

June 2, 2021

**TO: Mayor Scott Sedgley**  
**Napa, California**

**Copy: Vice Mayor Liz Alessio**  
**Councilmembers:**  
**Beth Painter**  
**Mary Luross**  
**Bernie Narvaez**

**From: [Larry Will](#)**



Reference:

1. [https://napavalleyregister.com/lifestyles/the-climate-connection-it-s-time-to-phase-out-gas-powered-leaf-blowers/article\\_ea84989e-7c1a-55c7-805d-41b35a9f173a.html](https://napavalleyregister.com/lifestyles/the-climate-connection-it-s-time-to-phase-out-gas-powered-leaf-blowers/article_ea84989e-7c1a-55c7-805d-41b35a9f173a.html)

Dear Mayor Sedgley:

Although lengthy, this letter will be of interest to you because it deals with the leaf blower, something that is presently being addressed by **Napa Climate NOW** in your famous and beautiful city. This is an organization dedicated to the banning of gasoline-powered leaf blowers. That means that ultimately Ms. Sharon Parham and her supporters are going to try to convince you that leaf blowers are evil and must be eliminated from use in Napa.

I am not a stakeholder in your community's leaf blower issue, nor am I trying to interfere with any decision you deem necessary. But I am a source of facts about the design and use of cordless and gasoline powered leaf blowers that will be enlightening to you. I am a retired Vice President of Engineering for Echo Inc., a leading manufacturer of powered handheld lawn care products. I would like to start by providing you with a link to my [qualifications and credentials](#).

Now I am an engineer and as such, I tend to be quite technical. But I will try to avoid that as much as possible in this letter. I know the leaf blower has been a hot button for some people for a long time, especially in your area of the country. But I must say that if you support a blower ban based on what these anti-leaf blower advocates tell you, you are being misled. There is no legitimate reason for banning gasoline-powered leaf blowers, **except for noise**, because everything else you hear and read in the referenced article is either false, misrepresented, or unsubstantiated. I know you don't want to believe what I am telling you here because you have heard otherwise for a long time, from people you think know the facts. The bottom line, however, is that noise is the problem and there is a way that noise from gasoline-powered leaf blowers can be mitigated, without banning all gasoline-powered blowers. I feel compelled to comment further on this, so you are not blindsided in the future as certain so-called facts professed to you are shown to be false.

It is hard for me to get my point across because I can't dramatically compete with the passionate efforts of those working hard to convince you to ban blowers, not being a resident of Napa. Ms. Parham would like you to believe that she represents the 79,000+ residents of Napa, but that just might not be the case. A petition is being circulated by Napa Climate NOW for signatures requesting a blower ban. To be meaningful, according to California tradition, it should contain 5% of the voting public. You might want to keep that in mind, should you think her petition represents the will of all the people in Napa.

I do not know what you have been told about blowers, but I can guess. Much of it has been articulated in the referenced article. I have heard it all before. Health hazards are always brought up.

Here is something that I am reasonably sure you do not know. There is a group of people, from outside your community, working hard to have gasoline-powered leaf blowers banned throughout the West coast. The initial reason was, and still is for that matter, that some of them are noisy and therefore irritating. The concept of citing health hazards as the reason for a ban is contrived. It was initiated by Peter and Susan Kendall of Orinda, California. You can read all about them in the [New Yorker, October 25, 2010 issue](#). Because sound was not a compelling enough reason for banning leaf blowers in their hometown, Ms. Kendall said, *"I would (in the future) try to get the law classified not under noise but under health and safety..."*

Many anti-leaf blower advocates have created websites that dedicate themselves to demeaning the leaf blower. So, the Kendall's and many others, no doubt including Ms. Parham, have searched the Internet for the names of dignitaries and organizations that provide statements supporting their mission, regardless of the truth. Local people that are strongly against the leaf blower are eager to believe what they read, using these falsehoods to justify their cause. I am sure you know from your experience with the media that if something is said often enough, by many different people, or put in print by many sources, regardless of the facts, people will tend to believe it as being true. They then will proceed to confidently restate these unproven hypotheses emphatically.

I know you will want to do something about the leaf blower to please those that want them banned. But you have to consider the impact this will have on those that use them. For the professional user, this can be a game changer. It can actually put some contractors out of business.

The local people trying to convince you that leaf blowers are bad, are well meaning, conscientious, and dedicated to improving the environment, (especially Ms. Parham), but they are not professionals. What I mean by not being professional is that none of them are in any way professionally involved in the use, development, or accreditation of the leaf blower. As a result, they really do not know or understand the value of this tool to those that use them. These people can only quote claims made by others. They have no way of knowing if what they are restating is true. Have they cited qualified tests as justification, or is what they say simply inuendo or opinion? Some of the background material they show is true in concept, but the impact on the environment, as it relates to the leaf blower, is not true.

For example, according to the above article, Ms. Parham said that gas-powered leaf blowers generate high levels of greenhouse gases. Where are the facts for this statement?

I don't want to overwhelm you here with technical engineering numbers and other details but let me focus for just one minute on the above falsehood. I'd like to talk about carbon emission or the [Greenhouse Gas](#) coming from internal combustion engines as it relates to leaf blowers.

Have you ever given any thought to what happens to fuel (a hydrocarbon) that is burned in an automobile or a leaf blower? It oxidizes. That means oxygen combines with the two elements found in fuel, namely hydrogen and carbon. Every ounce of it turns into an airborne gas. Hydrogen combines with oxygen to form water vapor (H<sub>2</sub>O) and carbon oxidizes to form carbon dioxide (CO<sub>2</sub>), or greenhouse gas. For the most part, neither of these compounds are hazardous to the environment. Everyone likes water and our trees and plants thrive on CO<sub>2</sub>. Today, some are saying that the environment has too much CO<sub>2</sub>.

Assuming that is true, those arguing that leaf blowers are bad for the environment because of greenhouse gas (CO<sub>2</sub>), do not know how it is created. It's all a function of how much fuel is burned. In your car, how many gallons of gasoline do you burn in a week, one tank full (18 gallons)? How much do you burn in a leaf blower in a week, 10 ounces? A gallon, by the way, is 128 ounces. The average automobile is 230 times worse than a leaf blower when it comes to the emission of greenhouse gasses. Fancy catalytic converters and computers in automobiles do not limit the formation of CO<sub>2</sub>, in fact, these devices increase it by converting unburned hydrocarbons into water vapor and CO<sub>2</sub>. Every hydrocarbon molecule burned turns into water vapor and greenhouse gas.

The New York State Department of Environmental Conservation says that there are [11 million gasoline-powered leaf blowers](#) in the United States. But there were [276 million vehicles registered](#) in 2019. This figure includes passenger cars, motorcycles, trucks, buses, and other vehicles. The number of [light trucks](#) alone sold in the U.S. stood at 12 million units.

So why are these people singling out the leaf blower. To say that leaf blowers are a serious source of greenhouse gas is an uninformed statement. Ten ounces of fuel through a leaf blower generates about the same amount of CO<sub>2</sub> as that found in a [couple cases of beer](#).

Check out [Aspen, Greenhouse Gas Sources](#), to see where this gas is really coming from.

She also cites nitrous oxides, which does not come from gasoline powered engines. This compound comes from engines that require excess air in the combustion chamber, such as diesel engines.

And then she points to hydrocarbon exhaust emission, which has been addressed by the Environmental Protection Agency (EPA) through California Air Resources Board (CARB) regulations. Only CARB has been given authority to regulate exhaust emission from small engines in California by the EPA. All subdivisions thereof (cities) are preempted from controlling emissions, including through the means of banning. See the [section 209 of the Federal Clean Air Act](#) to read the restriction.

CARB has mandated that hydrocarbon exhaust emission from small handheld engines must be [reduced by as much as 90%](#), effective January 1, 2005. If one is serious about reducing hydrocarbon exhaust emission, a good approach to doing this legally is to require that all gasoline-powered leaf blowers be manufactured after January 1, 2005. But since these small engines have been regulated for over 16 years already, and there are very few unregulated units still in existence, you might

just want to ignore this issue and do nothing, keeping your regulation simple and easier to enforce.

If someone tells you that two-stroke engines are worse than four-stroke, because of existing CARB regulations this cannot be true. If one says that 1/3 of the fuel goes through a two-stroke engine unburned, well that is just not true anymore.

Then there is the reference to the Edmonds test. She justifies in part, her comments about exhaust emission, by citing the test run by edmonds.com. This test is inaccurate. There is a [paper](#) that explains why but suffice it to say here that edmonds.com does not know how to test small engines. The equipment they used was designed for testing 300+ horsepower car and truck engines not 3 horsepower leaf blowers. The parameters for this comparison test, as outlined by the EPA, are entirely different. Vehicles are measured according to a variable load, over a timed sequence while leaf blowers are measured in kilograms per horsepower hour at full load, without variation.

Ms. Parham thinks people are losing topsoil due to leaf blower use. This is a real stretch of the imagination. 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 and/or prairie wind both have the potential to create the kind of dust storm that will remove topsoil, but not a leaf blower. Essentially, there is no meaningful or realistic comparison.

As I read the reference article, I found much of its contents capricious. She blames everything from Asthma to COVID-19 on the gasoline-powered leaf blower and then recommends changing from gasoline to battery-power blowers. What is the difference when it comes to generating dust? Except for exhaust emission, everything she cites as reasons for banning gasoline power also applies to battery power.

The article cites particulate matter as the cause of this catastrophe. Leaf blowers are not the cause of PM10 and PM2.5. To understand why, please check out the reason at the following website:

[https://www.leafblownoise.com/#Are\\_leaf\\_blowers\\_hazardous\\_to\\_your\\_health](https://www.leafblownoise.com/#Are_leaf_blowers_hazardous_to_your_health)

I know that in time, changes will be proposed as to what kind of leaf blowers can be used in Napa. A decision from you will be required. No doubt something will have to be done, but you do have choices, choices other than banning all gasoline-

powered leaf blowers. Limiting the time of use for leaf blowers is a good first step. This is being done by other cities with great success. The key to any ordinance succeeding is that it should be something that people will accept and willingly comply with. In other words, don't do something that will cost them money and don't take away their indispensable tools, tools that except for your ordinance, are perfectly legal and do not significantly impact the environment. Look, the overall goal of an ordinance regarding the gasoline leaf blower is, and should be, to eliminate the noise.

So, how can you do that without controversy? Obviously, **ban only the noisy blowers.**

In the back of your mind, you may be thinking that because there are other cities that have banned blowers, you can't go too far wrong to follow their precedent. However, I'm sure you have questions:

- How will a ban be enforced?
- Will homeowners with leaf blowers be upset?
- How does this impact the elderly?
- What will be the cost impact to the homeowner and landscape contractor?
- Will current users comply with your ordinance?
- Will people use time consuming tools, or will they just leave the debris where it lies?

If you decide to check this out for yourself, you can talk to council members from cities that already have a ban, but don't overlook talking to the enforcers, local lawn care providers, and homeowners to learn the true impact.

The industry took notice of blower noise more than 20 years ago and deliberately addressed this issue in response to complaints. Much has been done to reduce the noise from gasoline powered leaf blowers, spending millions of dollars to make an alternative to noisy blowers available to the consumer.

[To understand how sound reduction is quantified](#), note that for every six dB(A) reduction in sound magnitude (from any starting point on the measurement scale), the actual volume, or sound pressure, is reduced by 50%. This much sound reduction is hard to accept as being true for the average person because we cannot comprehend from experience what a 50% reduction sounds like. The best thing to do is to witness an actual leaf blower sound comparison, but I know that it is not easy to arrange this. An alternative is to check out the [video](#) of an actual demonstration developed for the comparison of leaf blowers on my website. Note that battery-powered blowers are not as quiet as one might think.

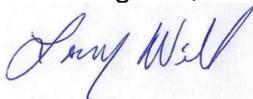
In the case of a gasoline-powered leaf blower, sound level is measured at 50 feet to replicate what a bystander will experience. The published values are obtained per the industry Standard ([ANSI B175.2](#)). A “Quiet” leaf blower is 65 dB(A) or less, measured per this Standard. This is at least a seventy-five percent reduction in sound or 12 dB(A), from a typical noisy leaf blower at 77 dB(A). Quiet leaf blowers are only 85 dB(A) at the ear of the operator, not requiring hearing protection according to OSHA.

Quiet leaf blowers have been available for a long time, however, not all leaf blowers are quiet. Therefore, I encourage you to learn more about these quiet blowers before summarily banning them along with the noisy ones.

Fortunately, because of the industry’s foresight, any city that wants to limit the sound emanating from a gas-powered leaf blower can easily determine sound magnitude in the field without testing. The consumer can also determine compliance with local sound limitations at the point of purchase via the attached [label](#). This decal has been on all quiet gasoline powered leaf blowers manufactured in the United States for at least the past fifteen years. If there is no label on a unit, it does not comply.

The leaf blower issue can become quite complex. It is my experience that most of the time, people not interested in engineering or technical matters, are not so inclined to understand details presented by an engineer. According to my wife, engineering stories can be quite boring. If engineering stories are boring to you, before you believe all the negative claims you hear about the leaf blower, ask an engineer friend, or better yet, ask the city’s engineer to check out my [website](#), [links](#) to references, and the [appendix](#) to this letter. Ask him if what I am saying has merit. Knowing the facts will help you arrive at the best decision in this matter.

Best Regards,



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Click: [APPENDIX](#) for details and [links](#) to references.