

November 29, 2017

**Mayor Craig Hughes
and
Town Council Members
Portola Valley, CA**

RE: <https://www.almanacnews.com/news/2017/09/26/portola-valley-gas-powered-leaf-blowers-not-just-a-noise-problem>

Mayor Hughes:

I see that Portola Valley is considering the viability of battery powered lawn care products over the industry standard, 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 their limitations and applications. I can provide you with facts you should have before making any decision regarding legislation requiring this product.

I am a retired Vice President of Engineering for ECHO Inc., a leading manufacturer of gasoline powered lawn care products. As an expert on the subject of leaf blowers, I have disseminated 'up to date' information to more than 160 cities throughout the United States and Canada. More information on my qualifications can be found at: <http://leafblownoise.com/about%20the%20author.pdf>

Let me start by saying that Craig Taylor hit the nail on the head. According to the above referenced Internet article, he said that "some reasonable solution ... is where we should go". Opposing stakeholders on this issue are highly polarized and are generally intolerant of each other's point of view, often making the issue quite controversial. Regardless what you may hear about gas leaf blowers, the one and only true issue with them is noise. Since sound is not a viable reason to ban blowers, a small, but influential group of well-organized people will be asking for a complete ban on gasoline powered leaf blowers for reasons other than sound. Their arguments will be based on opinion and anecdotal assertions including outdated and unsubstantiated quotations. Don't believe everything you hear.

An example of an unrealistic claim, referred to by Town Manager Jeremy Dennis, is that hydrocarbon emissions from a two-stroke leaf blower running 30 minutes is the same as a Ford pickup running from Texas to Alaska (3900 miles). That quote came from a website called edmonds.com. Even if you take into consideration that the blower they tested was 11 years old at the time and did not meet current emission standards, this is an unbelievable statement and quite frankly, ridiculous. In 30 minutes a leaf blower will burn less than a half-gallon of fuel. At 18 miles per gallon, a pickup will burn 217 gallons. Edmonds' remarks cannot be justified because it is impossible to compare these two vastly different engines using the equipment available in their test lab. Check it out at: <http://leafblownoise.com/edmonds%20test%20response2.pdf>).

The comment that blowers generate the same kind of air flow as a hurricane is ridiculous as well. It sounds scary, but the high air flow of a leaf blower is from a two-inch diameter nozzle. Air flow dissipates to a moderate breeze, which can barely be measured as close as twenty-five feet away.

Regarding battery powered leaf blowers, some years ago I gave a demonstration before the California Air Resources Board of my new professional grade battery-powered leaf blower suggesting 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 blowers. 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, it was not without problems. ECHO didn't put it into production for lack of performance and because of its prohibitive cost.

Mr. Mabe, the Founder, CEO and President of 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 capability 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 require a lot of time to get the job done on any yard of substantial size. 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.

Some people suggest that a ban could be limited to only the summer months. It's true that there is less debris to blow in the summer, but if the landscaper can use his large blower, his job will be done in minutes, not hours. Now that has got to be an advantage, noise wise; don't you think?

I'll grant you that there are leaf blowers out there that are very noisy, some over 80 dB(A) measured at 50 feet, but there are also extremely quiet gasoline powered leaf blowers, which measure 65 dB(A) per the industry Standard. This represents more than a 75% reduction in sound pressure over older designs and is the quietest gasoline powered leaf blower universally available.

http://leafblownoise.com/Measuring_Sound.pdf If you don't have a feel for this difference, you owe it to yourself and your constituents to attend a comparative noise demonstration. Be sure to include battery powered units. I know you'll be impressed.

On occasion you will hear that leaf blowers are bad for the environment. Not anymore than any other small off-road engine, because all these engines must meet a very strict CARB mandated exhaust emission standard. Since January 2005, exhaust emission has been reduced by as much as 85 to 90%, depending on engine displacement.

By the way, you should know that if you write an ordinance to ban gasoline powered blowers because of exhaust emission, you will be in direct violation of the Federal Clean Air Act, 1990.

<http://leafblownoise.com/Taken%20from%20the%20Federal%20Clean%20Air%20Act.pdf>

However, you can require that they meet current emission Standards by allowing only units built after January 2005. The date of manufacture is also available on the unit.

<http://leafblownoise.com/Mounted%20emission%20Label.jpg>

Since noise can be the only issue and the driving force behind any attempt to ban gas leaf blowers, I propose that you consider requiring that all leaf blowers used in Portola Valley display the manufacturer applied sound label stating that it meets 65 dB(A). (<http://leafblownoise.com/Sound%20label%20mounted.jpg>). It will be a simple and understandable directive.

This type of ordinance works well where a total ban on gas powered units will not. Landscape contractors will readily use a quiet blower because it will allow them to adequately do their job. This type of leaf blower has become an indispensable tool for them. As for the homeowner, if a neighbor complains about another neighbor's blower, the enforcement officer need only ask the alleged offender to show him his blower. If the 65 dB(A) label is not present, he is in violation. No need to catch him in the act.

Now please don't think that I am just trying to sell ECHO leaf blowers because we have been selling quiet blowers for a very long time. Increased sales due to your ordinance would be negligible. The quiet leaf blower

has been on the market for twenty years and I can guarantee that there are many already being used in Portola Valley. But the problem is, if there is only one noisy blower in the neighborhood, all leaf blowers are reviled. Your ordinance will only be requiring that quiet ones be used exclusively. Many cities have already taken this step.

Initially, you might hear complaints from lawn care providers because they don't want to discard their old noisy blowers if they are still working. But these complaints will pale compared to those you will hear if you ban them totally.

Electric powered units are fine for the typical consumer or homeowner, but for the professional, it would simply take too long to get his work done. He doesn't get paid by the hour; rather he gets paid by the job. Substandard equipment could put him out of business. At the very least, it will increase his cost, which is not always recoverable through increased pricing.

There are more detailed facts concerning the overall leaf blower issue I would like to share with you, but for that, I'd like to call your attention to my website <http://leafblownoise.com/>. In it you will be able to read about all the false claims made by anti-leaf blower activists with links to documentation supporting my comments. You will also learn that the blower is not to blame for everything in this controversy. Often the issue is when and where the blower is being used.

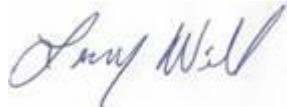
Before taking the step of introducing a leaf blower ordinance, be sure to talk to cities that already have bans in place. Talk directly with their enforcement agency to see if their ban is working. Look at what's happening in Newton, MA. <http://leafblownoise.com/WBZ%20Boston%20Radio%20.pdf>

For 20 years, Santa Monica has struggled with no success enforcing their leaf blower ban.
<http://leafblownoise.com/Santa%20Monica%20Report.pdf>

To arrive at "some reasonable solution", be sure to have your advisors reach out to the professional service people to find out what they will support voluntarily. It is an important issue to them and it will take more time than that allowed at a typical council meeting for these stakeholders to relate all their concerns.

If you should need information that is not clearly addressed on my website or need documents that I have not provided, please contact me and I will do whatever I can to help, including further research on your behalf.

Best regards,



Larry Will, BSME
Leaf Blower Information Specialist
ECHO Inc.
479-256-0282
Email: info@leafblownoise.com
Website: <http://leafblownoise.com/>
To learn more about ECHO: <http://www.echo-usa.com/About-ECHO/About-Us>