

**Board of Selectmen  
&  
Advisory Committee  
Wellesley, MA  
February 14, 2012**

After being contacted by a Wellesley concerned citizen about a petition to restrict the commercial use of gasoline powered leaf blowers, I decided to send an email sharing my knowledge regarding the arguments you will hear supporting this request. This is a very controversial and emotional issue for some people and requires careful thought before acting.

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 address leaf blower concerns throughout the United States and Canada. I do this as a public service to our customers and to the cities confronted with a leaf blower issue. I have helped more than 100 communities understand the facts after which reasonable and effective ordinances have been enacted.

Wading into a controversy such as this, which results in the imposition of an ordinance that impacts the livelihood of working class people and small businesses, can ultimately harm the image of the governing body that authors it. It can send a statement to your constituents that although you understand that your warrant constitutes a financial hardship, it is worth it in order to appease the pressure being applied by anti-leaf blower activists. At a time like this, when people are trying to cut corners in order to meet their financial obligations as well as pay off their credit card bills from years before; such a move shows callousness not in your best interest or that of the city.

The leaf blower issue boils down to one thing. It is so certain residents are spared the annoyance of a neighbor grooming his yard with a tool that makes too much noise in their opinion. I think you will agree that most residents are indifferent to this issue because leaf blowers, like lawn mowers or garbage trucks or diesel pickup trucks, are just a part of living in a crowded neighborhood.

But this is not to say that there is nothing to be done. On the contrary, there are things that should be done. Very effective limitations are available to you that landscape contractors and anti-leaf blower activists will embrace. Herein you will find up-to-date information about modern leaf blowers, potential problems and suggested solutions, which will help you with the recommendations and decisions you choose to make. This document provides reliable information you will want to read in order to make an informed decision on behalf of your community.

### **Enforcement of a leaf blower ban.**

To start with, let's face this issue head on. The favorite request of anti-leaf blower activists is to issue a ban on leaf blowers. Like the eighteenth amendment, prohibition of leaf blowers will not

work. I know that if you were to speak to anyone trying to enforce a leaf blower ban, they would tell you how difficult it is. In fact, it is for the most part, impossible. For this reason, Menlo Park rescinded their blower ban after several years of expense and frustration. The police in Los Angeles have publicly given up on enforcing their ban. Palo Alto, CA has discharged their only police officer assigned to citing leaf blower users for economic reasons. Santa Monica, CA has had a ban in place for 20 years and have not been able to enforce it. You can read about their problem in a report presented to the city council.

<http://leafblownoise.com/Santa%20Monica%20Report.pdf>

Police give a very low priority to chasing down leaf blower operators. After all, leaf blower users are not really criminals. They are only trying to make an honest living using a profit enhancing tool that complies with State and Federal emission and noise regulations. Some contractors will ignore a ban and risk paying a fine for this is the least expensive option, considering the time it takes to clean a yard by hand. An unenforceable ban is far worse than any regulation that takes advantage of leaf blower improvements because old, noisy and unregulated blowers remain in use.

## **Controversy**

My experience as an industry expert concerning this issue, goes all the way back to 1999, when I met with Dianne Wolfberg, Jack Allen and Mrs. Peter Graves as they lobbied the city of Los Angeles to enact a leaf blower ban. They managed to secure a ban, but it was extremely controversial. The ban polarized communities, those who owned and used blowers against those that didn't. It got so bad that there were even hunger strikes on the steps of City Hall, protesting the ordinance.

Many residents use professional services to maintain their properties. When a ban is enacted, as I said above, some contractors will choose to ignore it. They know that using a leaf blower is the only real way to clean a yard to the satisfaction of their customer. Should a person issue a complaint to the police, often he or she will not know the name of the contractor so the police will not know whom to confront. Further, unless there is an officer in every neighborhood 24/7, the offending contractor will most likely be gone before the police arrive since cleanup with a blower is the last thing a contractor will do before leaving the area. If a private resident is turned in to the police by a neighbor, it becomes a "he said, she said" issue and most likely will convert two somewhat tolerant neighbors into antagonistic adversaries with a "get even" attitude.

## **Product changes and improvements**

Leaf blowers were redesigned in response to complaints from the field. We listened to all the anti-leaf blower activists, as well as end users, contractors and retailers that had opinions regarding leaf blowers and their use. The industry systematically proceeded to eliminate the sources of these complaints over the course of several years.

More than seven years ago, this program was completed, addressing every complaint with effective product improvements, recommended legislative alternatives, and educational materials. We also brought clarity to the argument when false accusations and exaggerations were made based on claims from uninformed or outdated sources.

## **Quiet Leaf Blower**

As I said above, complaints about blowers are primarily noise related. Usually activists attack the gasoline powered leaf blower, but tolerate the electric version. It's not clear why. For one thing, the typical electric leaf blower is actually noisier than the gasoline blower that is specifically designed to be "Quiet". For test results, see <http://leafblownoise.com/Electric%20blower%20sound.htm>.

All other arguments negatively attributed to the gasoline powered leaf blower also apply to the electric blower, except for emissions, which I will discuss later in this letter. Not all leaf blowers are considered quiet, but all are quieter than they once were. One should know that actual "Quiet" gasoline powered leaf blowers are readily available from several manufacturers. Blowers having labels that indicate they are 65 dB(A) or less are 75% quieter than blowers of older design. The whine common to outdated leaf blowers, generated by the main impeller fan, is essentially gone on these models. Because blowers are labeled, no testing is required by the enforcement agency to determine sound level compliance. Some cities write this maximum allowable sound level into their regulation as an alternative to banning, eliminating older and louder designs. To see the leaf blower sound label found on the actual unit, check: <http://leafblownoise.com/Sound%20label%20mounted.jpg>

## **Proper Time to Use**

Often the time of day a blower is used, early morning or late in the evening, is the only real problem. Many cities limit hours of use and have been successful using this approach to quiet down leaf blowers during the hours when neighborhoods should be quiet.

## **The Operator May Be at Fault**

One primary factor in the leaf blower issue is none other than the operator himself. I venture to say that most of the time it is an operator issue rather than a blower issue. The Kendall's of Orinda, CA repeatedly complained about the operator in their interview with CBS News Sunday Morning (November 6, 2011). In some cases they observed someone using a blower from more than a block away. Clearly their issue is with the operator and not the leaf blower per se.

Some operators are inconsiderate, but most are just uninformed and untrained. It seems unlikely, but because of cultural differences, some operators do not realize that noise and common courtesy is a concern to residents. As with everything, there is a right way and a wrong way to use a leaf blower. The State of Arizona has adopted a training requirement for all professional users. Arizona Bill:

[http://www.azleg.gov/FormatDocument.asp?format=print&inDoc=/legtext/48leg/1r/summary/h.s.b1552\\_06-27-07\\_astransmittedtogovernor.doc.htm](http://www.azleg.gov/FormatDocument.asp?format=print&inDoc=/legtext/48leg/1r/summary/h.s.b1552_06-27-07_astransmittedtogovernor.doc.htm)

## Training Manuals

I have written a training manual (available in English and Spanish) that addresses proper leaf blower use. You can find a copy at my web site (<http://leafblownoise.com/LEAF%20BLOWER%20%20manual%2012-13-10.pdf>).

The Outdoor Power Equipment Institute (OPEI) has also created a bilingual booklet called "Leaf Blower, A Guide to Safe & Courteous Use" (<http://leafblownoise.com/LeafBlowerTraining.pdf>). Either is available for free distribution (make your own copies) to operators and contractors through local lawn care equipment outlets or by landscaper organizations. In some cities, the police have copies on hand to give to operators when they respond to a complaint. On occasion, cities have created their own manual, which includes the information found in the above pamphlets plus operator requirements unique to their city, such as noise limits and permitted hours of use.

Finally, there are PowerPoint and Flash presentations available on the internet that can be used as educational tools by landscapers, parks departments and trade schools.

<http://leafblownoise.com/OPEI%20Presentation/leafblower01.swf>  
<http://leafblownoise.com/OPEI%20LB%2002-10-12.pptx>

## Elements Other Than Sound

To embellish the argument in favor of a limiting leaf blower use, elements other than sound are sometimes called into issue. Blowers have been falsely accused of generating excessive exhaust pollution and particulate matter. Some would even have you believe they are hazardous to your health, which has no foundation in fact. Let me explain.

### Exhaust Emission

First of all, it is illegal for cities or states to write regulations that control emissions, even through the act of banning. Only the United States EPA has the authority to do so. <http://leafblownoise.com/Taken%20from%20the%20Federal%20Clean%20Air%20Act.pdf>

There are two chemically different types of exhaust emission. One is hydrocarbon emissions, which is unburned gasoline that passes straight through the engine. The other is greenhouse gas, which is what results when the gasoline passing through the engine is completely burned. With respect to hydrocarbons, a very colorful comparison some like to make is to automobiles. They say that leaf blowers are significantly worse, but this is not true. It may have been true 15 years ago, but now leaf blower engines have been substantially improved. For a given homeowner, a week's worth of driving an automobile to work (five hours on the road, 200 HP engine) is 30 times worse for the environment than a week's worth of leaf blower use (15 minutes, ¾ HP engine). An SUV is 45 times worse. You can easily calculate what happens if two people in a household drive to work separately. For those that argue that professional landscapers run leaf blowers several hours per day, not 15 minutes per week as a typical homeowner might, keep in mind that they also care for several households in one day and more households means there will

be more automobiles to add to the emission equation.

To see a detailed comparison of Automobiles to Small Engines, click the following link:

<http://leafblownoise.com/carchart%20comparison.htm>.

## **How to Require Low Emission Engines (hydrocarbons)**

Legislation in the United States mandated that hydrocarbon exhaust emission from small hand held engines needed to be reduced by as much as 90% by January 1, 2005. Many designs changed so radically that completely new engine concepts were introduced. If you want to reduce hydrocarbon pollution beyond what is presently being experienced, a good approach is to eliminate the really old engines. As you now know, only the EPA can legally write rules that control emissions, but a city or county can require EPA compliant engines build after January 2005. You can tell when a blower was built by looking at the emission label attached to the engine. To see what an emission label looks like, click:

<http://leafblownoise.com/Mounted%20emission%20Label.jpg>. If there is no emission label on an engine, it simply does not comply.

## **Greenhouse Gasses**

The other exhaust emission argument used relates to greenhouse gasses. Oxygen combines with the two elements found in fuel, namely hydrogen and carbon. Every ounce of it turns into an airborne gas. During complete combustion, hydrogen combines with oxygen to form water (H<sub>2</sub>O) and carbon oxidizes to form carbon dioxide (CO<sub>2</sub>), the greenhouse gas everyone is talking about.

Aspen, Colorado wanted to know what was causing greenhouse gasses in their community. They found that 555,000 tons of CO<sub>2</sub> were emitted from the transportation sector. That represents 66% of all the CO<sub>2</sub> emissions in Aspen. The other major contributor is the power generation sector. Obviously, nothing was mentioned about leaf blowers because from these engines, CO<sub>2</sub> production, measured in ounces, is insignificant.

[http://aspenpitkin.com/Portals/0/docs/City/GreenInitiatives/Canary/COA\\_GHGInv\\_Full.pdf](http://aspenpitkin.com/Portals/0/docs/City/GreenInitiatives/Canary/COA_GHGInv_Full.pdf)

Those arguing that leaf blowers are worse than automobiles when it comes to greenhouse gasses (CO<sub>2</sub>), are once again incorrect. Because of the volume of gasoline burned in an automobile compared to that of a leaf blower per week per household, the average automobile is 230 times worse than a leaf blower. To say that these very small engines create more greenhouse gasses than large automobile engines is obviously an unrealistic statement.

To learn more about greenhouse gasses, see the following web site:

<http://www.fueleconomy.gov/feg/co2.shtml>

## **Dust**

Another argument used to discredit a leaf blower is its perceived ability to create dust. Scientific facts do not support such a claim. Dr. Dennis Fitz of the University of California, Riverside,

conducted a study for the San Joaquin Valley Air Pollution Control District and reported that dust levels generated by a leaf blower were so low that when compared to an automobile by others, the automobile was 100 times worse than a leaf blower. You can read about this comparison at <http://leafblownoise.com/leaf%20blower%20dust.htm>.

However, it is possible to generate unwanted dust if a leaf blower is used on unstable ground. These are surfaces that have not been paved, covered with landscaping materials such as decorative rock or planted in grass. To prevent excessive dust, add an appropriate restriction to your regulation that prevents leaf blower use on unstable ground. Arizona was the first to add this restriction to a leaf blower regulation.

## **High Air Flow**

Leaf blowers typically do have the ability to generate air flows above 150 miles per hour. Some like to compare this to the winds of a hurricane. This is colorful, but keep in mind that this air flow is measured at the end of a hose with a two inch diameter nozzle. Ten feet away it 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. A hurricane has the potential to create the kind of dust storm you saw in the news last summer from Phoenix, AZ. Essentially, there is no meaningful comparison.

## **Perceived Health Hazard**

Since noise is really not an issue if a city requires quiet leaf blowers, many activists have focused on the health impact. You may hear about an East Coast doctor that claims leaf blowers are hazardous to your health or that they cause asthma in children. Keep in mind that this particular doctor is only stating his personal opinion based on presumed facts, same as any other anti-leaf blower activist, not his expert professional opinion. To fully accept his comments as fact, one must inquire as to where he gets his information. Ask for supporting documentation. An expert opinion from a pulmonary doctor that is also a leaf blower expert is unlikely. A fact based study linking leaf blowers to asthma, for example, or any other respiratory ailment does not exist. In all my research, I have never found any test data or reputable report, which shows that leaf blowers cause any kind of illness. This is confirmed by the California Air Resources Board in their report to the State Legislature, which was compiled by Dr. Nancy Steele: <http://www.arb.ca.gov/msprog/mailouts/msc0005/msc0005.pdf>.

There was an article in the Greenwich Patch, written by Patrick Barnard, June 29, 2011 stating:

*The Board of Health, which drafted the town's (Greenwich's) current noise ordinance in 1984, and amended it in 2004 and 2006 to address the use of leaf blowers, has the power to amend it again and present it to the RTM for approval. However, that seems unlikely since the board's Leaf Blower Research Subcommittee recently concluded that leaf blower noise, ... "does not pose a threat to public health," said Caroline Baisley, Greenwich Director of Public Health.*

*Baisley said the subcommittee, comprised of three doctors, found “there’s no conclusive, well-grounded scientific data providing medical evidence of the health risks associated specifically with leaf blower use — and therefore recommended that no changes be made to the ordinance.”*

## **Seasonal Banning of Leaf Blowers**

Summer bans do more harm than good. This is the time of year when there is little work for a leaf blower, except to clean grass clippings and hedge clippings from paved surfaces such as driveways and sidewalks. Not having the blower forces contractors to use water or a broom. The former is very bad for the environment, transferring debris to the storm sewer rather than blowing it back on the lawn. The latter is inefficient and incapable of doing a good job, especially around shrubs and on uneven surfaces such as bricks or cobblestone.

## **Conclusion**

One should take into account the many improvements made to leaf blowers over recent years and consider a leaf blower regulation that takes advantage of these improvements. It is well known throughout the industry that a landscape contractor will readily comply with any restriction that governs leaf blower use so long as he is aware of the restriction and so long as it does not take this indispensable tool away from him through banning. Ineffective bans result in operators using all kinds of blowers, including those that are old and noisy as well as those that still contribute to exhaust pollution.

A model regulation is available at my web site. The suggested measures, if incorporated into a new regulation, will result in environmental improvements while substantially reducing the sound generated by leaf blowers in residential neighborhoods. Click the following to see this model regulation:

<http://leafblownoise.com/MODEL%20LEAF%20BLOWER%20ORDINANCE.pdf>

## **Where Can You Learn More**

I have a great deal more on the subject. For additional information regarding leaf blowers, check out my website and the many links available near the end of my commentary:

<http://leafblownoise.com/>. I am also available to answer any specific questions you or your staff may have.

Best regards,

Larry Will, Vice President (retired)  
Leaf Blower Information Specialist  
ECHO Inc  
Tele: (479) 250-4110  
Email: [info@leafblownoise.com](mailto:info@leafblownoise.com)

For information on Echo Inc., click: <http://www.echo-usa.com/About-ECHO/About-U>