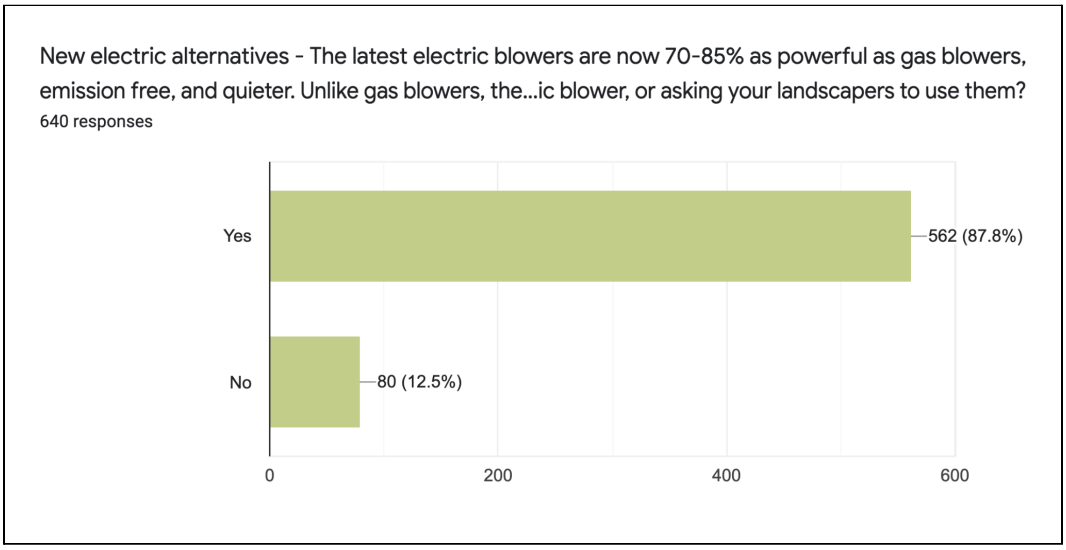
Question 2: What size is your property?



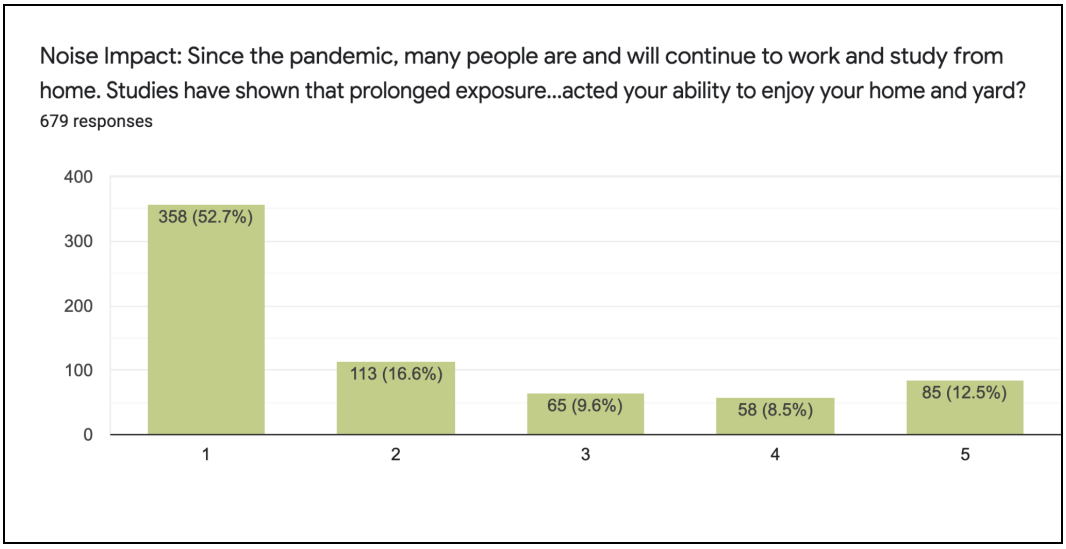
Question 3: If leaf blowers are used on your property, which kind are used?



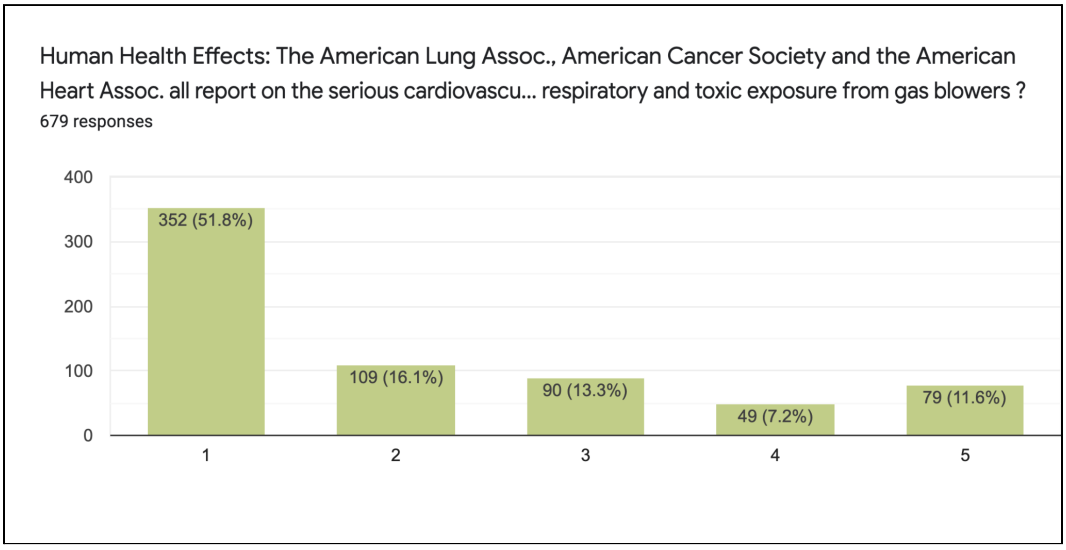
Question 4: New electric alternatives - The latest electric blowers are now 70-85% as powerful as gas blowers, emission free, and quieter. Unlike gas blowers, their frequencies do not penetrate home walls and windows. Electric blowers also cost less to operate and maintain. Would you consider switching to an electric blower, or asking your landscapers to use them?



Question 5: Noise Impact: Since the pandemic, many people are and will continue to work and study from home. Studies have shown that prolonged exposure to the kind of noise generated by gas blowers leads to stress, reduced productivity, and hearing loss, Do you feel that the noise from leaf blowers has impacted your ability to enjoy your home and yard?

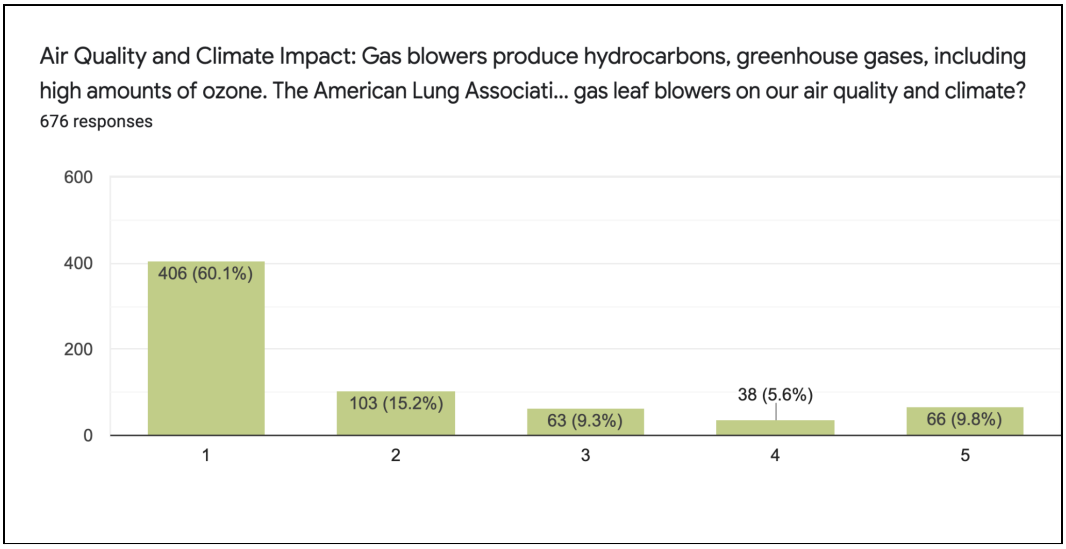


Question 6: Human Health Effects: The American Lung Assoc., American Cancer Society and the American Heart Assoc. all report on the serious cardiovascular, neurological and respiratory health risks associated with the fine particulates and other pollutants released in high concentrations by gas blowers. These emissions include benzene, butadiene, and formaldehyde which are among the four top-ranking cancer-causing compounds. High wind-speeds from gas blowers stir up lawn chemicals, allergens, and hydrocarbons into the air we breathe that can last for hours. Are you concerned about the respiratory and toxic exposure from gas blowers ?

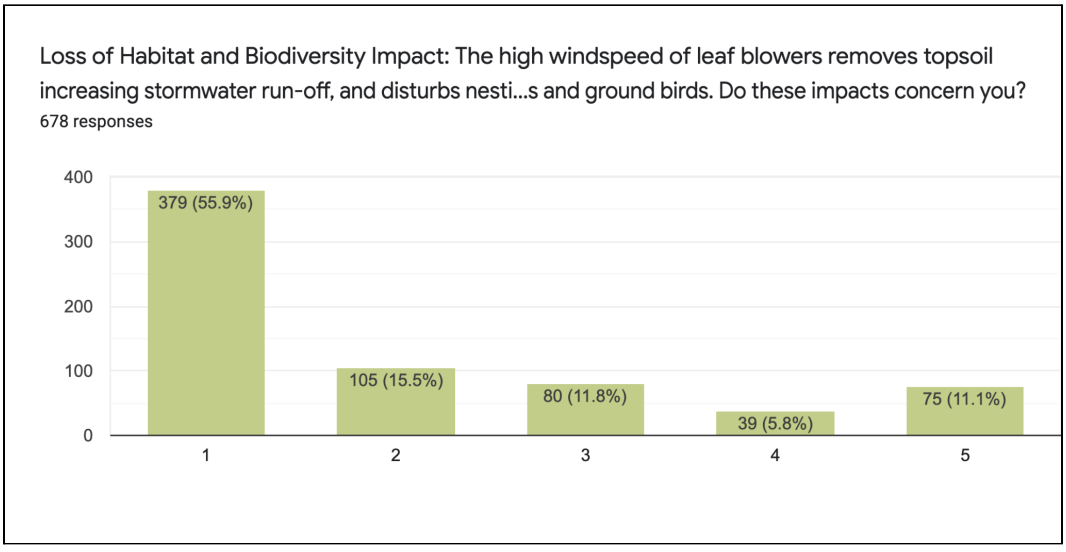


Question 7: Air Quality and Climate Impact: Gas blowers produce hydrocarbons, greenhouse gasses, including high amounts of ozone. The American Lung Association has graded Fairfield County with an F for ozone. Ozone pollution impacts us all, but especially

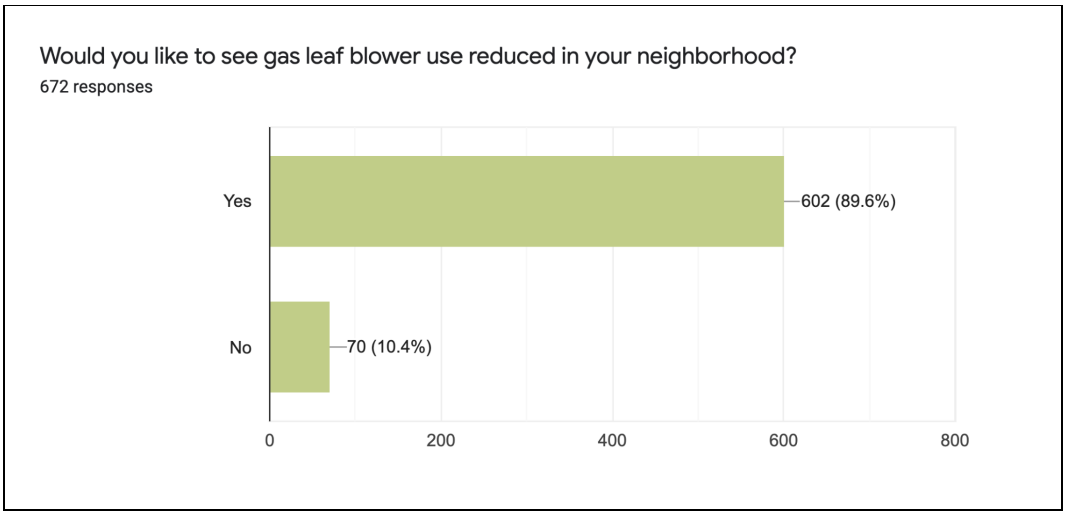
older adults, children and those with lung disease. Gas blowers are far more polluting than cars and release greenhouse gasses that are 30 times more powerful than carbon dioxide. Are you concerned about the impact of gas leaf blowers on our air quality and climate?



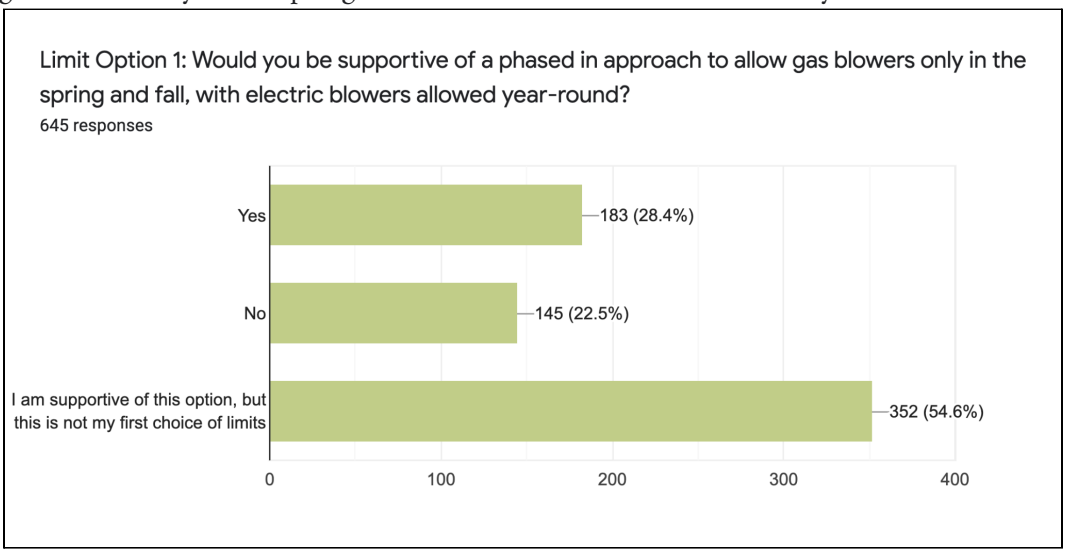
Question 8: Loss of Habitat and Biodiversity Impact: The high wind speed of leaf blowers removes topsoil increasing stormwater run-off, and disturbs nesting insects and ground birds. Do these impacts concern you?



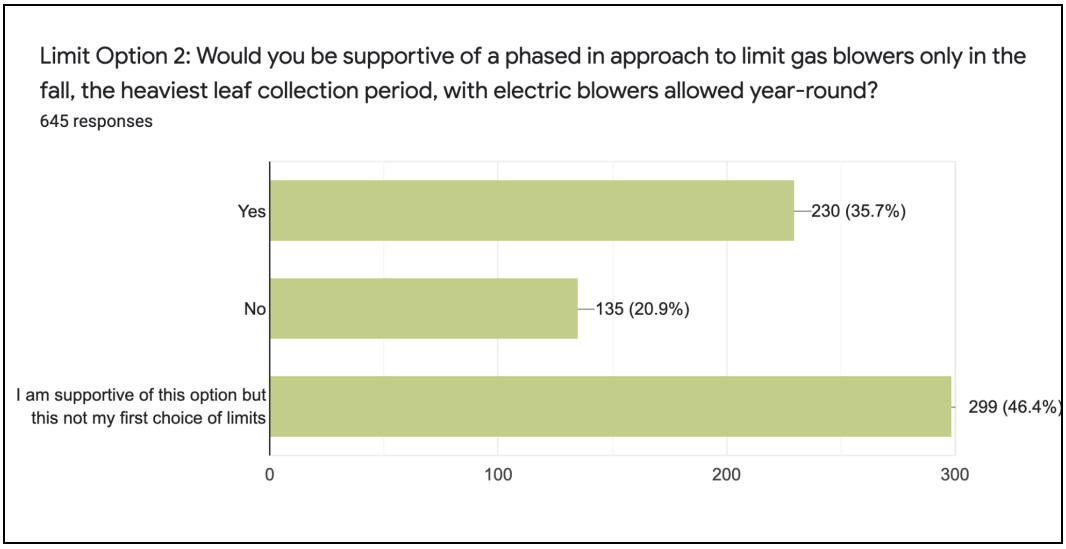
Question 9: Would you like to see gas leaf blower use reduced in your neighborhood?



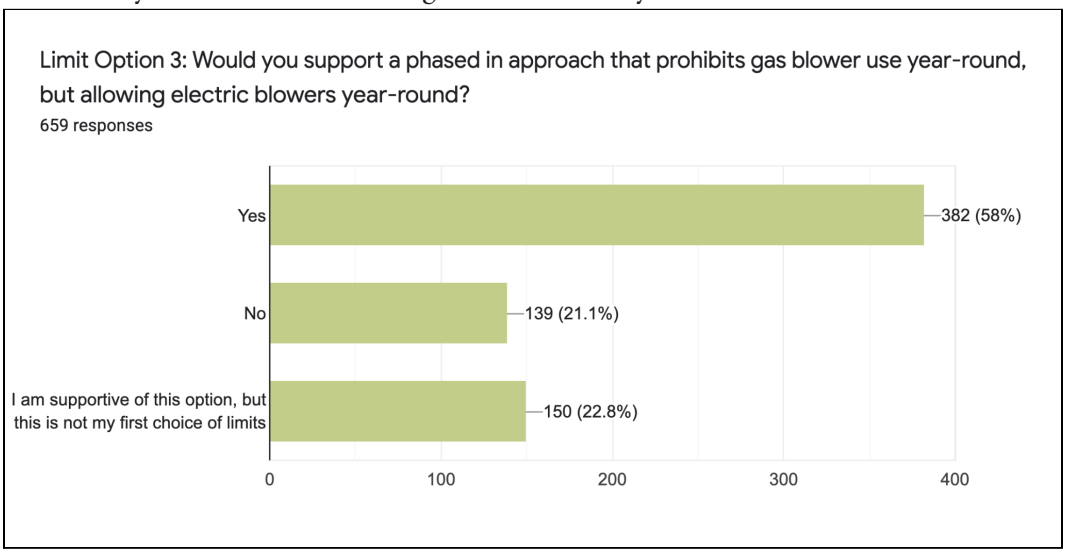
Question 10: Limit Option 1: Would you be supportive of a phased in approach to allow gas blowers only in the spring and fall, with electric blowers allowed year-round?



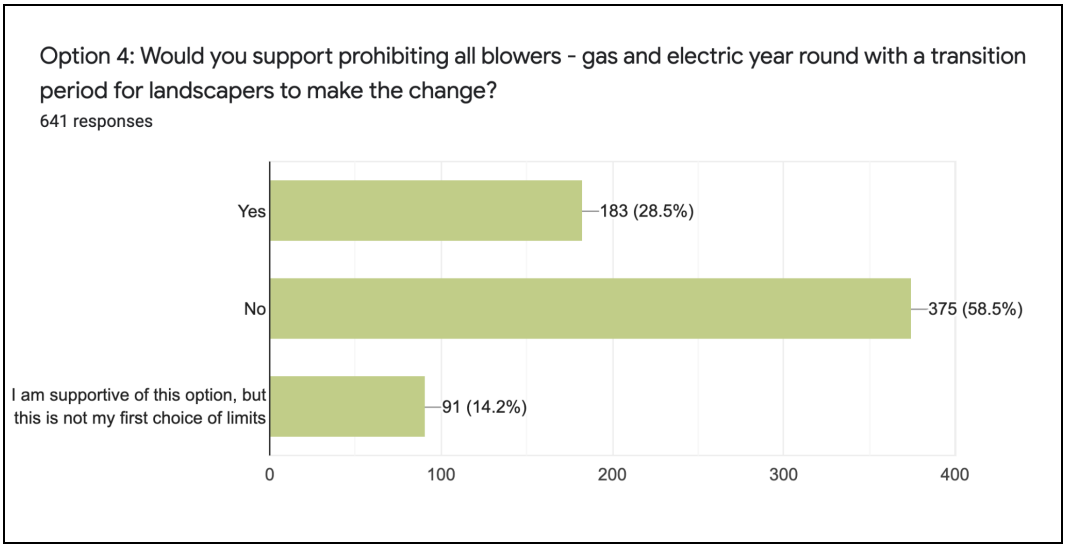
Question 11: Limit Option 2: Would you be supportive of a phased in approach to limit gas blowers only in the fall, the heaviest leaf collection period, with electric blowers allowed year-round?



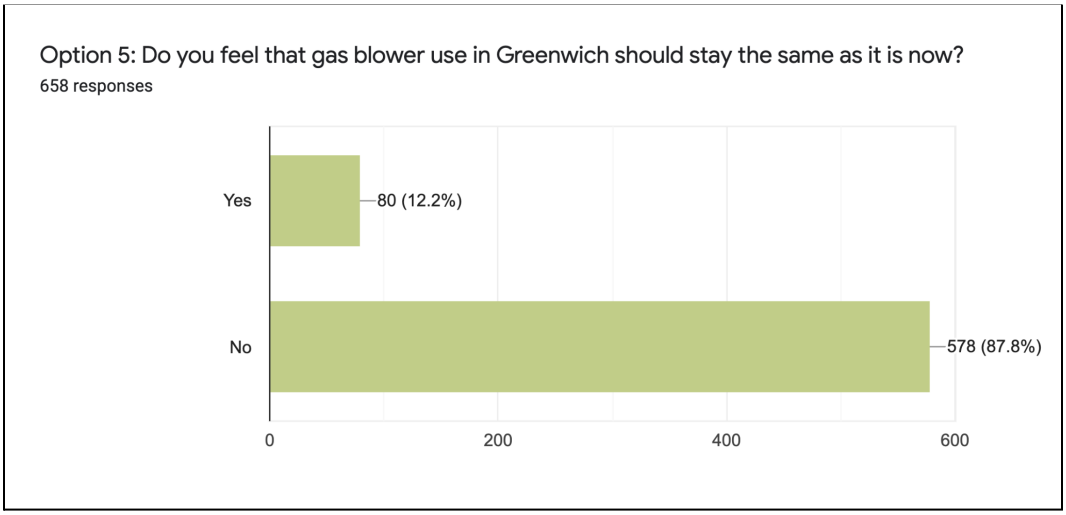
Question 12: Limit Option 3: Would you support a phased in approach that prohibits gas blower use year-round, but allowing electric blowers year-round?



Question 13: Option 4: Would you support prohibiting all blowers - gas and electric year round with a transition period for landscapers to make the change?



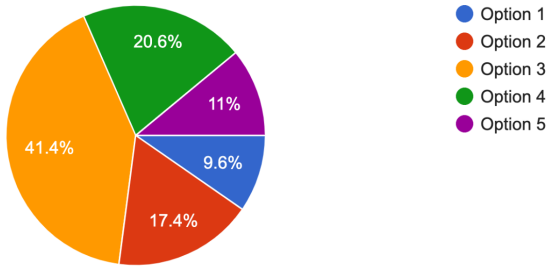
Question 14: Option 5: Do you feel that gas blower use in Greenwich should stay the same as it is now?



Question 15: Please tell us which option above you are most in favor of?

Please tell us which option above you are most in favor of?

665 responses



Question 16: Other comments/feedback:

Other Comments/feedback? Thank you for your time.
Thank you for working on limits! This madness has to stop !
Thank you!!!!
We regularly ask our lawn people NOT to use leaf blowers on our property. We are received with strange looks and baffled expressions.
I'm your huckleberry
The facts about gas leaf blowers are compelling. I believe the more people know about the dangers/downsides of gas leaf blowers, the more likely they will be to act.
I had no idea those gas blowers were so bad for the environment. Seems awareness campaign needed.
Thank you for investigating this issue!
Thank you!
We do not use the services of a landscaper and have a small gas blower we use sparingly on our 1/8 acre property because we mulch our leaves into our lawn. I'd be happy to switch to electric, although we previously had one and it wasn't powerful enough. Many neighbors use landscaping companies that use multiple, industrial-sized blowers simultaneously on similarly small properties. If there is resistance from the RTM on an ordinance banning gas-powered blowers, I wonder whether having restrictions on the HP of the blower, the numbers used simultaneously, and the hours and days of the week they are allowed would make a difference. I'd also support a requirement that leaves must be mulched and put an end to town leaf pick-up, which seems to create problems with storm drains and is inefficient and costly. Requiring mulching would have the added benefit of reducing the town's organic waste removal costs. But I know that's unlikely to get broad support.
Thank you for doing this! I have been on an anti-leaf-blower tirade for a long time, but you're actually taking action - so great.
It would be great if they could limit the days in each neighborhood that the gas blowers could be used - perhaps only 2 days per week and everyone would have to get their gardeners to come on those days. There's too much noise on a day-to-day basis. We need some quiet days besides Sundays.
Preferred Option 6 = a) only permit electric blowers in the Fall season, b) offer a "phase-in"/transition period of either 3 or 5 yrs. to completely phase out all gasoline-powered leaf blowers and c) offer local residents a $50 local property and vehicle/asset tax credit if they can provide proof that they run their own (leaf) mulch pile (e.g. submit 2 pictures/photos with evidence; such pix must contain "geo-location" data, i.e. as address/local verification).

Raking leaves is just as fast as using a leaf blower.
Provide residents and contractors with a standard contract that lists optional services, including limits on blower type and uses. Include “use blower on hard surfaces only.”
I applaud this effort because I detest leafblowers, but I don't think your survey is well designed, or offers a full range of practical options. The scalar questions go from Very Concerned to Not Concerned; generally questions of these types use the opposite scale - I almost answered all the questions incorrectly. The option questions allow multiple choices for each question when it should have been one -- and they could have been presented all as one question. The options you present are very limited. You didn't consider what might be more practical (achievable) options: like limiting the number of blowers in use at one time, or days/hours of use, or maybe using fees to discourage gas blowers in favor of electric. In my neighborhood if there was a limit to one blower in use per property at a time, that alone would make a big difference (though there would need to be enforcement). I appreciate your efforts, but you may want to consider revising the survey. Thank you.
Thank you for your efforts
Go Quiet Yards! Total ban in summer?
Please add to your noise pollution concerns: 1) Crew Coaches pointing electric megaphones at homes on the Mianus River. We love the rowers and love crew, but literally cannot do business in our home offices when the coaches do this. People on the other end of the call hear them clearly through the windows. 2) the highway noise from the Mianus River bridge. It is excessive. Thankyou
I think we should also consider not allowing blowers on Sundays all year around.
PLEASE do something about these hideous machines and their almost constant use. The noise on our street is unbearable approx. April-November. Several close neighbors mow/blow their lawns almost daily for hours each time. I suffer. Our dog suffers.
Thank you for your leadership and concern
Stop trying to regulate and interfere in everyones life!
thank you!
I am very much in favor of limiting leaf blowers in general, but since I do not own the house where I am living, I do not want to offend the owner by signing a petition.
I would also be supportive of a phasing out period vs. an outright ban to give people time to adjust. Also curious if there have been conversations with landscaping companies, are any already making the switch to electric? Thanks for your leadership on this issue!
Didn’t realize they were different types of gas blowers—- electric so much better. Thank you for raising my awareness via your survey.
Thank you!
Thank you for your action on this!
Ordinance for leaf blowers to not be used within 10 or 20 feet of all property lines, including street.
This a high priority for elderly people like myself and my wife.
I have recently moved to a co-op development and these decisions would generally be made by the board or a majority of the shareholders.
I have never seen a more biased survey in my life. The “facts” laid out before each question, who does that? How many additional police officers are we going to hire to enforce this? 4-5? Impact on my property taxes?

Thanks for doing this survey; the near constant use of leaf blowers in our neighborhood has a significant negative impact on our community, and I'm hopeful we can do something to address this.
Thank you for spearheading this initiative, and educating residents about this form of pollution.
Thank you for the survey!
Thanks for doing this. Leaf blowers are a pestilence.
The majority of lawn service providers in my neighborhood ignore the noice ordinance restricting more than one leaf blower on properties less than one/quarter acre.
THAN YOU FOR ORGANIZING THIS GROUP. WE CAN DO IT! YES WE CAN!
One option not mentioned is on-site leaf mulching to return nutrients to the grass -- the "love 'em and leave 'em" initiative from Westchester County is a great example of community Education and outreach in reducing organic yard waste. It's crazy to spend so much time and money removing leaves and then buying mulch and fertilizer to do the job of leaves; I think that obviously many landscapers would not be motivated to offer alternatives for clients (many of whom might be urban transplants and don't have any experience in this area) so it's up to others to teach and promote more sustainable landscaping methods. See http://www.leleny.org
This is a pertinent topic for the Energy Management Advisory Committee of which I am a member.
THE NOISE IS abominable; many Westchester towns have banned them. Let's Lead!
This is a great initiative and I appreciate your efforts.
You should simplify this. It's condescending. People know if they hate them or not and the preachy references are a turn off. You asked.
Two other major detriments to leaf blowers: 1) A lot of people, like I do, actually have allergies in the fall to "tree mix," and the leaf blowers forcefully kick up these plant allergens into the air where they don't naturally belong, causing an allergic reaction; it's terrible. 2) As our neighborhoods predominantly don't have sidewalks, pedestrians have to walk in the street with the cars, but the deafening noise of leaf blowers blocks out our natural instinct of hearing a car coming. Many times as a walker I've been shocked to suddenly have a car blow by me that I didn't know was coming, and I was just glad that I hadn't varied my step in that moment. Conversely, while driving a car, I've often been stuck behind walkers in the street oblivious to me tarrying behind them because they couldn't hear me, and when they happen to glance over their shoulder, they have been quite startled to see me there. Kids on bicycles being oblivious to traffic is my greatest concern - kids are definitely more presumptuous and impulsive. 3) Extra note: leaves are not evil; just chopping them up on your lawn and leaving them there is actually beneficial. Maybe with this proposal, there could be some guidance on constructive leaf management. I don't allow my yard workers to use any kind of leaf blowers.
I would prefer blowers--gas or electric--used only in the fall.
It would be too confusing to monitor and enforce to allow gas some months and electric some months. It should be all electric or all gas and if electric is better for the environment and for our health, then it should be the direction the town heads for the future.
Thank you!
Our property is in the backcountry on 6.9 acres and would be very difficult to maintain without gas or electric-powered blowers. There are no other houses around us, so at this time we do not feel we are imposing on our neighbors or putting them or ourselves at risk by using the blowers. Electric blowers sound like a great alternative, however, so I would like to learn more about them. Thank you for conducting this survey.

Just don’t know much about this topic. Hard for me to answer on the options. But I truly hate the noise gas blowers make.
I work in Greenwich but no longer live there so can't sign a petition. I would like this action taken in the town I live in now.
On the noise issue, I think you've missed one opportunity. Perhaps limit that on a 1/2 acre or smaller property, only 1 leaf blower may be used at a time. Part of the issue of the noise is that when more than one machine is being used (most gardening services), the combined noise is what makes it deafening.
I don't know if a 100% ban is right, but seeing them use to blow snow off sidewalks or to remove leaves from tiny yards seems excessive. I'm excited to hear about quieter, cleaner electric blowers!
The Town has a noise ordinance which is not being complied with. See Ordinance 6b5 which I will send in an email.
I feel grass should be replaced by ground covering plant , such as wild strawberries or others. Most ground covering do not require watering because it conserve humidity in the ground. They do not require fertilizer and weed killers that accumulate in the ground over the year. They do not required to be weekly mowed which saves gaz energy and noise. With ground covering plants, leaves can stay on the ground to nourish the plant and protect them. Banning leaf blowers is a very timid attempt to save the environment and our health. We need to change the grass growing culture. Thank you.
Thank you - this is important
There should be a Sunday ban on any kind of noisy machines.
Contact landscapers in the town by compiling a list of them, perhaps by going to garden clubs to getting names or going through Town Depts to start campaign
We like to take walks around our neighborhood, so even use of leaf blowers on other streets impairs our enjoyment with noise and dust.
I’ve heard of neighborhoods allowing leaf blowers only certain days of the week, so there is quiet 5/6 days of the week and only one or two days is noisy. No matter what type of leaf blowers are used, this sounds like a good idea to me.
I would like to hear more about financial incentives to make it possible for homeowners and landscaping companies to change to electric. Otherwise, mandates like this disproportionately harm small immigrant-owned landscaping companies and lower-income homeowners. I also wonder why gas-powered lawnmowers aren't part of this.
I strongly support eliminating the use of gas lawn blowers in town...but, this "survey" is very leading. Beginning with facts section and preambles to several questions that are clearly meant to influence the outcome. For these reasons (not mention self-selection and likely lack of randomization), it will not provide any legitimate data on the subject. If I were on the opposite side of this issue, I would easily drive a diesel-powered, heavily polluting Mac truck through this gaping hole. If we want to convince our neighbors to take action and support this issue, we must use honest arguments and sound data.
I love that you have taken up this issue, I HATE the noise and fumes of gas leaf blowers. My electric leaf blower is definitely weaker and runs out of batteries, which I would guess is the pushback. At any rate, YES, I support getting rid of gas leaf blowers!

I am very concerned about environmental issues with gas blowers, but the noise level on ALL blowers is out of control. Every single day, the noise is intrusive. Even if you ask your own landscaper to minimize their use, you are subject to the properties around you. The noise is CONSTANT. I would like to see restrictions on both days of the week and hours of the day on the noise. I just hope people understand that asking landscapers to rake leaves might increase the labor costs of maintaining property. I am happy to absorb this cost for my own property; my crew works hard and deserves to get paid. Sometimes I take the rake up myself and enjoy the exercise. Perhaps the town could also educate residents on the benefits of composting their leaves as well. This is "eco-friendly" in general and might also help reduce the need for town pick up of leaves.
I understand this is a complex issue which may require compromise but the incessant sound of leaf blowers has come to dominate my neighborhood's soundscape 3-4 hours every day of the fall, spring, and summer. This has become a quality of life issue that impacts all but most directly those in our neighborhoods during the day (landscape workers, children, stay at home parents, retirees, remote workers, wildlife, etc.) My preferred compromise would be only allowing electric powered leaf blowers during the fall and select days per week during the spring. Thanks and good luck.
At my apartment complex they use multiple gas powered leaf blowers. Riding and hand carried. The noise drives me insane and I can't think straight. I called the GPD because there's is an ordinance in Greenwich that says only one leaf blower can be used per property, regardless of the size of the lot. I call the police to enforce because the landscaper is supposed to receive a ticket and all I get from GPD is "due to COVID we're having limited contact with the public on these matters." So all Spring and Fall and Summer it's non-stop racket every time the landscaping crew comes to work on the property. I think that ordinance was started by Barton Biggs' daughter the attorney and I'm glad she did!
Would be great if you could make this survey easily shared on Facebook or other social media to spread the word.
Option 3 is the most ideal solution for the future, for sure. But at the same time, I feel that there needs to be a transition period as well as some financial support before it can be implemented. Thank you for making "idea" into "action"!
Thank you for working on this!
I would also like to limit the hours air conditioning is used.
This is as biased as I could ever hope to imagine. You have way too much free time on your hands. Find something more productive to do.
I feel that you are missing the mark here. We only have one real chance to get this right especially since it's failed in the past. I think we should be restricting leaf blowers altogether, gas or electric, to a specific time period per acre - and make all landscapers register with the town to agree to our rules. We limit our own blowers to 20 minutes and they miraculously get the job done where before they would chase individual leaves for 1-2 hours. And, how do your proposals limit the ground-baring, insect killing, habitat destroying nature of the blowers?
Thank you for doing this
Great initiative!
Thank you — this is LONG overdue and it is time for residents to take action against these detrimental in all aspects machines!
Thanks for your efforts.
Limit leaf blowers to M-F and NO Weekends
As Tom Petty liked to say "I won't back down." Push had, you're bound to meet strong resistance but it's the right thing to do for our planet.
thank you for organizing

This is a one sided survey!
Thank you for doing this!!
Thank you for Doing this! I hate leaf blowers!!
Most landscapers are small, independent workers - not large companies. Who's going to buy them new equipment and who thinks they're entitled enough to make that decision for them. It's a grueling manual labor job that most times is not as lucrative as one would hope. They'd likely lose business in the end due to having to raise their prices to make up for the costs of new equipment. Let people make their living for goodness sakes. It's like 15-20 minutes to do an average yard.
If you would like to come rake my leaves go ahead. I have both gas and electric. The electric don't last long enough and are not powerful enough. Stop trying to cost me more money.
Thanks for doing this! Wonder if we could get electric tool companies to help us. They certainly have an interest in getting people to switch to electric.
Please help to make the leaf blower hell stop! Not allowed in Europe and many other places and a full on terror here.
This is a great survey, and excellent initiative!
I would like to see a restriction of days blowers are used. I think the most aggravating thing is that it is all day, every day. It would be nice if different neighborhoods had different leaf blowing days.
The exhaust from leaf blowers in the fall has triggered migraine headaches that lasted 4-5 days. This is difficult to avoid since I now work from home permanently due to the pandemic. I also have to plan my calls around the daily landscaping schedule because there is nowhere inside the house I can go that avoids the noise.
Thank you for addressing this very important issue!
I was very aware of the noise pollution as all of my neighbors use these blowers and often during lunch or dinner hours making it unpleasant to sit outside on our deck. There should be time restrictions as well. I learned from this questionnaire about the significant air pollution problem as well.
I am less concerned about the type of blower and more concerned about the noise pollution. I would be supportive of restricting days and/or times for leaf blowing. It seems lead blowing occurs at all hours of the day, every day of the week - even on weekends - making it annoying to be outside and difficult to schedule WFH calls.
Please let's ban gas powered leaf blowers in Greenwich. Every single day in my neighborhood there are several different landscape crews that come in with 3-4 industrial gas blowers and they go all day long every single day of the week. Let's end this madness!
I'm in favor of any reduction of gratuitous noise, especially after Metro North cut down all the trees and shrubs that acted as noise buffers from the constant noise from I-95
I would like to speak more in detail about this from a greenwich ave renter resident perspective. Please call me.
I think this is the kind of change that needs a lot of education for the public, specifically how do neighboring communities restrict gas blowers and how is that working out for them? What has the impact been on the landscape companies? It would be wonderful to reduce noise especially in dense neighborhoods, and improve our health and environment, but we also shouldn't lose sight of the fact that there are many small owner operated businesses that depend on leaf blowers to efficiently do their job. This could cost them in spending more hours on a job and in turn cause them to raise prices on their customers. Again, just want to make sure that the solutions/restrictions appropriately reflect all of these considerations. Thanks!
Thank you for raising this issue!!

Thank you for initiating action on this serious health, environmental, and quality of life issue.
We need some relief. Thank you for taking this initiative.
The problem is also that neighborhood landscapers come on different days--therefore we hear the blowing 6 days per week. It never stops. 1x/week would be tolerable, but the way we live and work in Greenwich makes this noise incessant....sometimes even on Sundays if a landscaper is bold enough to break the rules.
a town ordinance is the only way to make this change effective
This is great that you are doing this. This is a terrible problem that ruins many beautiful days in Greenwich. Something needs to be done here!!!!
Leaf blowers only allowed a few hours per day and none on Sunday
Can we add snowblowers.
Keep existing regulations with improved enforcement
Let’s speak to people who are in the industry to get other points of view.
This is loony nonsense. I would actively campaign and fund a movement to PREVENT the elimination of gasoline leaf blowers and lawn equipment.
They’re bad for the guys who use them.
We switched to electric last year. We couldn't handle the noise and pollution from gas powered lawn equipment any longer. It was affecting us negatively in several ways. Thanks for doing this!
We use less expensive landscapers at our home and they likely couldn’t afford the electric blowers. Could the Town or even private subsidies be considered to help keep cheaper landscapers and lawn maintenance guys in business ? I worry the cost to care for my property will be prohibitively high if I have to switch to the expensive companies who can afford the transition — but I really want to combat noise and emissions pollution at the same time.
I would like to see sample test cases where a blower is used vs a small team of rakers. The efficiency of people over some machines, the health and safety of the workers, the reduced cost to the environment, and the greater employment of skilled rakers are all considerations. Education as to the environmental benefits to leaving leaves in places where they can begin to decompose, to harbor beneficial insects and small animals over the winter, where they can serve to enrich the soil instead of being carted away... need to be taught and understood to help homeowners change their habits.
If product limitations can’t be implemented—time periods perhaps? On my street everyone uses diff landscapers so it means that there is constant disruptions as everyone has it done diff times and days. If there was more of a limit on when they could do it, the disruption wouldn’t be so nonstop.
Thank you for your efforts. Please split or reword some of the options where 2 questions are embedded in one. I'd like to give a transition period to make the switch to electric, but blocking the use of any blower year round seems not practical.
The constant use of gas leaf blowers in spring, summer and fall is an incredible nuisance. The noise pollution it creates interferes with our right to the quiet enjoyment of our homes. It needs to change. That said, it would be impractical and very damaging to small landscape businesses to implement a radical, immediate change. That’s why I’m in favor of a phased-in approach that still permits electric leaf blowers. If that is not feasible, an alternate solution is a time-limited solution involving certain prescribed “leaf blowing” days and times.
I’m extremely happy that something might be done about the leaf blowers.
Thank you for addressing this very important issue.
Thanks for organizing this

I take care of my own lawn and leaves on 4 acres. Leaf blowers overused by landscapers. They blow leaves and debris in circles when they should use a rake and hands or shovel to pick up the material. At a minimum town of greenwich should be enforcing the existing leaf blower ordinance.
Outright ban on gas blowers is impractical. How would landscapers charge up electric blowers constantly during the day? However, all blowers are overused during the summer and there should be strict limits on use. Every property does not need to be blown every time the grass is cut between May and October.
Something needs to be done about the noise pollution in Greenwich. There is not only constant blowing of leaves and mowing but construction of houses as well. I am a lifelong resident of Greenwich and am saddened to see the quality of life in this area decline
I have been working out my home office for 20 years and have not been bothered by leaf blowers operating in the neighborhood. I have a 2-acre property and operate my own gas powered backpack leaf blower. I believe concerns over leaf blowers are overblown - no pun intended. Those who are concerned about "constant" noise should work with their neighbors to have the same landscaping crew come through the neighborhood just one day per week.
Not at this time
Wow
The noise regulation in Greenwich has to be updated.
I live across from the newly built Greenwich country day high school and they use blowers for 2-3 hours on Saturday mornings. It is constant and very disruptive. We have contacted the school and there has been no change. Larger buildings with more grounds like schools, churches etc should not be using these gas blowers.
I would like to see landscapers limited to certain days of the week so you do not have the noise every day!!
I am most concerned about the noise on weekends when many of us have time for the yard.
Please email me your email as I know others who may be interested in this.
Appreciate your efforts to ban gas leaf blowers
Landscape should use powerful electric device to minimize the time they produce noise.
There are certain job sizes that are too big for electric blowers. You may have to make exceptions for Town clean-ups and multi-acre estates.
Electric powered leaf blowers are simply not feasible for many yards. The battery powered blowers are not powerful enough for heavy lawn debris. Corded blowers cannot be used in all places because there are are limits to how long electric cords can be and there are limits to where electricity is available on properties. I'd consider asking the company that does our lawn care to use electric blowers but there's no way that they can given the layout of our property. The restrictions on when gas blowers can be used that are already in place seem to do a perfectly fine job of balancing the need to clean up lawns with the desire to avoid disruption from the noise of leaf blowers.
how about a phased in approach that limits gas blowers for commercial landscape companies - those are the loudest ones. The home depot blowers aren't as bad, and would probably get more buy in by residents if residents can still use their own personal ones. alternatively, consider weekends only for blowers - or something like that. trying to push for a full ban on gas blowers in this town will probably hit a wall - recommend going more incremental and model this based on what other towns have done. thanks
Thank you for taking this initiative!
Thank you for your efforts!
we do own a gas powered leaf blower but I limit using it to literally once or twice in the fall

Enforce the times that gas leaf blowers can be used. Too many people ignore these regulations.
Good luck!
They are already banned in some or all Westchester towns
I own a gas powered leaf blower. I use it only a couple times a year. As someone who self performs my landscaping I do not wish to have restrictions put on me which would cause me to purchase new equipment.
Thank you for your efforts. Please put on your website information about how many 1/4 acre size yards can be done with one rechargeable battery and also what one commercial quality electrical blower costs. I support this initiative, however, I am concerned about the expense and manageability for small business landscapers and sole proprietors.
No one needs leaves blown all year.
Whether gas or electric all blowers are blowing chemicals in the air frim people who put weed killers, pesticides, etc. into the air. So in essence the pollution is not just from the gas blowers but from what all blowers blow I to the air. None are really good for our health.
I was involved with the campaign to reduce them about 10 years ago and would love to give it another try.
The noise pollution is just unbarable. The town does not enforce existing ordinances. I live in a zone of 0.1 to 0.4 acre plots and those are limited to one leaf blower between certain hours of the day. Yet many gardening companies that service other homes in my neighborood use 2-3 leaf blowers at all times of the day.
Thank you so much for taking this on. It's a menace and greatly impacts the quality of life here in our beautiful town.
This year we mowed our leaves into our lawn, Rest of leaves left where they fall. And I have been raking for years. I do use and electric mower to clean my gutters during the fall . thank you for moving this forward. Maybe we could at least count on quiet Sundays and evenings?
Very informative. I was not aware of the many issues caused by gas leaf blowers and leaf blowers in general. Thank you for taking this stand.
Please do not publish my comments with my name.... I mostly rake my back yard. My property is 1/10 acre. My neighbor puts on a headset like he's guiding in airplanes and blasts his driveway, front porch and tiny yard sometimes twice a day, year round. I smell it. I heard it and it is so annoying. I'd support a gas-powered leaf blower ban year round.
only home owners should be allowed to use blowers. Ban landscaper use
Thanks for taking this on. But you've missed an important option imo. Time -restricting the use of any /all blowers. Also I fell a bit differently about their usage in commercial v residential parts of town. Thanks again
Good work! Happy to distribute this survey in my neighborhood and among friends
My favored option is leaf blowers in spring and fall but none between Memorial Day and at least Labor Day. I don't know enough about the issues involved in using electric leaf blowers to have an opinion about them for lawn services and commercial operations. Educating people about the rules that do exist--only 1 leaf blower on lots of a smaller size and encouraging people to manage the blowing that does occur on their property is a great first step. Have some phrases in Spanish since often in my experience the leaf blower operator and I do not speak the same language and have trouble communicating.
Our neighbor on John St. has about 20 acres and except when there is snow on the ground the owner has their full time grounds maintenance man blowing, blowing, blowing! It is incessant and drives us crazy. It is daily Spring, summer and fall unless it is pouring rain. I've seen and heard him out there in moderate rain or after rain when it is difficult to blow leaves - it takes him forever!
Great idea!

Educate landscapers on not blowing pollutants into the air that would otherwise naturally fall to the ground and wash away
Great initiative. Thank you for organizing!
Highly support electric blowers!
This survey should be sent to Greenwich property owners, not just residents.
You neglected to mention that ambient noise in excess of 50dB is detrimental to health in that it causes a significant increase blood pressure - this is irrespective if the person find the noise irritating or not. The effect is not diminished by habituation.
Leaf blowers should also restricted on the times they are used and enforced. Many start before 8am on a Saturday or Sunday
Never before 9 AM and No wind blowers (EVER) over weekends !!!!!!!!!!!!!!!!
I am not sure what kind of organization you are. Could you please send me more information about your organization
I feel that the benefits of blower usage far outweighs the negatives.
It's unlikely that blowers will go away completely. Some alternatives I'd like to suggest - for zoning under an acre have black out days of the week, or establish limited hours/day, when no blower activity can happen so residents can plan events or mtgs at home without surprise blowers going off in the middle. - in general a more nuanced approach might be more palatable to residents if solutions are designed around population density. - and finally, with the help of local media educate home owners to the value of natural property management. This survey doesn't ask but I'd guess those eager to stop noise pollution would be equally interested in fewer pesticides.
My neighborhood includes residential properties owned by Greenwich Academy. Their landscapers use multiple gas-powered leaf blowers simultaneously on these very small lots, which creates an overwhelming decibel level and must be in violation of town ordinances.
substituting electric (means they don't work) for gas won't solve your concerns about topsoil will they? You are so biased it makes me sick
Let's get this done!!
There should be restrictions by day and time as well. Our blower is used almost exclusively for decks and driveway.
This survey begins with bias towards the use of the leaf blowers and is continued throughout. That said, I won't/can't debate the effects of leaf blower usage that you have provided, but can you address the financial impact that comes with removing leaf blowers. Who offsets the added costs of landscapers raking and bagging leaves? What happens to all the gas powered leaf blowers owned by homeowners? Will the Town buy those expensive blowers back. Note that properties in the R-12 and less receive free leaf removal from the Town, something not afforded to the R-1 and larger districts. As a biologist and former Audubon Board Member, I can tell you that ground nesting birds are not impacted by properties using blowers due to their size and the frequency of human activity. If you are trying to foster communication on this topic, you've gone about it all wrong with this survey.
Yes! Thank you for spearheading this initiative! I have shifted my landscapers to electric but its been an uphill battle and they still insist on using their gas blowers in the spring & fall. I feel like this change can't happen soon enough. It is a huge problem.

I hope the cost for yard maintenance will not increase too much if use of the gas powered blowers is not permitted.
There are already town regulations (Chapter 6B) on times these can be used and operated, along with all other construction work. Please do not upend that as there is a tremendous amount of construction throughout the town. The ramifications could also be disastrous on already shitty traffic conditions throughout town if yard work takes more time and effort from crews, pushing the time periods of their work closer and closer to the start and finish of these regulated time windows. Under the real possibility of this negative externality you're neglecting, even a reduction in 15% in power via EV vs Gas powered blowers, as your survey pushes as "best case", should not be deemed acceptable. Remember, people opt and pay for these crews and methods for a reason.
Do you think this survey is biased?
Greenwich is diverse. One size regulation does not fit all situations. We have gone through this fight several times. The best way forward is to have each neighborhood discuss the situation and decide if there is a problem and decide on a solution for their neighborhood. It is my understanding that the Health Dept does not consider this a health problem. Until it is considered a health issue, I doubt you will be able to get an ordinance passed no matter how much pressure you apply.
We need all noise from leaf blowers and tree removal/grinding reduced.
I live in a part of Greenwich where properties are 1/4 to 1/2 acres. Landscapers will use up to 3 gas powered leaf blowers at one time with three landscapers. The noise level is so loud my family can't even be on the deck outside to eat a meal. Another issue is landscapers are on weekends are using gas powered leaf blowers after 3pm and the police dept is not aware that leaf blowers are not allowed after 3pm and don't care. My neighbor will use his leaf blower after 6pm during the week and on weekends.
I raised this issue with Fred Camillo, a few years ago. He told me that he would discuss it with the town office involved with blowing to see if the town could switch to electric. Obviously he did nothing. I have stayed at a Marriott resort in Orlando. They only use electric blowers where the workers strap the battery pack to their back. I told Fred. C. about that, to no avail.
Big problem as I see it is there is noise from landscapers everyday. Seems like all my neighbors use different gardeners and they all come at different times so the noise is pervasive. If they all came the same day would be better but obviously that will never happen.
I would like there to be no restrictions on a homeowner using one leaf blower on their own property, while limitations on commercial users are ok. The curfews are unduly burdensome on people who cannot retain commercial landscapers and must maintain large properties themselves. However, there should be reasonable means of enforcement to control the landscapers. Electric machines are impractical for a single person because of limited run times.
The other concerning issue that needs to be addressed is the environmental damage caused by the brine that is put on the streets prior to a snow storm. The damage far exceeds its usefulness. Although it should not be used at all, possibly limit it to major highways such as I-95 and the Merritt Parkway, for example. The towns are overusing the brine.
I am in favor of an immediate elimination, yes elimination of gas blowers with no exceptions for landscapers. It's their problem and they can fix it. No need for moderation.
Gas mowers also reduce the residential appeal of our neighborhoods because it is unpleasant to be outside, walk, jog, or ride anywhere near where they’re being used.
Think there should be a noise ordinance prohibiting all but emergency clean up on sundays and federal holidays
No landscape work should be allowed on Saturdays and Sundays! We want quiet weekends!
Thank you for putting this together. Leaf blowers are a real nuisance in more ways than one. Some of our neighbors have up to 3 leaf blowers, together with ride-on ones. Crazy. One note to have any chance of making

progress: any proposal needs clear exception for the City's DPW and perhaps makes a distinction for landscaping companies (phased approaches, financial incentives, ...)
I'm 100% in favor of electric blowers. I own one, an Ego power+ 600 that cost about $400. It works great on my front walkway, deck or driveway. However, I also live on 4.25 acres of wooded property so I can attest that for clearing my yard it is 100% useless! Unfortunately, at this time electric blowers are simply not yet a viable option for many home owners and for all professional landscapers. They are significantly more expensive and not even a fraction as powerful as gas models. Yes, incentivize the use of electric blowers where possible, but learn much more about them before you propose banning or limiting their use. The motivations to ban or limit are correct, but reality doesn't yet support the solution. ((To put my comments in further prospective, I purchased the first electric hybrid car available for sale in 2003, and have since driven a fully electric car for years. However I also wouldn't support the ban or limitation of gasoline powered vehicles for the same logic.)
I question the need for weekly visits by landscapers. This is in their interest not in the interest of the neighborhood. So please consider limiting the frequency of leaf blower use. Also, leaf blower use occurs on almost every day of the week and therefore it is an annoyance most every day and at different times. Consider limiting by neighborhood the days and times on which leaf blowers can be used. Consider limiting the size of property on which leaf blowers can be used. Closely spaced properties must have a limit regarding the number of leaf blowers and the type of leaf blowers that can be used. Larger properties have gangs of landscapers using leaf blowers and the sound carries for perhaps half a mile. Rakes are really effective in removing leaves and should be used more frequently. Raking, by homeowners!, Is a good form of exercise and should be encouraged. This can be done in association with explaining the benefits of composting. Leaves are not the enemy. Home owner education as to the deleterious effects of the use of leaf blowers should be made a priority. Many people simply don't know that there are negative affects, or that are there are alternatives to leaf blowers. We can encourage landscapers to inform their customers as well. Some will be happy to do this others will think we are idiots. The overall negative affects of extensive lawn care and leaf blowing need to be brought to greater public attention. There seems to be a societal norm that having a perfectly clean and manicured landscape is the most desired state. This is nonsense in today's world.
Thank You!
You don't offer raking, which was done in may lifetime. I have seen 2 or 3 men with blowers walking side by side with full power blasting on. Noise is awful. Pollution and destruction of soil health/ habitat is bad. Also they blow over the delicate flowers and leaves, breaking them. Raking is quiet, would provide a few more jobs and is better for the ground. The cost of the blower and gas is gone A good big wooden rake lasts a long time and combined with a smaller metal one for certain places do not require a big truck to haul them along with the gallons of gas jugs. and ramps, etc..
Thank you for doing this-it's been driving me crazy. why can't they just use a rake?
Education on the use of any blower as electric blowers can still do environmental damage.
Thank you for taking on this important issue.
I am grateful that someone is finally doing something about this.
Yes, I also suggest homeowners, if able, should take care of their own property.My son took care of my lawn until he went to college. It only takes about an hour and you can spend time with your family and show your children what it's like to care for a home and they can earn a couple of bucks rather just giving them an unearned allowance.. Also, when you are in your yard you meet your neighbors, get exercise, and good old fresh air instead of being inside on a beautiful day possibly on the phone or on line.

The noise is constant all summer long and prevents us from enjoying our own backyard.
Thank you for the survey. Education on leaf blower pollution and the effects on our natural habitat needs to be in place. The town should eliminate all leaf blower and cultivate landscaping projects with this in mind. Audubon needs to educate around bird habitat and the impact of leaf blowers. The Garden and land use organizations need to address this aspect of planting in their community workshops.
I worry about the cost of electric blowers , the time it woudl take whcih would affect the cost to consumers. THey are only there once a week
Thank you for organizing on this issue! I am especially concerned with the environmental pollution.
Electric blowers only , during limited hours, never on the weekends
Cars with loud exhaust tailpipes are a concern to many in my Byram neighborhood. This should be addressed with current traffic laws if we are concerned about nose pollution.
Our town's noise regulations should be re-evaluated. They may not be sufficient for noises like leaf blowers and percussive noises like skateboarding
Thank you Karen and Elizabeth, for your work on this!
Thank you for undertaking this effort
Thank you for taking up this issue! The noise and pollution from gas blowers make life in this 'quiet' town absolute hell!
The Town of Greenwich has a noise ordinance regarding leaf blowers and noise. Enforcement is first step.
Electric blowers don't do as good of a job now, and the battery lasts very little on a power level compared to gas-powered. Let us make sure we are smart about phased-in, practical approach to the transition. Happy to help - was planning this transition in my property.
Thank you for doing this!
I think limits could be based on property size, with under an acre and multifamily immediately moved to rake and electric only; up to 2 and 4 acres phased out more gently.
Gas Leaf blower should be forbidden, they cause too much noise and air pollution. We use rakes on our property.
Electric blowers would be a very welcome and quiet solution to a noisy annoying problem.
Thank you for sending this
Leave the rules the way they are now.
Please get this done
Thank you for starting this project. It is about more than quality of the air we breath. It is also such a waste of gasoline Years ago a local Riverside resident wrote about this many times in local papers. I will locate those articles. Rose
I have lived in Old Greenwich for 30 years. The profileration of gas leaf blowers in the last 5 years on properties less than an acre is staggering. No one is aware or follows the 'one gas blower' at a time ordinance. Weekly (spring, summer and fall) multiple blowers work in multiple small yards and far exceed the allowable noise levels. I have called the Greenwich police to issue warnings to property owners and the police are not interested. Please begin in Old Greenwich. There is a small number of residents using electric mowers - perhaps a push for both

pieces of equipment would work. I think both landscapers and property owners are price-sensitive, but open-mnded. Supporting grants for equipment conversion, might help to keep both parties economically happy. Thank you.
The current situation is a nightmare and needs attention. Thank you for trying to correct the excessive noise and pollution.
Someone always has to complain about something- requiring electric blowers for companies is ridiculous, limited the use of gas blowers also ridiculous
Stop the wokeness crap and leave business and people along. There are noise ordinances on the books already!
Why can't you use this Survey in place of a "petition" wouldn't it serve the same purpose without giving too much personal info?
Thank you for doing this.
This is a huge problem that needs to be addressed. It seems to be nonstop.
I moved from Rye to Greenwich last June and am shocked and dismayed by the excessive and unnecessary use of gas powered leaf blowers everywhere i go in Greenwich, especially downtown where I live. I was part of the effort in Rye to put into place a seasonal ban on these dangerous and polluting machines and would like to help out with the effort in Greenwich. My cell phone is 646-541-6495. Thank you, Melissa
leaf blowers are unnecessary and should not be allowed at all.
I am supportive of using electric leaf blowers, but the problem is getting the landscapers to invest in them. Ideally raking leaves by hand is best for lawn care, the environment and the noise level, but it is time consuming and labor intensive. Landscapers are not currently willing to change their ways.
Very short term ie from Spring 2022: no use of gas leaf blower on week-end, max 1 per property 9am-5pm. Penalties on landscapers not following existing rules housed be enforced
Could they also be limited in some manner? Monday through Friday? From 8am to 5pm?
Thank you for taking the initiative to do this. I was aware of the noise pollution gas blowers cause (I have functioning ears), but I did not know about the other forms of pollution they cause. Thank you for educating me!
If the people sponsoring this survey are really concerned about carcinogens you should look into what you are sleeping on. In order to comply with 1633 laws; you are sleeping on fire retardant chemicals in your mattress. The leaf blower nonsense is just that. Non gas leaf blowers are just as load as gas. I have been working from home since 2015 and it has never been an issue.
Living on the water we get an unending cycle of leaf blower noise from all our neighbors on the cove. Sound travels amazing well across water!
Thank you for all your efforts!
I’m so grateful you’re trying to enact this change
This is a way of making a living what’s next police officers can’t use cars/sirens bc they are loud and bad for environment?
I support gas free blowers and lawn mowers. Need to move to electric or battery powered equipment
I support this research and initiative 100%

Are there any plans to limit even electric blowers to just the spring and fall ? Also, any estimates of how landscaping fees may go up for the average homeowner with any of the options ?
I actually favor a 6th option that is not in your survey, which is: gas powered blowers banned all year round and electric blowers allowed at limited times and in a limited way (rather than allowed all year round). I personally would love to have no blowers anytime at all year round, but I just think the option of allowing SOME electric blower usage is more realistic.
Thank you for your leadership in working on this problem
Too noisy in town!! We need stricter rules governing use / there should NOT be blowing On Sundays with heavy fines if you disobey !!
Thank you.
Would like to get the fact sheet.
I don't 100% get your options. What is like to see is that there are more limits to the days/times of all noise-producing leaf. blowers. Right now, people use them 7 days a week 7a-5/6pm. For me, that's the problem. There's noise and fumes all day every day
Please inform us who are the specific town officials responsible for enacting a ban on leaf blowers. Town Selectman? Others?
I would prefer no leaf blowers for the protection of the insects, birds, etc. but I opted for the electric option because I don't think you'll get people to rake or pay their landscapers the extra $ that that would cost.
I would be in favor of having each neighborhood only be allowed to use electric blowers certain days/week.
Thank you!

Appendix B: Letter from Yale School of Medicine Physicians to Town of Greenwich

February 14, 2022

Dear Greenwich Officials,

Gasoline-powered leaf blowers (GLBs), pose multiple health and environmental hazards. Growing dependence on gas leaf blowers for cleanup and routine landscape maintenance in CT, even for jobs that do not need to be done at all, is contributing to a public health emergency. The main argument of the landscaping industry is that they need these powerful, polluting, noisy machines to do their job. The truth of the matter is that, in Spring and Summer, there are few leaves to be blown. Grass clippings are actually good for the grass, and those that fall on patios and sidewalks can be taken care of with broom, rake, or left as is. Cities and towns in NY, NJ CA and elsewhere have restricted or banned GLBs without any cost increases to homeowners.

The major health and environmental hazards of gas leaf blowers are: Noise pollution, Exhaust pollution (out the back end), Fine particulate pollution (out of the front end), Environmental degradation, including water pollution and animal habitat destruction.

Noise from gas-powered leaf blowers can range from 95–115 decibels at the ear of the operator. Anything over 85 decibels can injure a person's hearing in as little as 2 hours. Even at 50 feet, GLB noise is typically rated at 65-75 decibels. These levels are orders of magnitude – because decibels are on a logarithmic scale. The noise from GLB is beyond that deemed safe by WHO, CDC, OSHA and NIOSH for workers and the public . In many neighborhoods, even the quietest [192] GLB will affect 23 homes at greater than 55 decibels, whereas many louder GLB will impact as many as 91 homes with a noise that can be heard at greater than 55 decibels.

The EPA recommends that sound levels be kept to less than 45 decibels indoors and less than 55 decibels outdoors in order to prevent interference with normal speech and relaxation. The definition of noise is "unwanted or disturbing sound" that interferes with normal activities such as sleeping, conversation, or disrupts or diminishes one's quality of life.

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[92] Fink D. 2017. What Is a Safe Noise Level for the Public? AmJPH January 2017: Vol. 107, No. 1, pp. 44-45. http://ajph.aphapublications.org/doi/abs/10.2105/AJPH.2016.303527

Noise is more than just an annoyance; exposure to high levels of noise can cause countless adverse health effects. These include stress-related illnesses including impaired immune systems, high blood pressure, learning and communication disabilities, speech interference, hearing loss, sleep disruption, impaired child development as well as lost productivity. The EPA states that "noise degrades quality of life by impairing communication and social interaction; reducing the accuracy of work, particularly complex tasks; and creating stressful levels of frustration and aggravation that last even when the noise has ceased." ' Even moderate noise levels can increase anxiety, decrease the incidence of helping behavior, and increase the rise of hostile behavior in experimental subjects. GLB noise is particularly toxic, as its low frequency component travels through walls and windows and can travel long distances.[93] The effects of noise particularly impact children, seniors and those with neurological conditions, including autism.

During the pandemic, many more people have been affected by the noise from GLB than ever before. People are working from home, teaching from home and learning from home. As a front line worker, I know that front-line workers do not want kudos from the public – they want to rest between shifts. If the community expects nurses, doctors, paramedics, fire, police, and all of the other front-line workers to be awake and ready to take care of people no matter what time they have an emergency, that can only happen if these essential workers can sleep during the day. GLB anywhere in a neighborhood emit a grating, low frequency sound that makes sleep impossible. There is no question that the high levels of noise disturb most household pets as well.

Exhaust pollutants (or as I call them, "Back-end pollutants") released by GLBs include volatile organic compounds (VOCs). These are HAPS: Hazardous Air Pollutants (defined by the US EPA as pollutants that cause or may cause cancer) Gas leaf blowers are primarily 2-stroke engines which have no emissions controls, are inefficient at burning fuel, and are highly polluting. In one hour, they create the same amount of hydrocarbon pollution as driving a F-150 pickup from Connecticut to Texas . They have an air jet velocity of 150–280 mph, much higher than hurricane strength winds.[94] Growing evidence implicates the 2-stroke engine in particular in increased risks of early death, heart attack,

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[93] http://www.epa.gov/clean-air-act-overview/title-iv-noise-pollution ,American Public Health Association; Noise Pollution Policy Statement
http://www.apha.org/policies-and-advocacy/public-health-policy-statements/policy-database/2014/07/16/12/50/environmental-noise-pollution-control

[94]https://www.edmunds.com/about/press/leaf-blowers-emissions-dirtier-than-high-performance-pick-up-trucks-says- [4] edmunds-insidelinecom.html

stroke, congestive heart failure, asthma, chronic obstructive pulmonary disease, cancer, and other serious health conditions.[95] Workers, children, seniors, and people with chronic illness are at greatest risk.

Gasoline lawn and garden equipment accounts for 5%–10% of total US emissions of carbon monoxide, carbon dioxide, nitrogen oxides, hydrocarbons and small particulate matter.[96] These are considered "Criteria Pollutants" (harmful to public health and the environment). Even low-level exposures have been associated with respiratory and central nervous system effects.[97] GLB pollutants such as hydrocarbon vapors, nitrogen oxides, and carbon monoxide react in the presence of heat and sunlight to form ground-level ozone, the major component of smog, and a known respiratory irritant and risk factor for cardiovascular disease. A recent report predicts that in a few years, the worst single ozone polluter in California will be gas garden equipment.[98]

Fine particulate matter (PM2.5 are under 2.5 microns, easily assimilated in the lungs) or front end pollutants have been linked to all-cause premature death, myocardial infarctions, anxiety, strokes, CHF, and respiratory disease – including asthma attacks. A recent study implicates particulates and exhaust pollutants of the type released by GLBs to an increased risk of dementia. Two-stroke engines account for the vast majority of PM2.5 in landscape maintenance.[99] PM2.5 may contain animal fecal matter, fertilizers, pesticides, herbicides, allergens, diesel soot, brake dust, rubber tire particles, and/or

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[95] Brook R.D., et al.; Expert Panel on Population and Prevention Science of the American Heart Association. Air [5] pollution and cardiovascular disease: a statement for healthcare professionals from the Expert Panel on Population and Prevention Science of the American Heart Association. Circulation. 2004;109:2655–2671. Li S, Williams G, Jalaludin B, et al. Panel studies of air pollution on children's lung function and respiratory symptoms: a literature review. J Asthma. 2012 Nov;49(9):895-910. Mustafic H, Jabre P, Caussin C, et al. Main Air Pollutants and Myocardial Infarction. A Systematic Review and [7] Meta-analysis. *JAMA*. 2012;307:713-721. Rice MB, Ljungman PL, Wilker EH, et al. Short-term exposure to air pollution and lung function in the [8] Framingham Heart Study. *Am J Respir Crit Care Med*. 2013 Dec 1;188(11):1351-7. California EPA Air Resources Board: "A Report to the California Legislature on the Potential Health and [9] Environmental Impacts of Leaf Blowers" Feb. 2000 http://www.arb.ca.gov/msprog/mailouts/msc0005/msc0005.pdf

[96] Michaels H, US EPA. NONROAD Overview presented at the 2012 International Emission Inventory Conference, 2012. *US EPA 2005 data in* Volckens J, Olson DA, Hays MD. Atmospheric Environment 2008;42:1239-48.

[97] Regulated by National Ambient Air Quality Standards established by the EPA. See http://www.epa.gov/air/ criteria.html Volckens J, Olson DA, Hays MD. "Carbonaceous Species Emitted from Handheld Two-Stroke Engines," Atmospheric Environment 2008;42:1239-1248.

[98] http://www3.epa.gov/ozonepollution/health.html California Air Resources Board Study http://www.kqed.org/news/story/2017/02/28/227727/california_weighs_tougher_emissions_rules_for_gaspowered_garden?source=npr&category=u.s

[99] http://www.medscape.com/viewarticle/874069

heavy metals or other toxins (e.g. arsenic, chromium, lead, mercury*).*[100] One hour of GLB use can blow up to 5 pounds of particulate matter into the air, and this particulate matter can be suspended up to 5-7 days. A recent Harvard study published in *Science* found that communities with high air pollution levels from PM2.5 experienced significantly higher rates of covid death, even after controlling for other variables.[101]

Environmental degradation is another way that GLBs impact a community. The high velocity air jets of leaf blowers – 150-280 mph – can destroy nests and small animal habitats; desiccate pollen, sap, and other natural plant substances; and injure or destroy birds, small mammals, and beneficial insects. High chronic noise levels decrease biodiversity in affected areas. ' GLBs damage plants, remove beneficial topsoil and mulch, desiccate and compact soil, diminish plant health and contribute to the spread of invasives.[102] This increases dependence on use of fertilizers, herbicides and pesticides, all of which can be blown into storm drains and pollute water supplies.

A final word concerns social justice issues. Most of the landscapers who do the actual work are low-paid hourly workers, without adequate health insurance or a say in their working conditions.

Sincerely,
Ada Fenick, MD
Associate Professor of Pediatrics, Yale School of Medicine

Karen Jubanyik MD
Associate Professor Emergency Medicine, Yale School of Medicine

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[100] US EPA 2012 study: *Provisional Assessment of Recent Studies on Health Effects of Particulate Matter Exposure,* EPA/600/R-12/056F, December 2012. Banks J. and McConnell J. National Lawn and Garden Equipment Emissions; presented at EPA's 2015 International Emissions Inventory Conference, San Diego, CA April 16, 2015. American Lung Association: State of the Air 2015 http://www.stateoftheair.org/2015/assets/ [18] ALA_State_of_the_Air_2015.pdf, Power M et al: *The relation between past exposure to fine particulate air pollution and prevalent anxiety: observational cohort study,* BMJ 2015;350:h1111. http://www.medscape.com/viewarticle/842093?src=emailthis

[101] Wu, X., Nethery, R. C., Sabath, M. B., Braun, D. and Dominici, F., 2020. Air Pollution and Covid-19 Mortality in [20] the United States: Strengths and limitations of an ecological regression analysis. *Science advances,* 6(45), p.eabd4049.

[102] file:///C:/Users/lucy/Downloads/10048_NO0235_PublishedReport.pdf Barber, JR, Crooks, KR, Fristrup, KM 2010. The costs of chronic noise exposure for terrestrial organisms. Trends in EcologyEvolution,25(3),180. https://www.nps.gov/subjects/sound/upload/Wildlife_AnnotatedBiblio_Aug2011.pdf

Naftali Kaminski MD
Professor of Medicine, Yale School of Medicine
Boehringer-Ingelheim Endowed Professor of Internal Medicine Chief of Pulmonary, Critical Care and Sleep Medicine Department of Medicine, Yale School of Medicine

Appendix C: Letter from Pediatric Environmental Health Specialty Unit, Medical Grounds for a Restriction on Internal Combustion Power Tools and Leaf Blowers

https://quietcommunities.org/wp-content/uploads/2020/09/042210_Mt-Sinai-Pediatric-Environmental-Health-Letter-1.pdf

Appendix D: Landscaping Companies interviewed for this report

4D's Landscaping
A&G Landscape Contractors
Adam Landscaping LLC
Aesthetic Landscape Care
Bedford Landscaping and Tree Care
Capocci Landscaping
Ceci Brothers
Cemar Landscaping
Chiappetta-Fierro, LLC
C Lorenti Landscaping
Coperine Landscaping
Creamer Landscaping and Lawn Care
D&M Landscaping
Dunster Landscaping
Eden Farms
Electrocut
English Gardens and Designs
Exquisite Environments
Fulton Landscape Design
Furano's Landscape
Gary Camillo Landscape Services
Green Day Landscape
Green Natural Landscaping
Greg Twardy Landscape Contractors
GroPro
HJ Landscaping
Hoffman Landscapes
Insight Groundworks
Jade Garden Design
Kusco Tree and Lawn Care

Laurel Rock
Lindquist Design Associates
Materia Brothers
Mike Sinisi and Sons
Morano Landscape
Mow Green
North Greenwich Landscaping
Organic Ways and Means
P. Fernandes Landscaping
Pennington Grey
Pepper Ridge Landscaping
Pete De Markey Landscape Contractor
Plan It Wild
Pyoor
Richard James Landscaping
Rodriguez Garden and Stone
Rolling Lawns
Sharp View Property Maintenance
Simply Chores
Soto's Service
Super Green Land Services
Total Turf

Appendix E. Quiet Yards Greenwich Green Guide

Landscapers currently offering electric mowing, electric blowing, electric clipping/trimming, or raking to Greenwich customers.

Appendix F: Towns that have adopted gas leaf blower restrictions

Part 1: Nationwide

AZ: Maricopa County (20 municipalities) * **CA state*** **Colorado**: Aspen, Carbondale * **CT**: Norwalk, Stamford * **Washington, DC** * **FL**: Coral Gables, Miami, Naples, Palm Beach. Tampa, Key West * **HI state** * **IL:** Evanston, Glencoe, Highland Park, Lake Bluff, Lincolnwood, Oak Park, Wilmette, Winnetka * **MD:** Montgomery County (19 municipalities), Chevy Chase * **MA:** Arlington, Brookline, Cambridge, Lexington, Lincoln, Longport, Newton * **MI:** Ann Arbor, Blackmon, Cassopolis, Kalamazoo, Oakland, Richland, Roseville * **NH:** Portsmouth * **NJ:** Maplewood, Highland Park, Montclair, Princeton, Woodcliff Lake * **NY:** Ardsley, Bronxville, Croton, Dobbs Ferry, East Hampton, Flower Hill, Garden City, Great Neck, Greenburg, Hastings, Huntington, Irvington, Larchmont, Mamaroneck (Town and Village), Newcastle, New Rochelle, NYC, North Hempstead, Nyack, Orangetown, Oyster Bay, Pelham Village, Rye, Scarsdale, Sleepy Hollow, Southampton, Tarrytown, Thomaston, Tuckahoe, White Plains, Yonkers * **NC:** Chapel Hill * **OR:** Portland * **TX:** Highland Park, Houston * **VA:** Fairfax County, Alexandria * **WA:** Seattle

Part 2: Some Cities and States currently considering gas leaf blower restrictions

NY State:

- SB7599: To prohibit gas blowers between May 1 - Sept 30
- Bill S74621 would require all lawn care equipment sold in NY State to be zero emission by 2027

New Jersey:

S4273 would prohibit the sale and use of gas powered leaf blowers in NJ

Maryland:

HB934 would prohibit the sale and use of gas powered leaf blowers in Maryland

Illinois:

SB3313 would prohibit the sale and use of gas powered leaf blowers in Illinois

Oregon:

HB3023 would prohibit the sale or use of gas powered leaf blowers in counties with populations over 400,000

Rhode Island:

S2168 would make it illegal to use gas-powered leaf blowers in Rhode Island and ban them from being sold

in stores

New Haven:
First public hearing on gas leaf blower ban, Board of Alders, March 6, 2022

Boston City Council:
Ordered a hearing to discuss options for regulating gas-powered lawn and garden equipment

Part 3: Types of restrictions in place in neighboring towns

Limits to number of blowers per property
Ardsley (1 blower per property for maximum of 30 minutes)
Mamaroneck (1 blower per 5,000 sf, maximum of 3 blowers per property)
Ossining (maximum 2 blowers on ½ acre property or less)

Landscapers must register with the Town:
Ardsley (both landscapers and leaf blowers must be registered)
Garden City, NY
Irvington
North Hempstead, NY (discount off registration fee with proof of purchase of electric equipment)
Tarrytown

Weekend restrictions:
Tarrytown (commercial use prohibited Saturdays, Sundays and holidays from September 16 through June 14, but personal use is permitted)

Summer restrictions
Bronxville (6/1 - 9/30)
Rye (5/1 - 9/30)
Hastings (5/15 - 10/14)
Bedford (5/15 - 9/15)
Mamaroneck (5/15 - 9/30)
New Castle (6/1 - 9/30)
New Rochelle (6/1 - 9/30)
Sleepy Hollow (Memorial Day - 9/30)
Tarrytown (6/15 - 9/15)
Tuckahoe (6/1 - 9/30)
Yonkers (6/1 - 9/30)

Summer and winter restrictions

Dobbs Ferry (5/2-9/14 and 12/16 - 3/14)
Greenburgh (5/16 - 10/14 and 12/16 - 2/28)
Irvington (6/2 - 9/14 and 12/14 - 3/14)
Mt. Vernon (6/1 - 9/30 and 11/16 - 4/14)
Montclair, NJ (5/16 - 10/14 and 12/16 - 3/14)
Town of Ossining (6/2 - 9/14 and 12/16 - 2/28)
Village of Ossining (12/16 - 2/28 and 6/2 - 9/14)
Pelham Manor and Village (5/1 - 10/14 and 12/16 - 3/14)
Port Chester (12/15 - 3/15 and 4/15 - 11/15)
Scarsdale (January - September)
White Plains (5/16 - 9/30 and 12/16 - 3/14)

Year-round ban on gas-powered leaf blowers
Larchmont (January 2022)
Irvington (December 2023)
Mt. Kisco (January 2027)
Rye (2023)
Village of Ossining (for properties of ½ acre or less)
Lexington, MA (March 2025)