

December 26, 2017

**Mayor Brian C. Daughney
and
Board of Trustees
Garden City, NY**

RE: <https://www.gcnews.com/articles/environmental-board-qchs-students-examine-effects-of-leaf-blowers/>

I see that Garden City is addressing the leaf blower issue. Soliciting comments from your constituents and professional users about leaf blowers is by far the best approach to the issue. Not all cities with a leaf blower issue are doing that. What you need in addition is technical information and credible facts. Clearly Garden City is trying to get at the truth and I'd like to help with that.

I am a former Vice President of Engineering for Echo Inc., a leading manufacturer of powered lawn care products. My employer, (company info below) has retained me after my retirement to inform cities about the improvements made to leaf blowers and make suggestions on how to regulate their use. I have helped more than 160 communities enact reasonable and effective rules. <http://leafblownoise.com>List%20of%20cities.htm>

More information on my qualifications can be found at:
<http://leafblownoise.com/about%20the%20author.pdf>

In response to noise complaints, I invented the first "Quiet" leaf blower for ECHO Inc. 20 years ago. Since then, several manufacturers have invested millions of dollars in tooling, testing and new assembly lines in order to provide this very important and valuable alternative. I note that nothing was said at your recent meeting about the existence of these products. It's important that you look into this because these blowers can solve your noise problem.

So far, what you have heard is mostly the anti-leaf blower side of the issue. Much of what I have read at the above website is also inaccurate. It is wrong because it is based on opinion and not facts. References to test results are seriously biased. I know this because I am familiar with the mindset of those publishing the information quoted by your presenters. I am surprised, actually I'm more disappointed than surprised, that I was not invited to speak at your meeting. I have the other side of the story and what I have to say is based on fact, with links to reports and studies to back up what I say. Further, I know leaf blowers and the people that use them very well, for I have been involved in the leaf blower controversy for a very long time. I wonder if those you have heard from so far have ever used a leaf blower or know how important they are to those that need them in their lawn care businesses.

I know you plan to solicit information from professional contractors, but they don't really understand the issues either. They can tell you how a ban will impact their income and how

their customer will react, but they don't know about the social impact a blower ban will have on your city. You probably have heard that there is a [court case in Maplewood](#) contesting their recent blower ban. This issue is deeper than just addressing the personal preference of the privileged few. You are dealing with the livelihood of an entire industry.

As was done in other cities, the solution to the leaf blower issue is to [ban only the noisy blowers](#). This may sound strange; however, it is possible if you ban only those blowers louder than 65 dB(A). The industry attaches a label to the blower that indicates sound level, which is measured according to a highly detailed ANSI Standard. This makes it easy to determine magnitude at the point of purchase and in the field by the enforcement officer.

<http://leafblownoise.com/Sound%20label%20mounted.jpg>. Sixty-five dB(A) represents a 75% reduction in sound. If you have not actually heard the difference between blowers at 77 dB(A) and those at 65 dB(A), you owe it to yourself and your constituents to seek out a [comparative](#) demonstration.

The issue of health risk is often misrepresented as it relates to the leaf blower. I'm sorry to say that Carole Neidich-Ryder is mistaken when she says if one landscaper down the block in Garden City ... uses a leaf blower, her whole block can get full of dust ..." Although leaf blowers typically do have the ability to generate air flows above 150 miles per hour, this air flow is measured at the end of a hose with a two-inch diameter nozzle. Keep in mind that ten feet away, air flow measures about 20 to 25 miles per hour and at 20 feet, it is nearly impossible to measure. You can visualize from this that fugitive material disturbed by a leaf blower will be blown away from the operator, but will remain within a few feet of the nozzle.

According to the EPA, the particulate matter that is potentially harmful to someone's health is known as PM-10 and PM-2.5. These numbers represent the particle size, which is 10 microns and 2.5 microns respectively. A micron is a meter divided by one million (1/1,000,000 meter). PM-10 has a diameter of 0.00001 meter (0.0004 inches or one-seventh the width of a human hair). They are smaller in size than the suspended dust you see in a ray of sunlight, right within your own living room. For the most part, PM-10 is otherwise invisible. Leaf blowers deal with a much larger sized particle, one that falls back to the earth within a few feet of the nozzle.

PM-10 particles originate from the combustion exhaust of a variety of mobile and stationary sources (diesel trucks, woodstoves, power plants, etc.). Their chemical and physical compositions vary widely. Particulate matter can be directly emitted or can be formed in the atmosphere when gaseous pollutants such as SO₂ and NO_x react to form fine particles. Gasoline powered leaf blower engines do not produce these chemicals; however, diesel engines do.

As for leaf blowers raising this particle into the air, PM-10 is already in the air. Because it is so small and lightweight, the wind keeps these particles suspended. The brown haze you see over a city is comprised of these particles.

You can learn more about PM-10 at the following sites:

<http://www.epa.gov/air/airtrends/aqtrnd95/pm10.html>
<http://www.epa.gov/air/particlepollution/health.html>

There are reputable organizations that have tried to determine if leaf blowers are in fact hazardous to your health and have found that there is no justification for that belief. The Greenwich Department of Health indicated in a report that there is no health hazard attributable to leaf blowers. <http://leafblownoise.com/#Greenwich Department of Health Statement> Dr Nancy Steele, of the California Air Resources Board (CARB), concluded the same thing in a report to the California State Legislature.

<http://leafblownoise.com/#Dr. Nancy Steele, of the California Air Resources Board>

I noticed that CALM has given a presentation. CALM has enlisted the endorsement of several groups that dedicate themselves to protecting our health; the American Lung Association, American Academy of Pediatrics, the Asthma Coalition and others. All these titles are impressive, but I have contacted some of these and asked for documentation justifying their position on leaf blowers and they refused to respond. I know for a fact that there is no data or reputable test results proving that leaf blowers cause or even aggravate asthma for example. Before trusting these endorsements, you might want to ask them if they have any justification for what they say, and I don't mean providing you with quotes from other people having a like mindset.

Dr. Lucy Weinstein, a CALM member, claims that the evidence is very clear that particulate matter (from a leaf blower *implied*) is a health hazard. We know it is a hazard, but we can't blame the leaf blower as the source. This is only her opinion. Don't let her profession and her title, which has nothing to do with leaf blowers, sway your opinion. I'm sure she is an expert at some things, but she is not a leaf blower expert. My experience with academics is that they are more theoretically subjective than they are objective.

I would not trust test results compiled by high school students or their advisors either. Because of their lack of experience, they have limited knowledge on how to gather samples or control the variables experienced during an environmental test. They are a little weak on understanding sound as well. They said that a decibel level from 60 to 70 represents a 10 times increase in loudness. Not so. Decibel measurements are not linear, rather they are logarithmic. An increase in 10 decibels represents a 3.2 times increase in loudness. Check out the math at: <http://leafblownoise.com/Percent%20difference%20in%20sound%20pressure.pdf>

I don't think they realize that below 85 dB(A) there is no need to wear hearing protection and above 85, protection is required based on time of exposure, which is on a sliding scale.

http://leafblownoise.com/Measuring_Sound.pdf

I see that Garden City is considering the viability of battery powered lawn care products over the industry standard, which is gasoline powered equipment. Battery power is a niche application and will never reach the performance of gasoline powered units for technical reasons. I know because I designed the first professional battery powered leaf blower and know its limitations and applications.

Some years ago, I gave a demonstration before the California Air Resources Board of my new professional grade battery-powered leaf blower. I suggested it was a viable alternative to gasoline units from a sound standpoint. It had a sound level of only 55 dB(A). To understand how quiet this is, one must realize that for every 6 dB(A) reduction in magnitude, the sound pressure is reduced by 50%. Fifty-five dB(A) represents a 92% reduction in sound pressure from the typical leaf blower of the time having a sound level of 77 dB(A). But that is not the level

of today's battery powered leaf blower. Manufacturers of battery blowers do not concern themselves with sound. You will not find a sound label on their units based on industry testing standards. Most are as loud as gasoline powered blowers. Sure, the motor is basically quiet, but the fan isn't. Now the blower I designed, although it was quiet, was not without problems. ECHO did not put it into production for lack of performance and because of its prohibitive cost.

Mr. Mabe, the Founder, CEO and President of American Green Zone Alliance (AGZA), admits that electric equipment technology is "not quite there yet". Keep in mind that using a battery powered blower is especially costly for the professional. In addition to the cost of the blower, several batteries are required to operate one blower for an eight-hour day. Stihl's backpack battery retails for \$850. Then there is the charging equipment cost and the safety issues surrounding lithium ion batteries. Finally, the limited number of sources available for the disposal of spent lithium ion batteries needs to be considered.

<http://www.sciencedirect.com/science/article/pii/S2214993714000037>

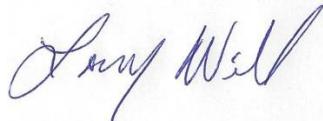
If you check the retail outlets in your area, you will see that stores like The Home Depot offer a large selection of battery powered products. For the home owner, they work very well. Normally they are used to clear off decks, short driveways and sidewalks, but they are not very effective for the large job. Since they are basically of low power, they will take longer to get the job done. This is where the gasoline powered unit excels. It's why the professional will not use battery or cordless power. You know, time is money. Corded units are totally out of the question because they cannot be used more than a few feet from the wall outlet.

I know some people would like to see all gasoline powered leaf blowers go away, but one must ask, "Is this the right thing to do?" Professional quality leaf blowers are firmly entrenched as indispensable tools. Eventually you will be deciding the fate of the leaf blower in your community. I know you will be tempted to ban all gasoline powered leaf blowers, but wherever a ban is in place, it typically fails. To understand why, talk to the enforcement agencies in cities that already have this type of ban.

<http://leafblownoise.com/WBZ%20Boston%20Radio%20.pdf> Your best bet is to find a solution that professional uses will support. Please give serious thought to adopting the quiet leaf blower alternative.

There is a great deal more information available regarding leaf blowers on my website.
<http://leafblownoise.com/> Should you or your staff have questions that are not adequately answered at my website, please respond to this email or call with your inquiry.

Best regards,



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