

Priya DasSarma
Oral Testimony

February 25, 2022

Economic Matters Committee

House Bill 0934 – **FAVORABLE**

Thank you Chair Wilson, Vice Chair Crosby and Members of the Economic Matters Committee.

Thank you to Delegate Foley for being the lead sponsor on House Bill 934.

Starting when I was home, taking care of small children and all the way through the COVID pandemic, when I like many others have worked from home, I have been disturbed by the noise and smell of the leaf blowers and other lawn equipment. The noise and smell are more than an annoyance.

According to the EPA, lawn care in the United States produces 13 billion pounds of toxic pollutants per year.

Our family (in Ellicott City) drives an Electric vehicle, get renewable energy via BGE and are fortunate enough to have convinced the neighbor who mows our lawn to switch to an electric mower, so on a personal level, we are doing what we can.

Running a gas-powered leaf blower for one hour emits the same amount of pollution as driving a car 1000 miles.

*Think of workers who have to work with these machines long days, all week, inhaling formaldehyde, VOCs, nitrogen oxides, carbon monoxide, benzene and particulate matter, deal with constant machine vibration, and are exposed to **115 decibels** (dB) of noise in their ears -well above the **85-decibel threshold that results in permanent hearing loss in as little as two hours**. Electric blowers have been found to be equally or even more efficient, are lighter, and quieter (65 dB) and have zero emissions. Please see more in my written testimony.*

*Banning gasoline leaf blowers will prevent premature deaths, cancer, heart and respiratory ailments, osteoporosis, dementia, stroke, reproductive issues, preterm and low birth weight, and birth defects. Consider the economic impact: **workers compensation, sick-days, shortened work-life, and taxable years, and treatment costs. And demand for electric lawn and garden equipment is forecast to increase to \$14.1 billion by 2024 by the Freedonia Group – Maryland should tap into this market.***

If you care about the citizens and the land you represent, I ask that you find a favorable report on HB934, joining over 200 localities including Washington, D.C. which this year started banning the use of gas-powered leaf blowers.

A broader version has already been passed into law in California this year.

*Surely Maryland wants to be at the leading edge of this effort. **The cost of inaction is greater than the cost of action. Please act now! Support House Bill 934, which is but a small step in the right direction.***

Priya DasSarma

Written Testimony to the Economic Matters Committee
February 25, 2022

Thank you Chair Wilson and Vice-Chair Crosby and Members of the Economic Matters Committee and especially Worker's Compensation chair, Delegate Courtney Watson.

As a result of the pandemic, many of us are working from home (and at one time were home raising small children who needed to take naps). Throughout the summer and fall, as I tried to concentrate on my work, noise from gas-powered engines like lawn mowers and leaf blowers filled the day. I wish I had a meter to register the decibels (dB) - it literally vibrates the house at times. When I go for walks, I smell the exhaust as well, as I walk by the houses where lawn work is on-going, which is on all streets in the neighborhood. The leaf blowers are responsible for some of the worst noise and also have other impacts on physical mental health for residents, and certainly for the workers who experience it throughout the workday.

We try to lead an ethical and environmentally conscious life here. As a result, we decided to boycott gasoline-powered mowers for our property (we do not do leaf blowing – preferring to either rake or leaves into our woods or leave the leaves in place to compost). We were most fortunate that the neighbor who does our mowing decided to purchase an electric mulching mower, and as a result, mows our lawn as well as that of several other houses on our street. We are relieved that the noise and pollution from our lawn work is minimized and the bill you are considering today would extend this health benefit to all residents in Maryland.

In 2018, North America accounted for over three-fourth of the leaf blower industry and lawns and gardens occupy ~30-40 million acres of land (2010). Commercial lawns, gardens and turfs (make up ~ 50% of the overall market share) and roof gardens are the main landscapes where they are used. The residential lawns and gardens sector brings in ~\$200+ million (2018) and growing.

Across the US, lawn care produces 13 billion pounds of toxic pollutants per year [hydrocarbons and oxides of nitrogen (principle ingredients of smog), particulate matter (damaging to the respiratory system), carbon monoxide (poisonous gas) and carbon dioxide (contributing to climate change)]. Gasoline itself is highly toxic and flammable, and causes many costly fires in homes and garages. The EPA estimates that 17 million gallons of gasoline are spilled annually just filling up lawn mowers. In 2018, Americans used nearly 3 billion gallons of gasoline running lawn and garden equipment which is the same as annual US energy use of more than 3 million homes. And the emissions affect the ozone layer too.

Running a gas-powered leaf blower for one hour emits the same amount of smog-causing pollution as driving a 2017 Toyota Camry from Los Angeles to Denver (~1,100 miles) or nearly 300 times the amount of air pollutants as a pickup truck. They blow 300 to 700 cubic feet of air per minute at 150 to 280 miles an hour. This dust contains pollen and mold, animal feces, heavy

metals and chemicals from herbicides and pesticides and more spread into the air and also displace natural wildlife.

But we must certainly consider, especially, the workers who have to work with these machines for long days, all week: they are inhaling the formaldehyde, benzene and particulate matter (“fumes”), are exposed to up to 100 dB of noise and constant machine vibration all day, often six days per week. Noise from gas-powered leaf blowers can range from 95 to 115 decibels at the ear of the operator. That’s well above the 85-decibel threshold that can result in permanent injury to a person’s hearing in as little as two hours. In addition to noise pollution, they emit exhaust pollution, fine particulate pollution, cause environmental degradation, including water pollution and animal habitat destruction and is clearly a social justice issue, whereby low-wage workers hired to operate gas-powered leaf blowers are most likely to sustain long-term hearing loss and respiratory and heart disease as a result of prolonged exposure to air and noise pollution from gas-powered leaf blowers and do not always have eye, ear, and breathing protection, as stipulated by manufacturer guides.

Gasoline powered blowers can be heard 23 (or even 91 houses at more than that, depending on the machine) at more than 55 dB vs. “only” 6 houses away from the lawn they are used in. Now consider that often there are often multiple gasoline leaf blowers used at one property at a time. Arlington County, Virginia Noise Ordinance 5 (enacted in 2014) has a maximum permitted noise level in residential neighborhoods of 90 dB. New Haven, Connecticut residential noise ordinance standard is a maximum of 55 dB for 800 feet in all directions.

Electric corded or cordless (90% of market 2018) alternatives produce less noise (70 or less dB) no fumes, and less vibration and weigh about half that of the gasoline models. Note: the decibel level measure is logarithmic scale rather than proportionate scale, and thus, a gas blower at 90 dB is 100 times noisier than an electric blower at 70 dB. Even still, a leaf blower rated at 70 dB at 50 feet may generate noise levels over 105 dB at the operator’s ears.

In 1990, the EPA estimated that gas-powered lawn equipment was responsible for five percent of the nation’s ozone-harming pollutants, and California was the first government in the world to adopt emission standards for small engines. Since then, emissions in cars have vastly improved compared with smaller engines.

On October 13, 2021 a tweet by MACA (MIT Alumni for Climate Action): “#California set to become first state to ban gasoline-powered lawn equipment” caught my attention. There was this powerful statement by Ms Gonzalez, California Assemblywoman (an author of CA Assembly Bill 1346): “Small gas engines are not only bad for our environment and contributing to our climate crisis, they can cause asthma and other health issues for workers who use them,” “It’s time we phased out these super polluters.” California Governor Gavin Newsom signed Assembly Bill which requires that the California Air Resources Board adopt statewide rules by July 1, 2022 that “prohibit engine exhaust and evaporative emissions” from “new small off-road engines” in a manner that is “cost-effective and technologically feasible.” Their state air board defines “small off-road engines” as combustion engines with less than 25 gross horsepower,

including those found in lawn mowers, string trimmers, chain saws, golf carts, pressure washers, pumps and require gas-powered home generators to be emissions-free by 2028.

Municipalities across the US (~200+ cities nationwide), as well as the state of Hawaii, have enacted some form of leaf blower restrictions. In December 2018, D.C. Mayor Muriel Bowser signed a bill banning the use of gas-powered leaf blowers that went into effect this year. Brookline, Massachusetts, has a seasonal ban on gas-powered leaf blowers, as does Montclair, New Jersey, and Burlington, Vermont. Massachusetts is considering a bill that would provide incentives for cities and towns to transition toward quieter, lower emissions equipment. NY and IL are trying to follow suit. According to Consumer Reports: “In most of the outdoor power equipment categories we test, we’ve seen that the performance of battery-powered units is on-par with gas—even outperforming them at times”

I immediately wrote to my Delegate, Delegate Courtney Watson, Howard County District 9B, suggesting that we also follow suit! She and her team let me know about **Foley, Fraser–Hidalgo, and Ruth’s House Bill 934 in the Maryland General Assembly** that would ban the sale of gasoline-powered blowers throughout the state by 2024, followed by a ban of all usage by the start of 2025. It is focused on just blowers, but at least it is a step in the right direction. I strongly support this bill, and urge you to do so as well and to further expand in it as well. I think the bill should also include other “small engines” like California: Note, e.g.: One hour of running a new gas mower emits the same amount of atmospheric pollutants as driving 11 new cars for one hour or driving 300 miles from LA to Las Vegas. They are noisy: 82-90 dB vs. battery-powered ~70 dB (about the same as a vacuum cleaner), weed whackers (96 dB) and hedge trimmers (103 dB).

By passing House bill 934, Maryland will begin to help improve the health and welfare of all citizens of our beautiful State, and counteract a preventable public health emergency. The drop in airborne pollution, including volatile organic compounds (VOCs), nitrogen oxides (NOx), carbon monoxide (CO) and fine particulate matter (PM 2.5) will prevent some premature deaths and diseases linked to air pollution including cancer, heart disease, osteoporosis and bone fractures, asthma and other respiratory diseases, dementia, heart disease, stroke and even reproductive health, preterm birth, low birth weight, birth defects and stroke. One should look into the **cost in terms of workers compensation, sick-days (if given), shortened work-life and the treatment costs for all these ailments, some of which affect the operators, and others affecting the newborn and children throughout their lives.** This is expensive.

Global Electric Lawn & Garden Equipment Global demand for electric lawn and garden equipment is forecast to increase 6.0% per year to \$6.6 billion in 2025. Maryland may want to invest in this industry for the future, creating new jobs.

The cost of inaction is greater than the cost of action. Not only in terms of the long-term environmental impacts and impacts on climate change, but also on healthcare and long term disability costs resulting from the use of gasoline-powered engines. **Please act now!**

Some supporting Resources (not in particular order- sorry):

- <https://twitter.com/MITAlum4Climate/status/1448314605684539401?s=20>
- <https://www.baltimoresun.com/news/environment/bs-md-to-rake-or-not-to-rake-20191010-4bcvx7fzagnagrtawfbgq4pxdm-story.html>
- https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=202120220AB1346
- <https://www.washingtonpost.com/climate-solutions/2021/10/12/california-newsom-law-equipment-pollution/>
- <https://www.observertoday.com/news/page-one/2021/11/ban-on-gas-powered-lawn-equipment-proposed/>
- <https://abcnews.go.com/US/wireStory/california-law-eventually-ban-gas-powered-lawn-equipment-80500839>
- https://news.yahoo.com/california-law-bans-small-off-174600432.html?guccounter=1&guce_referrer=aHR0cHM6Ly93d3cuZWNVc2lhLm9yZy8&guce_referrer_sig=AQAAAAOGrEh2v2t6p0hliq56eqZsfXjLdD7SOae3ZV9kDSv0gE3nerFqOTUai-otdNRDm8OaQ3odm6Tjnz0SjL7Nqlt5Fz7IDtpt4PywqsCfZgqzwZTQB0rGillmuVBR1e9xLv4upwcjwzuaOpMvMxncqw3S Sam2dYVy16suGivasmjx
- <https://www.msn.com/en-us/news/us/california-bans-sales-of-new-gas-powered-lawn-mowers-to-curb-emissions/ar-AARwTRi>
- <https://www.mercurynews.com/2021/10/14/qa-how-californias-new-ban-on-gas-powered-leaf-blowers-lawn-mowers-and-other-outdoor-equipment-affects-you/>
- <https://www.cbsnews.com/news/gas-powered-lawnmowers-california-environment-pollution/>
- <https://newsbasis.com/are-gas-lawn-mowers-banned/>
- <https://noisefree.org/sources-of-noise/lawn-and-garden-equipment/>
- <https://calmatters.org/environment/2021/12/california-lawn-equipment-trucks-smog-rules/>
- <https://www.consumerreports.org/emissions/california-ban-on-sales-of-gas-powered-outdoor-tools-a3883259556/>
- <https://www.kqed.org/news/11310630/more-pollution-than-cars-gas-powered-gardening-equipment-poses-the-next-air-quality-threat>
- <https://sign.moveon.org/petitions/ban-gas-blowers-and-mowers-in-arlington-va-for-a-quiet-healthier-community>
- <https://www.aarp.org/home-family/your-home/info-2021/lawn-mower-guide.html>
- <https://www.aarp.org/health/conditions-treatments/info-2019/air-pollution-effects.html>
- <https://www.marylandmatters.org/2022/02/17/del-foley-theres-a-more-environmentally-sound-quieter-way-to-clear-our-yards/>
- <https://www.prnewswire.com/news-releases/maryland-residents-invited-to-the-great-maryland-lawn-mower-event-on-august-14-99913739.html>
- <https://www.globenewswire.com/news-release/2018/06/06/1517450/0/en/Electric-Lawn-Mower-Sales-to-Surpass-10-Million-Units-in-2019-as-Electrification-and-Environmental-Conservation-Induce-Uptake.html>
- <https://www.rurallifestyledealer.com/articles/569-industry-news---maryland-residents-swapping-gas-mowers-for-electric-ones>
- <https://www.mordorintelligence.com/industry-reports/electric-lawn-mowers-market>
- <https://www.imarcgroup.com/electric-lawn-mower-market>
- <https://www.factmr.com/media-release/913/lawn-mower-market>
- <https://www.grandviewresearch.com/industry-analysis/lawn-mowers-market>
- <https://www.theguardian.com/environment/2022/feb/17/air-pollution-may-affect-sperm-quality-says-study>
- <https://nepis.epa.gov/Exe/ZyPDF.cgi/2000L3LN.PDF?Dockey=2000L3LN.PDF>
- <https://www.cdc.gov/niosh/docs/98-126/pdfs/98-126.pdf?id=10.26616/NIOSH PUB98126>
- <https://www.cdc.gov/niosh/topics/noise/pdfs/NIOSH-Sound-Level-Meter-Application-app-English.pdf>
- <https://www.gminsights.com/industry-analysis/north-america-and-europe-leaf-blowers-market>
- <https://www.verellenhc.com/blog/electric-vs-gas-leaf-blower>
- <https://sustainability.wustl.edu/rethinking-lawn-equipment-2/>
- https://www.newhavenindependent.org/article/gas_powered_leaf_blower
- <https://aptalist.com/en/global-electric-lawn-garden-equipment>
- List of top Electric Blower companies that I found from my research: Billy, DeWALT, Dolmar, Earthwise (Great States Corporation/ American Lawn Mower Co.), Echo, Emak S.p.A., Greenworks Tools, Hitachi Ltd., Honda, Husqvarna, Makita Tools Corporation, Positec tool corporation (WORX), Poulan PRO, RedMax, Remington Power Tools, Robert Bosch GmbH, Ryobi Tools, Stanley Black & Decker, Stihl, Toro Company, and Ryobi Tools, and Tanaka. How many are connected with Maryland?