



STAFF REPORT ON PROPOSED LEGISLATION

To: Mayor Gavin Buckley

From: Michael Mallinoff, City Manager

Date: October 25, 2023, updated January 17, 2024, updated January 30, 2024

Subject: O-28-23: City Noise Prohibitions and Enforcement

Purpose of legislation

The purpose of this legislation is to update the Annapolis City Code noise prohibition section by adding a ban on certain noise in residential areas; expanding enforcement; and generally related to noise prohibitions.

Impact of legislation on operations

Currently, noise complaints fall broadly into two categories: (1) noise related in some way to construction or buildings (overall noise levels at construction sites, noise from building operations such as air conditioners, and complaints about “after hours” construction), and (2) all other noise complaints. Noise related to construction or buildings is most often reported through 311 and handled by inspectors in the Department of Planning and Zoning. All other noise complaints are handled by the Annapolis Police Department. The Department of Planning and Zoning has a single inspector in the evenings, and that inspector started working in July 2023. All complaints received when there are no inspectors on duty are sent to the Police Department.

Each Department has a single sound meter that it can use to measure sound pressure levels (i.e. volume). The meters measure the maximum pressure level in decibels across all frequencies; the meters do not break out results by frequency. Most of the time, City staff investigating a noise complaint do not bring a sound meter with them but instead attempt to resolve the situation through voluntary compliance.

This legislation adds prohibitions on gas-powered leaf blowers and high-frequency sound in residential areas. As written, the portion related to high frequency sound will be difficult to enforce. "High frequency" is not defined in the Maryland Code of Regulations (COMAR), and the section of COMAR identified in the legislation as pertaining to high frequency sound (26.02.03.02(B)(4)) is this:

(4) A person may not cause or permit, beyond the property line of a source, vibration of sufficient intensity to cause another person to be aware of the vibration by such direct means as sensation of touch or visual observation of moving objects. The observer shall be located at or within the property line of the receiving property when vibration determinations are made.

Since 26.02.03.02(B)(4) can be subjective, City staff will likely have to rely on the overall sound level limits outlined in the table within the legislation. The need to rely on the overall limits is reinforced by the fact that the sound meters used by the City do not show sound level by frequency anyway. If the expectation is to measure sound levels on all calls and to more aggressively issue citations based on those measurements, the City would need to purchase additional meters. New sound meters that would meet the needs of the City under this legislation (must be able to be calibrated to ensure accuracy and stand up to potential challenges to citations) typically cost somewhere around \$500 each. Smartphone apps that measure sound levels are not sufficiently accurate at this time to meet this requirement.

This legislation is expected to increase the number of calls and complaints related to noise received by the City, though it is not known by how much. Call volume is something that the City will need to monitor. The current division of complaints between Planning and Zoning and the Police Department may need to be adjusted if the volume of calls increases significantly. As is the current practice, the City would continue to encourage reporting of construction or building related noise complaints through 311 and reporting of other noise disturbances through the Police non-emergency line.

Impact of legislation on City environmental goals, public health, and environmental justice

Leaf blowers contribute to climate change, harm public health, and cause other environmental damage.

In the US, gas powered lawn equipment accounts for 0.45% of all greenhouse gas emissions annually. This is a small but significant part of the American contribution to climate change. For example, gas powered lawn care equipment in Massachusetts alone emits as much carbon dioxide as 135,000 cars. Transitioning our nation's landscaping equipment to electric would make a measurable difference in U.S. climate change contributions.

This legislation helps to reduce greenhouse gas (GHG) emissions in Annapolis consistent with the City's goal to become a zero carbon emissions city and the Climate Solutions Now Act, which calls for Maryland to reduce GHG emissions by 60% (compared to a 2006 baseline) by

2031 and for the Maryland economy to reach net-zero emissions by 2045. The legislation also protects against the adverse public health effects produced by the use of gasoline powered leaf blowers.

According to the Kleinman Center for Energy Policy (University of Pennsylvania), a typical leaf blower burns just 60 percent of its fuel. The rest is released into the atmosphere. The two-stroke engines that power most leaf blowers use an antiquated technology not allowed in cars and boats. The car company Edmunds estimates that driving a Ford F-150 Raptor truck from Texas to Alaska emits the same amount of air pollution as using a leaf blower for a half-hour. Some leaf blowers generate 23 times the carbon dioxide of the Raptor and 300 times more non-methane hydrocarbons (volatile organic compounds such as benzene, toluene and xylene). Chemical manufacturers must contain their benzene emissions to 10 parts per million. Gas powered leaf blowers emit benzene at 10,000 parts per million. The landscaping industry accounts for one quarter of all benzene emissions in the US.. Leaf blowers also emit nitrous oxide. The U.S. Environmental Protection Agency estimates that the impact of one pound of nitrous oxide on warming the earth's atmosphere is almost 300 times that of an equivalent pound of carbon dioxide.

Gas-powered lawn care has been linked to debilitating health issues, such as cancer, asthma, heart disease, and hearing loss. Workers (and others in their vicinity) are exposed to the air pollution and noise from leaf blowers at close range and over sustained periods of time. Some gas-powered leaf blowers generate a 100-decibel roar, which is the same noise level as a passenger jet taking off. And the kind of noise generated is particularly harmful. Leaf blowers operate at a low frequency that can penetrate concrete walls and can be heard nearly three football fields away. Permanent hearing loss can occur with just 15 minutes of exposure at the highest decibel level that gas-powered leaf blowers operate. The Centers for Disease Control and Prevention report that one-quarter of Americans between ages 20 to 69 already suffer from diminished hearing. This outcome is due in large part to ambient urban noise, including sirens, traffic, and leaf blowers.

The health impacts of leaf blowers also pose equity issues. Low-wage, and often minority, workers suffer the most by operating leaf blowers for hours at a time on a daily basis. These workers often are not aware that the health problems they experience are associated with operating leaf blowers. Many of these workers are immigrants, some undocumented, who are unlikely to advocate for themselves about discomfort they experience during or after operating leaf blowers and any health problems they suffer.

Leaf blowers also cause soil erosion and diminish wildlife habitat and food sources. Generating a blast around 280 miles per hour, leaf blowers kill insects and blow away topsoil that leaves the ground less viable for plant life and more vulnerable to erosion. The noise emitted by leaf blowers also disrupts the ability of wildlife to communicate, impacting breeding, nesting, and migration success rates. (Clearing leaves is largely an aesthetics issue and will not interfere with lawn health if leaves are not piled several inches deep. Fallen leaves are used as shelter for pollinator species and small animals).

Capacity and cost

Electric leaf blowers come in either battery power or plug in form. Consumer grade leaf blowers hold a charge that can last 20-40 minutes, which is more than enough for most residential leaf removal needs. Larger lawns require users to keep multiple batteries charged. Residential grade electric leaf blowers are cheaper than their gas powered counterparts; however, commercial grade electric leaf blowers can cost up to three times as much as a gas powered blower. Savings are realized with greatly reduced maintenance costs. When properly maintained, an electric leaf blower can last ten years. Residential use models range between \$125 to \$400.

Gasoline-powered leaf blower bans in Maryland jurisdictions

Over 100 cities and towns across the U.S. have banned or restricted the use of gasoline-powered leaf blowers. In Montgomery County, gas-powered leaf blowers will be illegal to sell as of July 1, 2024 and illegal to use exactly one year later. In other areas of Maryland, the City of Baltimore (2023), the City of Hyattsville (2022), Chevy Chase Village (2019), and the Town of Somerset (2018) banned the use of gasoline powered leaf blowers. Prince Georges County is exploring a ban and Howard County is considering a pilot program to test the effectiveness of electric leaf blowers and then will make recommendations. In January 2024, HB 91 was introduced in the Maryland General Assembly. which would ban the use of gas powered landscaping equipment (leaf blowers, lawn mowers, hedge trimmers, and weed trimmers) on state properties. The ban would be phased in with full implementation by 2030.

Recently, outright bans (sale and use) took effect in Washington, D.C.; Miami Beach, Florida; Burlington, Vermont and Evanston, Illinois. The city of Los Angeles has had a ban on gas-powered leaf blowers in place since 1990, and California will end the sale of gas-powered blowers next summer. Portland and Seattle are in the process of introducing bans.

Fines in other jurisdictions range from \$100 - \$500 for first offenses, with \$500 as a common first offense fine, and second offense fines range from \$237 to \$1000, with \$500 and \$1000 fines being quite common second offense fines.

Maryland Gas Powered Leaf Blower Bans

Jurisdiction	Year passed /introduced	When does the bill take effect?	What does the bill do?	Other Notes
Montgomery Co	September, 2023	July 1, 2024	Prohibits the sale of all of handheld, backpack, and walk-behind gas-powered leaf blowers and leaf	Fine \$500

			vacuums	
Howard Co	N/A	N/A	N/A	Howard Co is considering a pilot project that would test the effectiveness of electric leaf blowers
Prince George's Co	N/A	N/A	N/A	PG County is considering a ban on gas powered leaf blowers, but there is nothing concrete at this time
Baltimore City	3/1/2023	Law will come into effect 1 year after passing	Prohibits the use of gas powered leaf blowers	\$250 first offense, \$1,000 subsequent offense
Hyattsville	6/1/2022	9/1/2024	Bans the use of gas powered leaf blowers within Hyattsville city limits	Fine \$250 Hyattsville has also created a rebate program to help offset the cost of purchasing electric leaf blowers
Somerset	2018	9/1/2022	Bans the use of gas powered leaf blowers	
Chevy Chase Village	December, 2019	1/1/2022	Bans the use of gas powered leaf blowers year round within Chevy Chase Village	The bill bans gas powered leaf blowers through a noise ordinance

Annapolis	Introduced 2023	12/31/24	The bill seeks to ban the use and sale of gas powered leaf blowers by updating noise prohibition ordinances	\$100 first offense, \$200 subsequent offense
State of Maryland	Introduced Jan, 2024	2030	HB91 seeks to ban the use of gas powered landscaping equipment by state agencies and	HB91 is in first reader as of 2/5/2024

Implementation/Public Education

To achieve compliance, public education regarding the ordinance’s requirements will be necessary to build public awareness before the effective date of the ordinance. Public messaging should include the rationale behind the ordinance including the public health impacts of gas powered leaf blowers and the benefits of electric powered leaf blowers, environmental justice concerns, and the environmental protections that the ordinance provides. The City will need to post a notice of the new ordinance and a frequently asked questions document on its website and provide information via social media as the effective date approaches. Social media postings would ideally be repeated one month and one week prior to the effective date of the ordinance. The City may also perform additional outreach such as mailings to residents and businesses regarding the requirements of the ordinance, its prohibitions, and associated fines. All communications must be provided in English and Spanish

Impact of legislation on staffing

The full impact of this legislation on staffing is unknown at this time and will depend on the increase in call volume and the extent to which the City’s response protocols will need to be adjusted. Currently, Planning and Zoning is at capacity regarding permitting and enforcing codes, and it is expanding the scope of its operations this year with the addition of two part-time liquor control enforcement officers. The department is working to fill these new positions plus other vacancies. Though the City is not expecting to increase staffing immediately as a result of this legislation, it will be important to monitor impacts to workload given staffing constraints. The two Environmental Inspectors in the Department of Public Works could support Code Enforcement Staff by responding to complaints by investigating, documenting, and issuing citations as deemed appropriate.

With public education prior to the ordinance’s effective date, it is estimated that, in the first year of implementation, staff will spend approximately two hours per week responding to complaints or investigating observed violations, and issuing warnings and citations. This estimate will be impacted by the time of year of the effective date. Fall leaf removal and spring clean up periods are when violations are most likely to occur. Providing advance time for public education will be

critical to compliance with this new requirement. The estimated staff time per week should diminish by half each year (1 hour during spring and fall) as City residents and businesses become acquainted with the new law.

It is estimated that, prior to the effective date, approximately 15 hours of staff time will be needed to develop educational materials and prepare mailings and create social media and website content for public education/awareness.

Reason to address leaf blowers rather than all landscaping equipment

Gas powered lawn care tools emitted 20 million pounds of carbon dioxide, a known carcinogen, in 2020. Leaf blowers are being targeted by legislation as opposed to other types of lawn care equipment because they are significantly worse for the environment. This is because the archaic two stroke engines used by leaf blowers are less efficient than the more modern four stroke engines used in other types of landscaping equipment. While two stroke engines only account for a small fraction of fuel used by landscaping equipment, they are responsible for the majority of emissions in the landscaping industry. Two stroke engines account for 85% of all fine particulate emissions from gas powered equipment. Two stroke engines are regulated in every industry except for the landscaping industry. Two stroke engines are still used in leaf blowers because they are lighter weight than the four stroke engines commonly used in other types of landscaping equipment, such as lawn mowers.

Banning the use and sale of gas powered leaf blowers is an easier first step towards electric landscaping equipment for landscaping companies and the general public than banning all electric landscaping equipment. Electric leaf blowers are more readily available than other types of electrical landscaping equipment. Leaf blowers are also primarily used during the fall, while lawn mowers are needed most of the year. This will make the ban more palatable than banning equipment like lawn mowers. Gas powered leaf blower bans are considered first steps towards bans of all types of gas powered landscaping equipment as more and cheaper, longer-range models come on the market in the future.

Further legislation to be considered - rebates and buy back programs

Some jurisdictions, such as Hyattsville and Washington, D.C., have introduced a rebate program to help landscaping companies offset the rather hefty costs of transitioning to electric equipment. This is significant because the upfront cost of purchasing electric landscaping equipment can be three times as expensive as traditional gas powered equipment.. Other jurisdictions have considered a buyback program, in which the governing body will pay consumers to turn in their old gas powered leaf blowers. This can help consumers pay for new electric models. California allocated \$27 million for small landscaping businesses to transition to electric tools.

Impacts on local landscaping businesses

The Economic Development Staff reached out to 11 local landscaping businesses for their input on the potential impacts of the ordinance on their businesses. Four responses were received and the main concerns expressed by three of the companies were:

- Companies would be forced to purchase equipment that would be used only for city customers.
- Companies would have to charge more because of the new and more expensive equipment required by the ordinance; these costs would be passed on to the customers which may cause companies to lose customers due to increases in charges for services
- The need to increase hourly rates could cause companies to price themselves out of business
- Hispanic companies will need additional outreach to understand changes in the law.
- E-equipment is viewed as heavier and more expensive, not as powerful, requiring multiple battery packs (3 batteries for each piece of equipment).

However, one company responded that:

- Some clients have already requested that gas powered leaf blowers not be used on their properties and other companies report the same request.
- The trend in the industry is moving towards E-equipment and no landscaper should be surprised by such legislation.
- While battery powered blowers do not have quite the output as their gas powered counterparts, there are plenty of options available to make the transition
- There will be some expense associated with buying new equipment but it is the future of landscaping and the investment will need to be made sooner or later.

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