

January 5, 2021

For an electronic version of this letter:

<https://www.leafblownoise.com/SantaCruz.pdf>

**TO: Mayor Donna Meyers  
Santa Cruz, California**

**Copy: Vice Mayor Sonja Brunner  
Councilmembers:  
Sandy Brown  
Justin Cummings  
Renee Golder  
Shebreh Kalantari-Johnson  
Martine Watkins**

**From: [Larry Will](#)<sup>1</sup>**



Reference:

<https://www.change.org/p/santa-cruz-city-council-ban-gas-powered-and-high-noise-leaf-blowers><sup>2</sup>

and

<https://scruzclimate.org/leaf-blower-ban/#:~:text=We%20can%20live%20in%20a,did%20we%20wait%20so%20long%3F%E2%80%9D><sup>3</sup>

Dear Mayor Meyers:

Clearly this is a lengthy letter but bear with me. This is a document filled with information you will not find anywhere else concerning the leaf blower. As you or your staff read this, you will find links to facts, not opinions or anecdotes, that will provide truths you can validate for yourself.

**Who am I to tell you all this?** I am a former Vice President of Engineering for Echo Inc., a leading manufacturer of powered handheld lawn care products and have a great deal of knowledge about all kinds of leaf blowers. No, I am not a stakeholder in your community nor am I trying to interfere with any decision you deem necessary, but your ultimate decision regarding a blower ban should be based on facts. You can find some of these facts here in this letter and the rest at my [website](#)<sup>26</sup>. Click [here](#)<sup>1</sup> to see my qualifications and credentials. I am an engineer and therefore I write like one. So, if all this confuses you, ask your engineering friend to read this and let him tell you what he thinks about my statements.

I see from the referenced articles on the Web that the leaf blower will be an issue in future Santa Cruz City Council deliberations. The issue is, should you or should you not ban them. This is an interesting challenge for the advocates, and it makes interesting reading in the media. I wonder why that is. Perhaps it's because it is controversial.

It should be a bit of concern to you that all you have heard about the leaf blower and the people that use them is entirely negative. This is especially true of the two articles referenced. If I were in your position, I would like to know the other side of the issue and whether or not what you are being told is in fact, the truth.

You may not know this, but there are groups of people, from outside your community, working hard to have gasoline-powered leaf blowers banned throughout the country. Without a doubt, the issue concerning leaf blowers is noise. But many cities consider this a weak reason for banning blowers, so ban advocates look for other reasons. The concept of citing health hazards as the reason for a ban was initiated by Peter and Susan Kendall of Orinda, California. You can read all about them in the [New Yorker, October 25, 2010 issue](#)<sup>4</sup>. Because sound was not a compelling enough reason for banning leaf blowers, Ms. Kendall said, "I would (in the future) try to get the law classified not under noise but under health and safety..."

So, the Kendall's and many others have searched the Internet for statements and enlisted dignitaries that would support their mission, regardless of the truth. I'm 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. Others will then proceed to confidently restate these unproven hypotheses emphatically. I think this is called "[spinning](#)".

The local people that are trying to convince you to ban leaf blowers are well meaning, conscientious, and dedicated to improving the environment, 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 gasoline-powered yard care products. I venture to say that they themselves have likely never even used these products personally and therefore have no concept of how valuable they are to homeowners and professional users.

The background material presented, which appears to support a blower ban, may be true in concept, but the impact of these claims as it relates to a leaf blower is overstated. Take exhaust emission, for example. The contribution from each exhaust constituent is not meaningful as it relates to low powered yard care products. Exhaust emission from handheld engines consists of primarily three components:

- carbon dioxide (CO<sub>2</sub>),
- carbon monoxide (CO),
- unburned hydrocarbons or fuel.

All other presumed exhaust emission constituents are insignificant or non-existent in small handheld gasoline-powered equipment.

Let me start by focusing on [greenhouse gas, \(carbon dioxide\)](#)<sup>5</sup>. Think in terms of households that drive cars to work and have or use leaf blowers.

Gasoline is a hydrocarbon, which when completely burned turns into water vapor (H<sub>2</sub>O) and Carbon Dioxide (CO<sub>2</sub>). Carbon dioxide generation is directly proportional to the amount of fuel burned. While driving your car, how many gallons of gasoline do you burn in a week, one tank full (18 gallons)? How many cars in your household are used to drive to work? How much do you burn in a leaf blower in a week? Most likely not more than 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. Even though automobiles have a sophisticated emission control system, none of these controls will reduce the amount of CO<sub>2</sub> generated. Computers and catalytic converters minimize the emission of unburned hydrocarbons by converting them into water and carbon dioxide.

Aspen, Colorado did a [study](#)<sup>6</sup> to find the major sources of CO<sub>2</sub>, but all lawn care products, of which a leaf blower is only a small part, were not even on the scale.

Likewise, carbon monoxide is of even less concern since leaf blowers are used outdoors. CO is an unstable compound and is quickly dissipated. Like carbon dioxide it is produced in small amounts, because of the almost trivial amount of fuel being burned.

Hydrocarbon emission is another matter. Two-stroke engines may be somewhat dirtier than the automobile, ounce per ounce of fuel burned, but today, they are not as dirty as you may have been led to believe. The federal government has set standards for this component, which manufacturers must comply with. Thirty years ago, hydrocarbons, or unburned fuel in the exhaust, were identified to be the source of environmental pollution. It caused [smog](#), sometimes called "ozone". Admittedly, automobile manufacturers have done a lot over the years to reduce this constituent in exhaust gasses. But the leaf blower engine has also been improved. Mandated by the EPA, hydrocarbon emission has been reduced by as much as 90%, effective January 2005. See "[Certified Emission Levels](#)"<sup>7</sup>. Santa Cruz can mandate cleaner engines by disallowing blowers built prior to 2005. See [emission label](#)<sup>8</sup> for manufacturing date.

When you consider hydrocarbon emission improvements and the amount of time per week a blower is used compared to an automobile, [gasoline-powered motor vehicles are 30 to 45 times worse](#)<sup>9</sup>. Time of use must be a consideration in this comparison.

From your own observations, in a days' time or over the course of one week, ask yourself how many leaf blowers you have seen on your way to work compared to the number of cars there are on the road. Well, enough said about that.

One of the referenced articles refers to a report from "Edmonds Automotive Website". It indicated that emission from a leaf blower is worse than a Ford V8 truck. Obviously, they know how to test trucks, but they know nothing about testing leaf blowers. Suffice it to say here that this is a bogus claim. To learn why, check out the [report](#)<sup>10</sup> at my website.

Don't be misled by claims that blowers make harmful clouds of dust. If you use a leaf blower, you know this claim is not true. If you don't, observe how a professional landscaper uses it. You need to ask; what kind of hazardous dust are we talking about? According to the EPA, the particulate matter that is potentially harmful to someone's health is known as PM10 and PM2.5. Nitrous oxides are the source of this kind of [particulate matter](#)<sup>11</sup>. Leaf blowers cannot generate PM10 and PM2.5 because they do not run on excess air, something only diesels do. So, there is no justification for banning them for this reason.

As for their ability to lift existing PM particles from the ground and resuspend them indefinitely, that is not possible. PM10 and PM2.5 particles are already in the air. Because they are so small and lightweight, the wind keeps these particles

suspended. The brown haze you see over a city is comprised of these particles. Should it settle to the ground due to rain or high humidity, it will immediately attach itself to a larger particle which when disturbed by a leaf blower, will return to the ground within a few feet of being raised. You can see from the above "Particulate Matter" link, even PM2.5 is not a viable argument for banning the leaf blower.

Almost everything that can be presented, other than noise, can be exposed as a falsehood when attributed to a leaf blower, if you take the time to read the articles at the following links:

[Are automobiles cleaner?](#) <sup>9</sup>  
[What about global warming?](#) <sup>5</sup>  
[Are leaf blowers hazardous to your health?](#) <sup>11</sup>  
[Greenwich Department of Health](#) <sup>12</sup>  
[Dr. Steel's Report to California Legislature](#) <sup>13</sup>

[Excessive Dust](#) <sup>14</sup>  
[Dust study and comparison.](#) <sup>15</sup>  
[What do Doctors say?](#) <sup>16</sup>  
[Education](#) <sup>17</sup>  
[Suggested Ordinance Content](#) <sup>28</sup>  
[Will a ban work?](#) <sup>18</sup>  
[Leaf Blower vs. Broom](#) <sup>19</sup>

Recently, the misery caused by COVID-19, the new scourge for 2020, has been falsely tied in part to the leaf blower. It all has to do with noise. Working at home can be different from what people are used to because of the noise outside their window. I say different because where is there an office that is absolutely quiet. Leaf blower noise is just different. Noise from a vacuum cleaner is also atypical from office noise. I very much doubt that vacuums will be banned.

[Noise](#) <sup>20</sup> has long been associated with the leaf blower, but there is a way this noise can be mitigated in Santa Cruz without an outright ban. The simplest and most obvious thing to do is limit the number of hours during which they can be used. I myself am irritated when my neighbor uses his very noisy leaf blower after 5:00 pm, when I am on my deck enjoying refreshments and sharing the happenings of the day with my wife. It should not be used on holidays or on Sunday mornings either.

As for the blower itself, the industry deliberately addressed the noise issue in response to complaints 20 years ago. Millions of dollars have been spent designing, testing, and revising their manufacturing assembly lines, in order to reduce the noise from leaf blowers.

In the case of the gasoline-powered leaf blower, sound level is measured at 50 feet per the industry Standard ([ANSI B175.2](#)) <sup>21</sup>. A "Quiet" leaf blower is 65 dB(A) or less, measured per the above 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).

This much sound reduction is hard to accept as being true for the average person because we cannot comprehend from experience what a 75% 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. Today, there is a [video](#)<sup>22</sup> of an actual demonstration developed for the comparison of leaf blowers on my website.

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](#)<sup>23</sup>. This decal has been on all 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.

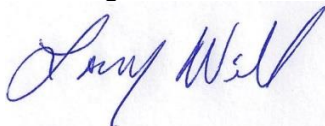
Even though quiet leaf blowers have been available for a long time, not all leaf blowers are quiet. Therefore, I encourage you to learn more about these quiet blowers and if a ban is in order, [ban only the noisy ones](#)<sup>28</sup>.

Just so you know, in some cities, banning gasoline-powered leaf blowers has been very controversial. Lawn care contractors have taken at least one city to [court](#)<sup>24</sup> over a ban. The reason is because it significantly impacts their livelihood. People generally do not like more rules, especially if the rule costs them money or infringes on their personal lifestyle. Banning the leaf blower, to many, seems like a subjugation to someone else's lifestyle and ultimately is not well received.

Don't just do what other cities have done, do what works for Santa Cruz, a beautiful city of character and tradition. If one is hearing leaf blowers every day at this time of year, it is only because people value the aesthetics of their property. I trust you value the cleanliness of Santa Cruz as well. The leaf blower is an important part of maintaining that appearance in a highly populated city with many trees.

If you should want more technical information about leaf blowers that is not clearly addressed here or on my website, please contact me and I will do whatever I can to help, at no cost to you, including further research on your behalf.

Best regards,



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## LINKS TO REFERENCES

1. <http://leafblownoise.com/Abouttheauthor.pdf>
2. <https://www.change.org/p/santa-cruz-city-council-ban-gas-powered-and-high-noise-leaf-blowers>
3. <https://scruzclimate.org/leaf-blower-ban/#:~:text=We%20can%20live%20in%20a,did%20we%20wait%20so%20long%3F%E2%80%9D>
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