

Town of Ridgefield, CT

Gas-Powered Leaf Blower Committee

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Executive Summary

The Task Force evaluated the use of gas-powered leaf blowers in Ridgefield with consideration for noise, health and environmental impact, actions of other local jurisdictions, enforcement potential and commercial impact. Each of these factors is discussed in the body of this report.

Based on these discussions, the task force developed the three (3) actionable options listed below. Each option received majority votes (5/8 votes) from Task Force members. Details for each proposed option appear later in the document.

Option 1 Status Quo Plus (No change) – gas-powered leaf blower usage at the discretion of the user.

Option 2 Time & Day Restrictions - gas-powered leaf blower use restricted to certain days and time of day restrictions.

Option 3 Work Restriction - gas-powered leaf blower use restricted to heavy duty jobs (e.g. fall cleanup)

The task force further recommends the Board consider the following four (4) task force consensus points. All eight (8) members agreed to these consensus points. Details of consensus points are included in the full document.

1. Municipal first – lead by example: The Town of Ridgefield should be at the forefront of any action taken on gas-powered leaf blower use.

Should the Board decide to implement any restrictions, then consider the following:

2. Geographical or lot-size approach: Consider applying restrictions only to certain areas of town.
3. Transition time: Allow for adequate time to adopt the new regulations/restrictions
4. Exemptions to any restrictions:
 - a. Extreme weather events
 - b. Agricultural operations
 - c. Ultra quiet gas leaf blowers in manufacturer specifications ≤55 dBA
 - d. Golf course cultural practices

Background -- Creation of the Ridgefield Leaf Blower Committee

The Ridgefield Noise ordinance ([Chapter 250-4\(F\)](#)) permits one to use any lawn equipment, including a leaf blower, from 7 am to 9 pm. Leaf blowers may be used every day of the year, including holidays, and the number of leaf blowers is unrestricted. Other than the specified time of day, the only restriction is the leaf blower must be “adequately muffled to avoid loud noises.”¹

In July of 2023, a group of Ridgefield Residents created an organization called Citizens for Leaf Blower Moderation (CALM). In accordance with the Ridgefield Town Charter, CALM circulated a petition to modify the Noise Ordinance to limit the use of gas-powered leaf blowers to the Spring and Fall cleanup months. CALM collected four hundred and forty-two (442) signatures of registered Ridgefield voters.

However, during the course of the petition process there were amendments/changes proposed by the public. The petition process is very restrictive however, and would allow only minor technical amendments. Rather than proceed to a special town meeting and vote on the petition as proposed, the Board of Selectpersons decided to create a town taskforce to study this issue.

In January 2024, the Board created a charter for the task force and advertised for town residents to volunteer to participate. Eight (8) Ridgefield residents were selected to participate on the taskforce. The Board selected three (3) Members who were in favor of restricting gas leaf blowers, three (3) Members who were opposed to any restrictions, and two (2) Members who were neutral on the subject. Members of the taskforce included expertise in relevant subject matters including landscaping, sound/noise, battery technology, law, and health. Task force members are listed in Appendix 1.

Charter

"The committee is tasked with conducting a thorough study to assess the feasibility and potential impact of implementing restrictions on the use of gas-powered leaf blowers. This study should encompass a range of considerations, including environmental concerns such as noise pollution, air quality, and carbon emissions, as well as the practical implications for landscaping businesses and homeowners. The committee is expected to gather data on alternative technologies and practices, evaluate the experiences of other municipalities that have imposed similar restrictions, and engage with stakeholders from various sectors to solicit input and perspectives. The goal of this study is to provide evidence-based recommendations that strike a balance between

¹ “Noise generated by engine-powered or motor-driven lawn care or maintenance equipment shall be exempted between the hours of 7:00 a.m. and 9:00 p.m., provided that noise discharged from exhausts is adequately muffled to prevent loud and/or explosive noises therefrom.

environmental sustainability and the needs of the community while considering the economic and operational aspects of transitioning away from gas-powered leaf blowers, including the possibility of making no change.”

Meetings / Methodology

The Leaf Blower Committee held its first meeting on June 6th, 2024 and continued to meet routinely until January 19th 2026. Subject matters included:

- Committee organizational matters,
- Noise and noise measurements,
- Ridgefield Police enforcement of the current ordinance,
- Interviewing representatives from local jurisdictions that have implemented gas-powered leaf blower restrictions,
- Interviewing outdoor power equipment suppliers and commercial lawn care operators,
- Ridgefield Fire Department’s training and experience with lithium battery fires,
- Collecting information from relevant Town departments, and
- Health and environmental impacts of gas-powered leaf blowers

In addition to regular meetings, the Committee established a dropbox to place presentations and relevant reading materials. The dropbox was organized by the subjects shown above. The dropbox materials were available to all Task Force members to review and for reference during the proceedings. A listing of the dropbox entries is included as Appendix 7.

Option Selection

Gas-Powered Leaf Blower Usage Recommendations to Board of Selectpersons
The Task Force discussed a broad range of options, from no change to full prohibition. The three (3) options listed below received majority votes (5/8 votes) from Task Force members. No option received more than five (5) votes. Details for each proposed option are shown here.

Option 1. Status Quo Plus (No change)

This option would follow the current noise ordinance. There would be no additional restrictions placed on the use of gas-powered leaf blowers. However, the Board would promote educational activities and incentives to promote the transition to different technology (which may include battery-operated equipment) and would request a Task Force, at a future date, to re-evaluate whether restrictions were warranted.

Option 2. Time & Day Restrictions

This option would restrict the use of gas-powered leaf blowers to certain days and time of day restrictions. Gas leaf blowers would not be allowed on State or Federal Holidays and would be limited to 10 am to 3 pm on the weekends. From December 1 – February 28th, gas leaf blowers would be allowed from 9 am to 4 pm. For the remainder of the year the commercial district hours of operation for gas leaf blowers would be 7 am – 6 pm; and residential areas 8:30 – 5 pm.

Option 3. Work Restriction

This option would restrict the use of gas-powered leaf blowers to those tasks requiring heavy duty use (e.g. fall cleanup, clearing large clumps of wet grass, and certain golf course cultural practices like aeration and top dressing). All light duty tasks (e.g., blowing dry grass clippings after weekly mowings during mowing season) would be done using battery operated equipment. This will not apply to home owners.

Consensus Points

During the option selection discussion, the task force developed the following four (4) consensus points. All eight (8) members agreed to these consensus points.

1. Municipal first – lead by example: Regardless of the option the Board decides to advance, the Task Force recommends that the Board adopt a municipal first – lead by example approach. If the Town decides that transitioning to battery-powered leaf blowers is warranted, two (2) of the town departments are already using handheld battery technology and all of the town departments could, over time, increase their use of battery-operated equipment. A significant complaint of the commercial landscape operators to the petition was that the municipality was largely exempted from the proposed ordinance.

Should the Board decide to restrict the use of gas-powered leaf blowers, the following consensus points apply:

2. Geographical or lot-size approach: the Board should consider applying restrictions only to certain areas of Ridgefield (e.g. the village) or to the smaller lot sizes (e.g. equal to or less than two (2) acres)
3. Transition time: the Board should consider a transition time for the following purposes:

- a. Minimize waste generation: providing a transition time would allow for existing equipment to reach its end of useful life. For example, the town could have the shortest transition time (one year), followed by commercial operators (two years) and then residents (three years).
 - b. Monitor technological improvements: battery technology has improved and is expected to continue to improve. Power and run-times are projected to increase.
4. Exemptions: the Board should consider the following exemptions
- a. Extreme weather events as designated by the First Selectperson
 - b. Agricultural operations in excess of five (5) acres
 - c. Ultra quiet gas leaf blowers – as stated in manufacturer specifications ≤55 dBA
 - d. Golf course cultural practices (e.g. aeration and top dressing)

Recommendation

The Task Force recommends that the Board discuss the three (3) options and the four (4) consensus points. Following a Board discussion, the Board may decide to propose one or more approaches for discussion at a public meeting.

Member Remarks

Below you will find comments from committee members and their individual positions and reasonings for their own conclusions. Remarks are provided in alphabetical order by last name

Remark #1: William Cygan

In the Spring of 2025 after more than a year of monthly meetings at Town Hall, the Leaf Blower Task Force sat down to collaborate on a final recommendation to the Board of Selectpersons. Initially, the only true consensus was “no change or status quo.” The committee then ran through all the options one more time based on Vincent’s desire to be sure and see if we may have missed something in the details. A few options began to draw more support, but most found some portion of the other options too restrictive, discriminatory, or complicated.

Remark #2: Bill Dornfeld

Greenwich, Norwalk, and Westport – along with at least 30 municipalities in Westchester County - have implemented gas leaf blower bans for the summer months - a “Quiet Summer” option. (See Appendix 3) Just under half of the Westchester towns also restrict usage in January and February. The logic is that gas leaf blowers are primarily needed for heavy fall and spring cleanups, particularly by landscapers, while for the summer months electric leaf blowers can adequately handle removal of grass clippings and lighter leaf loads. The restricted dates have an average start date of the third week of May and an average end date of the last week of September. A simplified restriction period could be from Memorial Day through Labor Day. Three of our task force members were in favor of this option, and one additional member expressed support for this option if it also included an exemption for residents who own GPLBs to continue to use them until the end of their useful life because homeowners in general aren't using their tools as much as professionals are. The quiet summer option would reduce outdoor noise during the prime months when residents want to enjoy the outdoors during warm weather with extended daylight hours while at the same time having minimal impact on landscapers.

Virtually all municipalities already restrict the freedom of their citizens to annoy their neighbors - whether it regards noise or blight/nuisance or zoning. When citizens are not able to self-enforce the Golden Rule, then municipalities step in. These restrictions already exist, and our task is to consider this one specific neighbor-annoying topic of leaf blowers. We have a scenario here where very noisy leaf blowers have become the standard way of working for a service industry and it should not be surprising that citizens are annoyed by the practice and looking for relief.

It is true that not all electric leaf blowers are quieter than gas powered leaf blowers and A-weighted loudness does not equate to a true measure of the annoyance due to the tonality and variability of the noise, but an “annoyometer” doesn't exist. What is known though is that the average electric leaf blower is significantly quieter than the average gas powered leaf blower. In Consumer Reports 2023 tests of 103 leaf blowers, when measured at 50 feet (i.e. at the neighbors), the electric leaf blowers were significantly quieter than the gas powered ones. An important consideration in annoyance regulation of any kind is having some mechanism of appeal, and instances of exceptionally quiet gas powered leaf blowers could be handled by that process. It would allow adapting to technology advances of all types. Keeping enforcement simple is another important consideration, hence the attractiveness of clear, uncomplicated restrictions like a quiet summer period or only allowing electric leaf blowers.

With a significant and growing majority of hand power tool purchases in the US being of battery-powered tools, it is difficult to foresee that battery-powered leaf blowers present some exceptional and unmanageable safety risk. There are already loads of lithium-ion

batteries being stored in homes and business facilities and incorporated into home and business solar installations with no noteworthy safety problems.

Regarding cost, we heard in our 18Nov2024 meeting from two contractors (Nelson Munoz and Burt DeMarche) who either were already all-electric or who would be by 2027. There are growing numbers of landscapers in municipalities with restrictions who are able to figure out how to make this work and the landscapers who work in Ridgefield would be able to learn from those pioneers. And it is expected that the technology will continue to advance to constantly make this transition easier.

Remark #3: Carson C.K. Fincham

I believe the most important take-away from the proceedings of this Task Force is that a group of residents that was specifically hand-picked to be relatively balanced on this issue (although in my personal opinion, was inherently leaning toward a ban from the start) strongly supported either making no changes at all, or implementing only minor changes (time/day restrictions and/or type of work restrictions).

While perhaps it shouldn't have, it has indeed surprised me how many people are willing (or actively advocating) to restrict the freedoms of their neighbors simply because other jurisdictions have done so. My impression from the speakers representing other towns is that absolutely no scientific basis was utilized for implementing their restrictions. Those advocating (perhaps crusading) for a ban on gas-powered leaf blowers have relied on generalizations (emissions are bad) and news articles that reference other news articles that ultimately point back to a single noise study that in my opinion cannot reasonably be considered scientific². Many appear to believe that battery technology MUST be better than what we are using currently. It is not clear to me, even after all of our many long hours of fact-finding and deliberation, why this is.

I write this as an electric power and battery technology advocate. I only own electric leaf blowers (battery-powered and corded). I have a business that promotes electric vehicle technologies and am a named inventor on multiple electric/battery-powered vehicle Patents. I helped procure grant funds for the acquisition of the Town's first electric vehicle (as part of RACE) and I am the builder (and owner/resident) of the first Energy Star®-certified home in Town (which utilizes an electric ground-sourced heat pump and passive solar design, and which was 100% green energy powered for more than 20 years). I strongly believe that electric powered-machinery is an important part of our Society – but that does not mean that EVERYTHING should be electric (much less battery-powered) – cars included.

² I discussed in our meetings the many problems I have found with respect to the Arup study, and I am happy to share with anyone (including the Board) that is willing to spend some time getting into the technical aspects of gas vs. battery-powered leaf blower noise, but I do not include those details here for the sake of brevity.

While battery technology has indeed advanced to be more powerful/efficient, it does not come without drawbacks and concerns, which I feel have predominantly been ignored by those advocating for a ban on gas-powered leaf blowers. I am happy that our Task Force had the opportunity to hear the Ridgefield Fire Department explain how they have had specific training with respect to battery fires (because they are indeed more intense and harder to extinguish than even gasoline fires) and how they desire additional equipment to be able to better extinguish such fires. For me, the options I supported were based on a two-part test: (1) are gas-powered leaf blowers environmentally worse (emissions and/or noise-wise) than their battery-powered counterparts, and (2) if so, do the differences rise to a level that warrants imposing restrictions on Town residents.

I believe it was clear from the evidence gathered that with respect to noise, there is no determinative answer regarding which type of leaf-blower is noisier³. The models available from different manufacturers in the market are constantly shifting and the technologies employed vary considerably. There are certainly electric leaf blowers that are less noisy than certain gas-powered models, but we also discovered some gas-powered models that are less noisy than certain electric models. So for me, making Noise Ordinance changes based on the mode of powering a leaf blower is not supported by any evidence and cannot be a basis for imposing a restriction.

With respect to emissions, it is understood (I believe) that gas-powered emissions are certainly worse than the zero-emissions from electric-powered equipment. So the question becomes, how much worse? No one appears to know. And how much worse is it to burn gas and oil (as almost all backpack gas-powered leaf blowers are two-stroke) to power a leaf blower than it is to burn natural gas (which is the predominant source of electrical grid power in CT) to provide the electrical energy that powers a neighbor's electric leaf blower? How dangerous will it be if we institute a ban and have the number of lithium-ion batteries stored in residents' garages AND commercial providers' facilities skyrocket? Will rental agreements and/or insurance policies even cover the mass storage of lithium-ion batteries? We simply don't know.

So the answer to question #1 ("are gas-powered leaf blowers environmentally worse (emissions and/or noise-wise) than their battery-powered counterparts"), for me, was: (a) with respect to noise, no; (b) with respect to emissions, yes; (c) with respect to fire safety, no.

For question #2 ("do the differences rise to a level that warrants imposing restrictions on Town residents"), for me the answer must be "no". Out of all the many sources of PM 2.5 pollution (the predominant concern from gas-powered equipment), I saw no evidence that gas-powered leaf blowers are a major contributor. Indeed, of the research that has been conducted that I was able to find, lawn equipment does not appear to be

³ I believe that "Appendix 5: Comparisons of Gas-Powered and Battery Leaf Blower Specifications" is misleading as presented. It provides generalized ranges of power and noise ratings which makes it seem as if all battery backpack models are quieter than all comparative gas models, but this is not the case.

even a statistically significant source, compared to the other sources. Nor do I believe the proper amount of attention has been paid to the negative aspects of battery-powered devices, making the determination of which mode of leaf blowing is safer for our community indeterminable.

It is also important to consider the cost differential between the technologies. The cost of implementing a switchover to only battery-powered leaf blowers for commercial operators would be significant. Current battery technology is simply nowhere near as energy-dense as gasoline, and operation of battery-powered leaf blowers accordingly requires many battery packs to equal a single tank of gas. As anyone that has installed an electric car charger at their home knows, getting the correct electrical equipment installed to handle increased charging demands (as a commercial operator would need) is extremely expensive.

So, is there evidence that can support a rational basis for imposing gas leaf blower restrictions on our Town's residents? From my perspective, absolutely not.

I don't, however, discount the concerns of those residents that signed the petition and are clearly concerned about noise in their communities. For this reason, while I would support limiting the hours of operation of any leaf blower (or possibly any lawn equipment) to make the Town a more peaceful place, I cannot support treating the power source of those devices as a distinguishing factor.

Remark #4: Vincent Giordano

In 2023, four hundred and forty-two registered Ridgefield voters signed a petition to restrict gas-powered leaf blowers to the spring and fall cleanup months only. The only option considered by this task force that would come close to satisfying the petitioners is the Quiet Summer option. The Quiet Summer approach, which would restrict gas leaf blowers during the summer months (mid May to mid September), received 4 votes from the task force members (4 of 8).

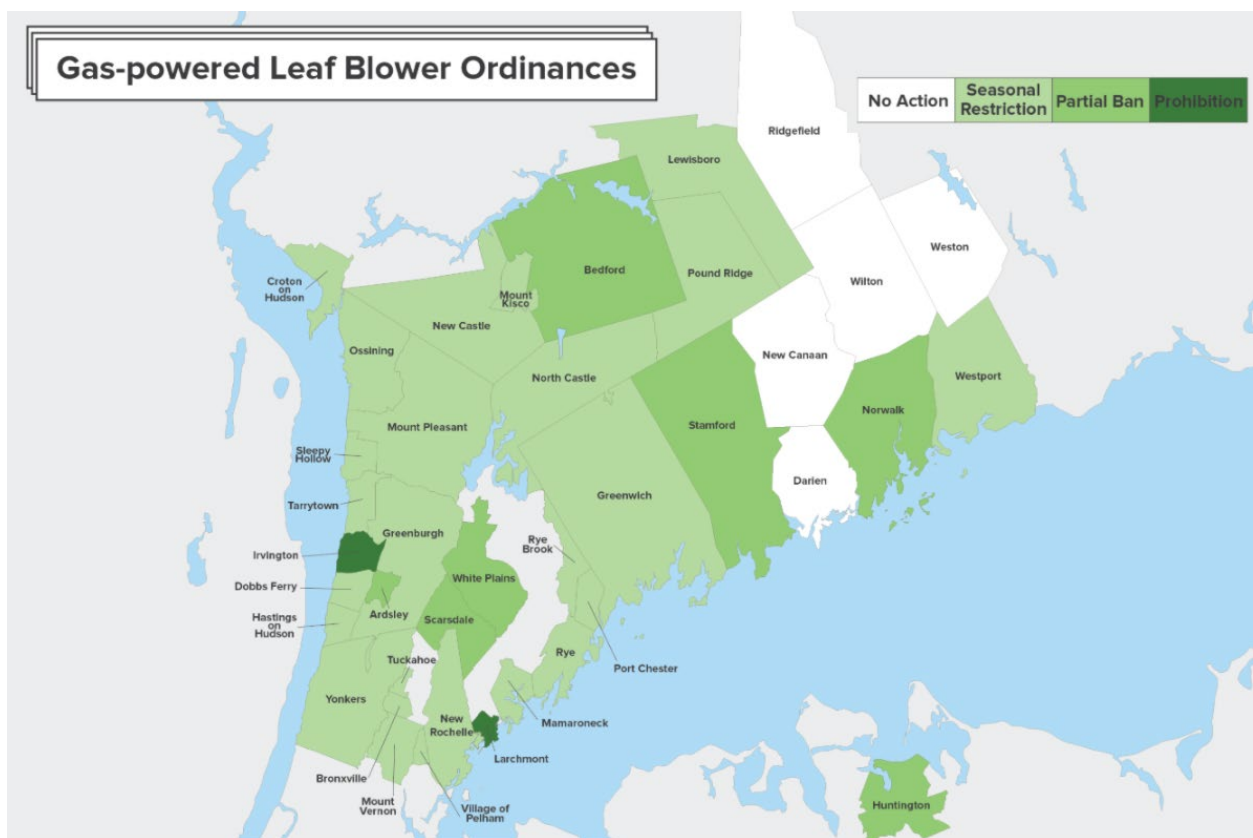
My suggestion to the Board of Selectpersons is to propose a Quiet Summer approach and include a Municipal lead by example commitment to transition to battery operated leaf blowing technology. This approach would be somewhat similar to, though not as extensive as, the recently enacted Stamford ordinance LR 31.100.

A few years ago Stamford attempted to address the noise and toxic air pollution from gas-powered leaf blowers. Their solution was to minimize the days (e.g. no holidays) and time of day that this equipment could be used. Their experience, however, was that this solution did not provide the relief that Stamford residents desired.

On November 5, 2025, Stamford passed a new leaf blower ordinance that goes much further and does the following:

1. restricts the use of gas-powered leaf blowers to the months of Oct thru December. This restriction is city-wide, takes effect in 3 years, and applies to residential, commercial and municipal use.
2. requires the City of Stamford, and it's lawn care contractors, to transition to **all** battery lawn care equipment. The transition would be complete in 3 years for most equipment, and in 6 years for walk-behind, ride-behind, and ride-upon blowers.

Stamford now joins 33 Westchester NY and CT towns that have passed ordinances to restrict gas-powered leaf blowers. In Ridgefield, one can use as many gas-powered leaf blowers as they like, any day of the year (including holidays) from 7 am to 9 pm.



Remark #5: Donald H. Hulnick, M.D.

Our Charter asked the Task Force to conduct “a thorough study to assess the feasibility and potential impact of implementing restrictions on the use of gas-powered leaf blowers. The study should encompass a range of considerations, including environmental concerns such as noise pollution, air quality, and carbon emissions...”

I believe that one of the reasons I was selected to be a member of this Task Force is my profession as a physician, and I attempted to emphasize the deleterious effects of 2 stroke gasoline engines on health. The following paragraph was publicized to all members as a supplement to our meeting where we heard from Drs. Evans and Hershkowitz and Mr. Martin (see above). Nonetheless the following paragraph, although included in our Drop Box, was kept out of the body of the report, so is presented here.

Fairfield County has the worst air quality in the NYC metro area. For CT, The American Lung Association gives Fairfield County a grade of F for number of high ozone days, and a grade of D for average particulate air pollution. Fairfield County consistently ranks among the top 30 or so worst counties in the entire country when it comes to the quantity of the four major types of pollutants emitted by gas-powered lawn and garden equipment. Out of approximately 3,100 counties in the United States, Fairfield County ranked No. 28 for fine particulates, No. 37 for carbon dioxide, No. 27 for nitrogen oxide, and No. 33 for volatile organic compounds, a category that notably includes benzene, 1,3 butadiene, and formaldehyde, three of the most carcinogenic air pollutants in the world.

My conclusion after researching and reviewing the evidence and hearing from many stakeholders is that a transition from gas-powered to battery-powered leaf blowers for all in Ridgefield is warranted and feasible. Are battery powered leaf blowers a perfect solution to the noise, pollution, ecological havoc, and bodily and mental health harm engendered by gas powered equipment? No, of course not, but they are a doable improvement over heritage technology, adopted by so many of our neighboring communities, and a transition would nudge our own community to a better future. The issues are bigger than merely noise abatement and many towns crafted new regulations, rather than simply amend noise ordinances. I recommend that the BOS open the discussion to a Town Meeting.

Remark #6: Flint Mu

I would caution against blindly following what other municipalities are doing because I don't know if they went through as rigorous of a process to study the usage of gas-powered leaf blowers as Ridgefield did. After listening to the representative from Norwalk, I felt like she had an obvious negative bias against landscapers and she also didn't understand why people would need anything more powerful than a battery handheld leaf blower because that's all she needed for her personal property. Some properties in Norwalk might be larger and/or have more trees. That made me question whether the restrictions passed by Norwalk were well thought out.

Remark #7: Arnie Nielsen

As I stated in meetings many times restricting blowers to a time of year implies that people who do not realize their use are deciding when they are useful. Professionals having to maintain two separate stocks of equipment seems burdening. If they were banned completely would be one thing or not banned at all would be better than a time of year ban. To the point of mentioning the petition that was roughly 2% of Ridgefield population that would not really show any overarching cry for change and also not really relevant to what this committee was tasked with doing.

Meeting Summaries

The sections below are summaries of Task Force meetings on selected subjects. The summaries do not include the entire body of information considered by the Task Force. For additional information considered please Appendix 7.

Understanding Sound

At the June 17th, 2024, meeting, Bill Dornfeld, committee member, educated the Committee on sound and the way sound is measured.

Sound is a pressure wave. Sound is a disturbance in the air pressure around us, above and below the average atmospheric pressure (14.7 psi or 101,325 Pascals). This disturbance is similar to the disturbance on the surface of water caused by dropping in a pebble, and sound similarly radiates outward from the source.

A "sound pressure level" is measured in Pascals (Pa), which is the unit for sound pressure; however, due to the large range of sound pressure humans can hear, sound pressure levels are usually expressed in decibels (dB). Decibels (dB) represent the intensity or loudness

of a sound and is based on a logarithmic scale where a tenfold increase in sound pressure corresponds to a 20 dB increase.

Sounds waves are different from water surface waves – as they travel longitudinally. The alternating higher and lower pressure zones travel like waves in a Slinky. And they travel around 1050 feet/second.

When a sound periodically repeats, it is described by its frequency (pitch) in Hertz or Cycles per Second. The frequency of sound is the number of waves that pass a point per second. Different frequencies of sound have different wavelengths. The sounds we could hear vary over a broad range of frequencies. People hear sounds in the 1,000 – 4,000 Hz range best

We commonly use an “A weighting” filter so our meters measure sound in a way that mimics the human ear (e.g., dBA). The A-weighting filter reduces the amplitude of low frequencies and very high frequencies because we don’t hear them well. The result coming out of an A-weighting filter closely represents the loudness that a human would perceive.

Two sounds of equal loudness will result in a +3 dB increase in total sound level. 60dB + 60dB = 63dB, not 120dB. Studies have shown that in general the sound is perceived twice as loud if the sound level is increased by 10 dB.

The reduction in sound level as it passes through a barrier like a wall is called Transmission Loss. The ability of building materials to block sound is frequency dependent. Most building materials are better at blocking higher frequencies.

Ridgefield Police Enforcement of the Current Ordinance

At the August 1, 2024, meeting, the Committee met with Lt. Brian Durling of the Ridgefield Police Force to understand how the current Ridgefield noise ordinance is enforced. Ridgefield’s noise ordinance prohibits any person to emit or cause to be emitted any noise beyond the boundaries of their premises in excess of stated noise levels. Noise level limits are specified for daytime and nighttime hours and for residential and nonresidential zones.

	RECEPTOR	
	Residential day / night	Non-residential day / night
Residential Zone emitter to:	55dBA/45dBA	55dBA/45dBA
Non-residential Zone emitter to:	55dBA/45dBA	62dBA/45dBA

The use of leaf blowers is exempt from the noise level limits when the work is done between the hours of 7 am and 9 pm. Use of a leaf blower before 7 am or after 9 pm, however, is subject to the noise level limits. In these instances, after receiving a noise

complaint an officer must first obtain the noise measuring equipment from police headquarters and then travel to the complainant's location. There the police officer must determine the boundaries of the emitter's or receptor's location, because the ordinance states that the measurement must be taken at a point that is approximately one foot from the boundary of the emitter's premises or a point that is located approximately one foot within the boundary of the receptor's premises. Once properly placed, the officer may take a noise measurement to determine whether the noise is above the standard for the zone and time of day.

All of the officers are trained in the use of the measurement device, and it is calibrated annually. The Ridgefield Police Department has a single sound-level meter; a Quest Technologies 2200 Integrating - Averaging Sound Level Meter. From January 1, 2024 up to the date of the meeting there had been 52 noise complaints and there were 83 noise complaints from August 1, 2023 to July 31st 2024. Information was not provided on the number of complaints specifically for leaf blowers.

Experiences of other Communities

At the September 16th, 2024, meeting, the Committee met with representatives of two nearby communities, Norwalk, CT and Pound Ridge, NY. Both communities had already implemented restrictions on gas-powered leaf blowers. In both communities' the legislative process began with residents raising noise and environmental impacts concerns of gas-powered leaf blowers and requesting their local representatives to take legislative action.

Prior to enacting legislation, the elected boards of both communities held open public meetings about restricting gas-powered leaf blowers. Concerns raised by commercial landscapers included: insufficient power of battery-operated equipment to address heavy spring and fall cleanups, limited battery run-time, and capital investment costs. To mitigate these concerns, both communities modified their initially proposed approaches to allow the use of gas-powered leaf blowers during fall and spring cleanup seasons, and in Norwalk's case, by instituting a phase-in period before a complete prohibition.

Pound Ridge modified their noise ordinance in December 2022 to limit the use of gas-powered leaf blowers from Oct 16th to May 14th. Almost one year later in November 2023, Norwalk, CT enacted an ordinance to restrict gas-powered leaf blowers to spring (April 1 to June 1) and fall (Oct 15th to December 15th) clean-up seasons. Norwalk has, however, gone further than Pound Ridge. Following an affirmative Council vote, Norwalk would prohibit the use of gas-powered leaf blowers beginning Jan 1, 2027, for properties less than 2 acres, and for all properties beginning Jan 1, 2028. Both jurisdictions include an enforcement approach that begins with a warning, followed by a financial penalty. A summary comparison of 8 local ordinances restricting gas-powered leaf blowers is attached as Appendix 2).

Both representatives spoke about the effectiveness of the legislation to the quality of life for the residents by restricting the use of gas-powered leaf blowers. Neither jurisdiction had implemented a buy-back program for gas-powered equipment.

Outdoor Power Equipment Suppliers & Landscapers Interviews

The Committee held two meetings with Outdoor Power Equipment suppliers, who sold both gas and battery powered equipment, and landscapers that have transitioned to battery leaf blower technology. Participants included Bethel Power Equipment, M & H Power Equipment, Laurel Rock and Cultural Lawns LLC. Ridgefield Power Equipment was invited to participate but declined. We spoke with the participants about the differences in the performance of the equipment, warranties, need for maintenance and cost.

From a performance perspective the two landscapers agreed that battery operated leaf blowers have sufficient power to handle the work in the summer months (Mid May to Mid September). However, the limiting factor for this equipment is “battery run time” or “trigger time” each crew would need to bring extra batteries with them to complete the work day.

A summertime requirement to use battery operated leaf blowers requires additional capital outlays for landscapers (e.g. the battery equipment doesn't replace the gas blower but is needed in addition to the gas blower which would be used during spring and fall cleanup seasons). At this time a reasonable investment cost would be between \$ 4,700 - \$ 6,400 per crew. See Appendix 4 for estimate configurations. Appendix 5 provides some specification comparisons.

Assuming an additional capital outlay is \$ 6,400 per crew, then a landscaper could recoup that investment in one year (24 weeks) by charging an additional \$5.33 per visit ($\$5.33 \times 10 \text{ client visits per day} \times 5 \text{ days a week} \times 24 \text{ weeks}$) = \$ 6,400. This calculation does not include any additional offsets for potential cost reductions (gas vs. electricity), or less maintenance.

The outdoor power equipment suppliers stated that they do sell battery operated leaf blowers, but the sales are limited to landscapers working in jurisdictions where battery operated equipment is required.

Ridgefield Fire Department's Training and Experience with Lithium Battery Fires

At the May 8th, 2025, meeting the Committee met with Fire Chief Jerry Myers to understand the Ridgefield Fire Department's training and experience with lithium battery fires.

The Fire Chief informed us of the following:

- Ridgefield's experience with lithium battery fires is low
- There have been no electric vehicle fires
- There have been no lawn and garden equipment fires
- There have been some cell phone fires, which were due to unattended charging / charging in non-ventilated conditions (e.g, charging a cell phone under a pillow while the user slept)
- The Ridgefield Fire Department has completed training courses on lithium fire fighting
- The Fire department is looking to buy some blankets that are useful for extinguishing / controlling lithium fires
- Gas fires are more frequent than Lithium fires; but they are easier to extinguish.

Town of Ridgefield's Use of Leaf Blowers

A short questionnaire was distributed to the Golf Course, Parks and Recreation Department and Department of Public Works to understand their use of leaf blowers. Responses were received from all three Departments. The responses about the number and types of leaf blowers in use are summarized in the table below. The full responses are attached as Appendix 6.

Both the Highway and the Parks and Recreation Departments have some battery-operated leaf blowers, in addition to gas-powered leaf blowers. The Ridgefield Golf Course uses only gas-powered leaf blowers.

	# Gas Blowers	# Battery Blowers
<i>Highway Dept</i>	3 back pack	5 hand held 2 chainsaws
<i>Parks & Rec</i>	8 back pack	2 hand held
<i>Golf</i>	4 back pack 4 hand held	none

Town Department Reactions to a mid-May to Mid-September GPLB restriction

- The Highway department would need some additional investment which is summarized below.
- The Parks & Recreation department is concerned about impact on labor (whether additional time would be needed to perform tasks) and requested that the Town and its contractors be exempt from any restrictions.
- The Golf Course is not in favor of any new restrictions on its operations

Investments needed to implement a Mid-May to Mid-September GPLB restriction

- The Highway Department stated that they would need an additional 50 Amp panel dedicated for battery charging; charging docks on several service trucks, shop battery storage and charging dock.
- The Parks & Recreation Department is planning on purchasing an additional battery hand-held blower for use at the Recreation Center and conducted a feasibility study in the summer of 2025 to develop a capital expenditure plan. The P&R garage has an existing 400 Amp Service.
- The Golf Course has an existing 400 Amp Service.

Health and Environmental Impacts of Gas-powered Leaf Blowers

At the December 17th, 2024, meeting, the Committee met with Dr. Sarah Evans (Department of Environmental Medicine and Climate Science, Icahn School of Medicine at Mount Sinai), Dr. Allen Hershkowitz (Ridgefield resident) and Mr. Stefan Martin from the CT Audubon Society to discuss the health and environmental impacts of gas-powered leaf blowers. Dr. Hershkowitz and Dr. Evans spoke about both the noise and emissions from the gas-powered blowers.

Some of the known adverse health impacts include:

- Emissions of cancer-causing substances; volatile organic compounds (VOCs) e.g. benzene and formaldehyde; ozone-forming compounds; nitrogen oxides (NOx); sulfur dioxide; carbon monoxide (CO); and carbon dioxide (CO₂)
- Emissions of Respirable Fine Particulate Matter (PM 2.5) which travel deep into lungs. PM 2.5 is known to cause serious health problems including decreased respiratory & lung function; lung cancer; heart attack; stroke; preterm birth & low birth weight; asthma (severity worse in children);

The individuals at greatest risk include:

- Older Adults
- Children
- People with Chronic Illness
- Workers Who Use These tools

Noise from GPLBs travel long distances

- GPLBs typically produce noise of 90-115 decibels; even short-term exposure to noise over 85 decibels can lead to permanent hearing loss
- Strong low-frequency noise can lead to increased risk of heart attack & stroke

Mr. Martin stated that birds and other wildlife are also adversely impacted by the noise and emissions of GPLBs. He stated that a reduction in leaf blowing (gas and battery powered) is preferred in order to provide adequate habitat (leaf litter) for insects, which are necessary for a diverse bird population.

Appendix 1: Gas Powered Leaf Blower Committee Members

William Cygan

William Dornfeld

Carson Fincham

Vincent Giordano

Donald Hulnick

Andrea Leone-Bay

Flint Mu

Arnie Nielsen

Appendix 2: Examples of Local Ordinances restricting use of Gas Powered Leaf Blowers

The chart below depicts actions taken by 8 towns near Ridgefield. The information is organized by approach (e.g. Cleanup Season; Summer restriction, Holiday restriction, and Ban). While there are some similarities amongst the approaches, none of them are identical.

Some common elements include the following:

- 5 of the 8 towns modified their town noise ordinance and 3 towns passed a separate ordinance;
- 5 of the 8 towns allowed for a phased in approach;
- All towns allowed for exceptions or means to request variances
- 6 of the 8 towns specified fines for non compliance

Gas Leaf Blowers	Bedford, NY	Norwalk, CT	Westport, CT	Greenwich, CT
Type	Cleanup Season approach	Cleanup Season Approach	Quieter Summer approach	Quieter Summer approach
Action taken	Modified noise ordinance	Separate ordinance	Separate ordinance	Modified noise ordinance
Passed	April 5, 2022	Nov 14, 2023	Jan 3, 2023	Jan 16, 2024
Transition time	2-year transition -- full effect 2024	Phased in transition Begins in 2024; Ban requires a vote by Sept 1, 2026	One-year transition, full effect 2024	Effective 2024 Enforcement in 2025
Applies to	Property owner, commercial operator; owner of the leaf blower	Residents and Commercial operators	Residents and commercial operators	Residential zones only Residents and Commercial operators
Time of year allowed	April 15 – April 30; Nov 7 – Nov 21	Before ban: Apr 1 – June 1; & Oct 15 th – Dec 15 th	Oct 16 th – May 14 th	Oct 1 st - Friday before Memorial Day
Time of day allowed	8 am – 5 pm; non holiday weekends; 10 am – 4 pm; Sat and holiday weekends Noon – 4 pm Sundays	8 am – 6 pm; Monday – Friday 10 am – 5 pm; Saturday 10 am – 4 pm; on Sunday and State or Fed holidays	8 am – 6 pm; Monday – Sunday Not allowed on State or Fed holiday. Residents using GPLBs for their own use – Monday- Friday 7:00 am to 8:00 pm; and Saturdays, Sundays and holidays 9:00 am to 8:00 pm.	8 am – 6 pm; Monday – Friday 9 am – 3 pm; Sat & Sunday Except No commercial use on Sundays
Exemptions	18-hole golf courses Town operations Agricultural operations Multifamily housing complexes	Mayor may temporarily suspend restrictions for cleanup and debris removal in the event of a storm, hurricane, or similar extreme weather event	Storm clean-up; Emergency situations; Snow removal State or town owned property Non-residential property in excess of 20 acres Use by public utilities	storm condition cleanup operations. All other applications for exemptions must be approved in writing by the Town Administrator & COO
Other restrictions		Ban begins Jan 1, 2027 for properties < 2 acres; all properties after Jan 1, 2028	1 GPLB on properties ¼ acre or less	No commercial use on Sundays ¼ acre or less, limited to 1 blower

	Bedford, NY	Norwalk, CT	Westport, CT	Greenwich, CT
Electric LB	Permitted year round; subject to noise limits	Limited to date and time restrictions: Apr 1 – June 1; & Oct 15 th – Dec 15; Allowed Year round on impervious surfaces.	Permitted year round during approved hours; 7 am – 8 pm Monday – Friday 9 am – 8 pm Sat, Sunday, holidays	Permitted year round; subject to noise and time restrictions
Enforcement authority	Police department	Not specified. Possibly Blight officer	None – education program only by Conservation dept	Town Administrator & COO
Penalty	\$250/\$500/\$1,000	Warning / \$250	None stated	Warning / 100 / 249

Gas Leaf Blowers	Pound Ridge, NY	Stamford, CT	Larchmont, NY	White Plains, NY
Type	Quieter Summer approach	Partial Ban	Ban	Ban
Action taken	Modified noise ordinance	Modified noise ordinance & Separate ordinance	Separate ordinance	Modified Noise Ordinance
Passed	Dec 13, 2022	May 2023 & Nov 5, 2025	Sept 2020	Feb 2022
Transition time	No transition	3 years	15 months	Phased in Ban
Applies to	Commercial operators using leaf blowers, vacuums, PTO devices	Leaf blowers, vacuums, PTO devices. Residential, commercial and town	Residential, commercial and town	Residential, commercial and town
Time of year allowed	Oct 16 th – May 14 th	Oct 1 st – Dec 31 st	Not allowed	Oct 15 th – Dec 15 th Total Ban Dec 16, 2025
Time of day allowed	8 am – 6 pm; Monday – Saturday Not allowed on Sunday Not allowed on State or Fed holidays	Day time hours Oct 1 – Dec 31 st	Not allowed	8 am – 6 pm; Monday – Friday 10 am – 6 pm; Sat – Sunday & Holidays
Exemptions	18-hole golf courses Emergency situations Town supervisor authority to suspend by temporary permit Town Board may suspend Building Inspector may provide variance	Director of Operations may extend hours for purposes of public safety and welfare	Extreme weather events	May be temporarily suspended by the Mayor in the event of an extreme weather event or other emergency
Other restrictions		City of Stamford, and its lawn care contractors, must transition to all battery lawn care equipment		Property < 5,000 square feet only one GP leaf blower allowed
Electric LB	permitted year round; subject to noise limits	Permitted year round; hour restrictions do not apply	Limited to spring and fall cleanup seasons	Permitted year round; hour restrictions apply
Enforcement authority	Police department	Police department	Not specified	Building Code Enforcement Officer, Police Officer, Parking

				Enforcement Officer, or Public Works Code Enforcement Officer
Penalty	Warning/100- 250/250 – 1,000	Not to exceed \$90. Each hour or portion thereof in which any violation shall occur shall constitute a separate offense	\$250/\$500/\$1,000	\$250/\$500/\$1,000

Appendix 3: GasPowered Leaf Blower Restrictions in Westchester County, NY

Thirty towns in Westchester County, NY have implemented restrictions on the use of Gas-Powered Leaf Blowers. The first depiction below shows the restriction time frames sorted by town name. The second depiction shows the time frame restrictions sorted by length of restrictions (longest to shortest).

Municipality	Dec				Jan				Feb				March				April				May				June				July				Aug				Sept				Oct				Nov																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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-powered leaf blowers during this period. All 30 towns restrict leaf blowers a minimum of 12 weeks.



Data Reference:

<https://docs.google.com/spreadsheets/d/1yNreNLXtwC1mikpelGEOH2Ff6ADx1NwR49mcuCYPDJU/edit?gid=235896857#gid=235896857>

Appendix 4: Equipment Configurations for Estimations

The Committee interviewed two landscapers that use battery operated leaf blowers during the summer months. Below are the equipment configurations, including batteries, that would equip a crew of 2-3 landscapers for a full summer workday.

This estimate covers the following configurations for a crew of 2-3 landscapers:

2 Husqvarna 550 iBTX \$1,800 each (includes battery and charger)

2 additional batteries BLi950X \$1,150 each

1 Towa smart charger 500

Total capital investment per crew = \$ 6,400

or

2 Husqvarna or Stihl commercial blowers 2,300 each (includes battery and charger)*

1 Towa smart charger 500

Total capital investment per crew = \$ 5,100

* Burt DeMarche (LaurelRock): re: Husqvarna or Stihl commercial grade battery backpack blowers additional batteries are not required. They last all day during summer use.

or

2 EGO LBPX8004-2 \$700 each (includes 2 6 AH batteries and charger)

8 additional batteries \$350 each

1 Towa smart charger \$500

Total capital investment per crew = \$ 4,700

Appendix 5: Comparisons of GasPowered and Battery Leaf Blower Specifications

There are many gasoline and battery leaf blower models. To simplify this effort, these comparison charts were compiled by first interviewing local outdoor power equipment suppliers and landscapers to identify the 3 or 4 most common hand-held and backpack models in use. Then we selected battery models that were comparable in performance to the gasoline counterparts. Each model number is hyperlinked to the specification reference and cost is hyperlinked to Amazon, when available. If Consumer Reports had rated the blower their rating is noted in the chart and hyper linked to consumer reports. Blowers are ordered left to right by price.

Some comparison observations for handheld models:

- The battery handheld models are more powerful than the gasoline models.

	Gasoline	Battery
CFM range	412 – 456 CFM	765 – 930 CFM
Newtons range	12.5 – 15.8 N	26 – 27 N
MPH range	159 – 172 MPH	170 – 200 MPH

- The battery handheld models are quieter and are rated higher than the gasoline models

	Gasoline	Battery
dB range	70 - 94 dB	68 – 76 dB

- The battery and gasoline handheld models are similar in weights. Note the weight for gasoline models is as empty and the battery models are with the battery.

	Gasoline	Battery
Weight range	9.3 – 12.3 lbs. empty	9.56 – 15.37 lbs. with battery

- We were unable to locate runtime information for the gasoline models. However, gasoline models are reported to have longer run times before needing refilling. Whereas battery models would require additional batter(ies) to complete larger landscaping jobs.

There are two price points to consider, \$ 240 and \$ 320. The two handheld comparison tables are divided by a double line to demarcate similar priced models.

Gasoline Handheld Leaf Blowers

Make	Stihl	Husqvarna	Echo	Stihl
Model	BG 56 C-E	125BVX	PB-2620	BG 86 C-E
CFM	412 CFM	425 CFM	456 CFM	444 CFM
Max Newtons	13 N	12.5 N	15.8 N	15 N
Air speed	159 MPH	170 MPH	172 MPH	170 MPH
Noise	70 dB	94 dB	70 dB	70 dB
Weight	9.3 lbs. empty	9.6 lbs. empty	9.7 lbs. empty	12.3 lbs. empty
Warranty	2 years	2 years	5 years	2 years
Cost	\$ 220	\$ 249	\$ 280	\$ 320
Consumer Report Score	74	73	75	79

Battery Handheld Leaf Blowers

Make	Ai Dot		Caterpillar	EGO
Model	ENHULK LBL1493J		DG651	LB8800
CFM	930 CFM		800 CFM	880 CFM
Max Newtons	27 N			30 N
Air speed	200 MPH		170 MPH	200 MPH
Battery life (trigger time)	40 mins on average 15 mins on turbo		Up to 110 mins	90 mins on average 15 mins on turbo
Battery Size	58 V, 5 AH		60 V, 5 AH	56 V, 5 AH
Noise	73 dB		68 dB	76 dB
Weight	15.37 lbs. with battery		11.3 lbs. with battery	9.56 lbs. with battery
Warranty	4 years tool, 2 years battery		5 years, 3 years battery	5 years tool, 3 years battery
Cost	\$ 240 includes battery		\$ 319 includes battery	\$ 269 without battery
Consumer Report Score	Not rated		90	Not rated

Some comparison observations for backpack models:

- **Gasoline backpack models are more powerful than the battery models, but the gap is closing.** Each interviewed landscaper that has converted to battery technology confirmed that the battery powered backpacks below are more than sufficient for Mid May to Mid Sept work. Some landscapers also stated that the power is also sufficient for year-round use, however additional batteries are needed.

	Gasoline	Battery
CFM range	912 – 1110 CFM	550 – 1100 CFM
Newtons range	41 – 48 N	21 – 36 N
MPH range	220 – 239 MPH	147 – 225 MPH

- **Battery backpack models are generally quieter than the gasoline models.**

	Gasoline	Battery
dB range	78 - 80 dB	65 – 80.5 dB

- The battery backpack models appear heavier than the gasoline models. However, note the weight for gasoline models is “as empty” and the battery model weights are with the battery.

	Gasoline	Battery
Weight range	23 – 26.7 lbs. empty	28.3 – 34.6 lbs. with battery

- **Battery backpack models are more expensive at the point of purchase than the gasoline models.** However, because gasoline is more expensive than electricity and maintenance costs for battery models are less, the cost differential reduces to zero in less than 2 years. ⁴

	Gasoline	Battery
Cost range at point of purchase	\$ 649 - 650	\$ 1,500 – 2,530

- We were unable to locate runtime information for the gasoline models. However, gasoline models are reported to have longer run times before needing refilling. Whereas battery models would require additional batteries to complete larger landscaping jobs.

⁴ You can compare gasoline and battery models for ROI at the Stihl ROI calculator <https://www.stihlusa.com/tools-calculators/battery-power-savings-calculator/>

Gasoline Backpack Leaf Blowers

Make	Echo	Shindaiwa	Stihl
Model	PB-9010T	EB 910RT	BR 800X
CFM	1110 CFM	1110 CFM	912 CFM
Max Newtons	48 N	48 N	41 N
Air speed	220 MPH	220 MPH	239 MPH
Noise	80 dB	80 dB	78 dB
Weight	26.4 lbs. empty	26.7 lbs. empty	23 lbs. empty
Warranty	5 years; 2 years commercial	5 years; 2 years commercial	2 years
Cost	\$ 649	\$ 649	\$ 650
Consumer Report Score	Not rated	Not rated	Not rated

Battery Backpack Leaf Blowers

Make	EGO	Husqvarna	Greenworks	Pellenc
Model	LBPX1100	550 iBTX	Optimus	Airion
CFM	1100 CFM	550 CFM	755 CFM	858 CFM
Max Newtons	36 N	21 N	35 N	27 N
Air speed	190 MPH	147 MPH	225 MPH	
Battery life (trigger time)	240 mins on low 36 mins on high 30 mins turbo	Up to 105 mins	Up to 63 mins	Up to 4 hours with the ULiB 1500 Battery
Battery Size	56V, 12 Ah	40 V, 31.1 Ah	82 V; 8 Ah	43.6 V; 35Ah
Noise	65 dB	76 dB	65 dB	80.5 dB
Weight	32 lbs. with battery	34.6 lbs with battery	28.3 lbs. with batteries	33.3 lbs with ULiB 1500 Battery
Warranty	2 years commercial	2 years	2 years	2 years
Cost	\$ 1500 includes 2 batteries	\$ 1,600 includes battery	\$ 1,600 includes 2 batteries	\$ 2,530 includes battery
Consumer Report Score	Not rated	Not rated	Not rated	Not rated

Appendix 6: Responses to Questionnaire by Ridgefield Town Departments

Re: Questions for town departments re: gas powered leaf blowers

From: Jake Muller (dpssuper@ridgefieldct.gov)

To: giordano17@verizon.net

Date: Tuesday, March 18, 2025 at 03:40 PM EDT

Good afternoon Vince-

Below are the answers to the questions regarding the gas vs battery blowers. At Highway, we currently use battery powered hand held leaf blowers and some chainsaws. Our main issue is during a large storm clean up, we do not have the infrastructure to support full battery powered equipment. Any questions please let me know.

1. How many hand-held gas powered leaf blowers do you need to conduct your operations each year?

We currently use (battery) 3 at Highway & 2 in the Building Maintenance. We have sufficient supply of battery handheld leaf blowers.

2. How many back pack gas powered leaf blowers do you need to conduct your operations each year?

The Highway Department currently uses 3 gas powered back pack blowers

3. Approximately what do you spend on maintenance of the gas powered leaf blowers each year?

Our staff mechanics service the gas powered equipment, there is minimal service costs other than gas\fuel.

4. On average, approximately how much do you budget each year for the purchase of new hand-held and back pack leaf blowers?

Typically, we replace as needed (not on an annual basis), estimate \$1,000\year for replacement.

5. Do you have / use any battery hand held or back pack leaf blowers?

- if yes, how many of each do you have in service?

5 battery handheld blowers & 2 battery chainsaws

- If yes, what has been your experience with the battery leaf blowers?

The hand held blowers have been great for both departments, minimal battery life issues.

Do you have any plans to transition from gas to battery leaf blowers, and if so what are those plans?

The Highway Department has replaced some gas to battery tools. We do not have a complete plan to convert at this time. One issue we would face; in the event of a major storm clean-up (hurricane, micro-burst, etc.). The infrastructure will need to be changed\upgraded to support our crews (storm clean-up) to go full battery.

6. If Ridgefield were to restrict hand-held and back pack gas powered leaf blowers from mid May to mid September, but allow gas powered leaf blowers for the remainder of the year; how many battery leaf blowers would you need and what types to conduct your summer operations?

For our typical summer operations, the Highway Department would need 3 back pack blowers, charging docks on several service trucks, shop battery storage and charging dock and a dedicated power supply (see below).

7. What is the size of the electrical service available to your operation to charge batteries?

The building would need an additional panel (50 Amp) dedicated to supply the chargers for the batteries of the hand held\back pack blowers and the chain saws used by the Highway crews. Additionally, some modifications to several service trucks would be necessary as well. Installation of on-board chargers would be required. The Building Maintenance Department has successfully moved away from gas powered leaf blowers (hand held).

Best regards
Jake

Jacob Muller
Director of Public Works & Facilities
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gas powered leaf blowers

From: Michael West (recadparks@ridgefieldct.gov)

To: giordano17@verizon.net

Date: Friday, February 21, 2025 at 01:42 PM EST

Hi Vince,

Please find my responses to your questions below in [blue](#). If you have any questions or would want to discuss in person please let me know. I look forward to chatting.

Best,
Mike

Comparing from gas-powered backpack blowers to electric handheld models involves several considerations, particularly regarding performance and staffing. Gas backpack blowers typically offer higher airspeed and higher airflow, enabling them to clear debris more efficiently. In contrast, electric handheld blowers provide less power, being lower airspeeds and lower airflows, that require more time/additional labor to accomplish the same task.

The primary challenge of transition to a less efficient process is the increased labor required to maintain productivity. Labor is not only the most expensive resource but also the one my department is already short on.

1. How many hand-held gas powered leaf blowers do you need to conduct your operations each year?
 - P&R Maintenance has two (2) hand-held gas leaf blowers. These are used for a few small, infrequent tasks.
2. How many back pack gas powered leaf blowers do you need to conduct your operations each year?
 - P&R Maintenance has eight (9) gas-powered backpack blowers. These are used frequently and are taken out almost daily.
3. Approximately what do you spend on maintenance of the gas powered leaf blowers each year?
 - P&R Maintenance spends around \$500 annually on blower maintenance.
4. On average, approximately how much do you budget each year for the purchase of new hand-held and back pack leaf blowers?
 - P&R generally replaces two (2) backpack blowers a year, keeping them approximately on a 4-year replacement cycle. We budget around \$1,400 annually to purchase two (2) STIHL BR 800 blowers.
5. Do you have / use any battery hand held or back pack leaf blowers?
 - if yes, how many of each do you have in service?
 1. Currently P&R Maintenance does not use battery-powered blowers.
 - If yes, what has been your experience with the battery leaf blowers?

2. In a previous position, I worked at a college that invested heavily in electric equipment – including zero turn mowers and hand-held equipment (string trimmers, hedge trimmers, pole pruners, small chainsaws, and blowers). While I believe electric equipment works well for certain applications and specific tools, the technology is not yet at a point where it can directly replace gas powered blowers with electric hand-held blowers.
6. Do you have any plans to transition from gas to battery leaf blowers, and if so what are those plans?
- Yes, we have two plans:
 1. We have discussed and plan to purchase a hand-held electric blower for small tasks, such as blowing off doorways or under bleachers at the Recreation Center.
 2. P&R will conduct research, investigations, and demos this summer to feasibility and potentially develop a capital expenditure plan.
7. If Ridgefield were to restrict hand-held and back pack gas powered leaf blowers from mid May to mid September, but allow gas powered leaf blowers for the remainder of the year; how many battery leaf blowers would you need and what types to conduct your summer operations?
- The issue is not how many backpack blowers would be needed, but how many additional individuals **AND** blowers would be required to complete the same task. Without comparing run times and in field efficiency a direct comparison is not possible.
8. What is the size of the electrical service available to your operation to charge batteries?
- P&R Garage located at 57B South Street has 400-amp service
9. In your opinion, how should Ridgefield design / construct a restriction on gas powered leaf blowers that promotes a smooth transition to battery powered technology?
- A truly “smooth: transition is not possible if the replacement technology is not comparable in performance to the existing one. I do not believe any restriction should be implemented until battery-powered blowers can match the capabilities of gas-powered equipment.
 - At a minimum Town departments and Town contractors should be exempt from any such restrictions.

Michael West, Assistant Director
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Frank Sergiovanni

From: golfdirector@ridgefieldct.gov

To: giordano17@verizon.net

Here you go Vincent,

Let me know if you have more questions

Frank A. Sergiovanni PGA Head Golf Professional/ General Manager
Ridgefield Golf Course, 545 Ridgebury Rd. Ridgefield, CT 06877 (203) 748-7008



How many hand-held gas powered leaf blowers do you need to conduct your operations each year?

Four

How many back pack gas powered leaf blowers do you need to conduct your operations each year?

Four

Approximately what do you spend on maintenance of the gas powered leaf blowers each year?

\$250

On average, approximately how much do you budget each year for the purchase of new hand-held and back pack leaf blowers?

\$800

Do you have / use any battery hand held or back pack leaf blowers?

No

Do you have any plans to transition from gas to battery leaf blowers?

No

If Ridgefield were to restrict hand-held and back pack gas powered leaf blowers from mid May to mid September, but allow gas powered leaf blowers for the remainder of the year; how many battery leaf blowers would you need and what types to conduct your summer operations?

4 Handheld, 4 Backpack

What is the size of the electrical service available to your operation to charge batteries?

400amps?

In your opinion, how should Ridgefield design / construct a restriction on gas powered leaf blowers that promotes a smooth transition to battery powered technology?

Not in favor of any new restrictions on golf course operations

Appendix 7: Task Force Dropbox Entries Organized by Subject

Name ↑



00 Folder -- Battery Technology -- Capability.docx



7 Best Battery-Powered Leaf Blowers of 2025.pdf



Consumer Reports - Gas vs. Electric Lawn Mower_ Which Is Better.pdf



Consumer Reports - Leaf Blower Ratings & Reviews.pdf



Consumer Reports -Should You Switch to Electric Lawn Equipment.pdf

Name ↑



00 Folder -- Cost Comparison Information -- Read me document.docx



Economics of switching from Gas to Battery leaf blowers 2022.pdf



GAS VS BATTERY POWERED MAINTENANCE TOOLS ON THE UNIVERSITY OF ARKANSAS CAMPUS.pdf

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00 Folder -- Environmental Information -- Read me document.docx



A Report to the CA Legislature on the Health and Environmental Impacts of Leaf Blowers.pdf



Air pollution table for CT counties -- showing PM 2.5.web



Air Quality Index (AQI) Basics.web



CoPIRG-Foundation-report-Small-Machines-Big-Pollution-Dec-1-2022.pdf



Dr. Hershkowitz Presentation -- Gas Powered Leaf Blowers AJH 121724v.2.pptx



Dr. Sarah Evans Mount Sinai Leafblower Presentation December 2024.pdf



edmunds_emissions_test.pdf



Environmental Impact Of Electric Vs. Gas Yard Tools.web



Gas Leaf Blowers are Health Hazards.web



Gas-Powered-Leaf-Blower-Emissions-Factsheet-11.12.pdf



Gas-Powered-Leaf-Blowers-Leave-Lungs-Vulnerable.pdf



Gasoline Engine Leaf Blower Health Hazards, Environmental Harm, Legislation and Alternatives For the White House Environmental Justice Ad...

	Health and Environmental Impacts of Leaf Blowers.pdf
	Impacts of leaf blowers.web
	Jamie banks & US EPA Region I study.pdf
	Lawn_Care_Goes_Electric_Oct23.pdf
	Mitigating the Health, Environmental, and Quality of Life Impacts of Gas-Powered Leaf Blowers Bronxville Green Committee, Bronxville, NY Jun...
	Most Polluted Places to Live -- American Lung Assoc..web
	State of the Air -- CT -- 2023.web
	The unintended consequences of leaf blowers.pdf

Name ↑

	00 Folder -- Financial Incentive and Buy Back Examples.docx
	AQMD leafblower-exchange brochure.pdf
	Pleasantville NY rebate_flyer_2023-rev1.pdf

Name ↑

	00 Folder -- Fire Safety -- Read me document.docx
	2023 NFPA annual report.pdf
	Battery Expert Testimony Eric Wachsman.pdf
	Extinguishing the EV Battery Fire Hype - IEEE Spectrum.pdf
	gasoline safety educators guide.pdf
	home structure fires - NFPA.pdf
	Lithium Ion Battery Safety -- NFPA.pdf
	MiniLessonLithiumIonBatterySafety.pdf
	OSHA - Preventing Fire and or Explosion Injury from Small and Wearable Lithium Battery Powered Devices.pdf
	Risks and response strategies for lithium-ion battery fires.pdf
	Study_ Electric Vehicles Involved in Fewest Car Fires - Kelley Blue Book.pdf

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	00 Folder -- Noise Information -- Studies -- Read me document.docx
	ARUP-Leaf-Blower-Noise-Testing.pdf
	Characteristics of Lawn and Garden Equipment Sound -- A Community Pilot Study.pdf
	DOD noise primer.pdf
	Lawn and Garden Equipment Sound - A comparison of Gas and Battery Electric Equipment.pdf
	Leaf Blower Noise.pdf
	LeafBlowers.xlsx
	low_frequency_noise_and_annoyance.6.pdf
	Metrics for Assessing Environmental Noise 19-30.pdf
	Mount Sinai Letter Leaf Blowers_Norwalk_Nov2022.pdf
	Noise and Quality of Life.pdf
	Noise as a Public Health Hazard -- APHA.pdf
	Quest_2200_SLM_UserManual.pdf
	Quest2200Info.JPG
	UnderstandingNoise.pptx

Name ↑

	00 Folder -- Noise Ordinances -- Read me document.docx
	Bedford ordinance.pdf
	Gas powered leaf blower restrictions in Westchester County.docx
	Greenwich Noise Ordinance -- HHS Amendments to Item 17.pdf
	GreenwichNoiseOrdinanceComplaints-GreenwichTime.docx
	Norwalk Leaf Blower Ordinance as enacted.pdf
	ordinance comparison.docx
	pound ridge leaf blower noise ordinance 75-4.pdf
	Ridgefield Noise Ordinance.pdf
	Stamford, CT Code of Ordinances.pdf
	Westport Leaf Blower Ordinance as enacted.pdf