

CLIMATE SOLUTIONS

The problem with gas-powered leaf blowers



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The sounds of autumn are familiar: leaves crunching underfoot, a crisp breeze rustling through trees — and, much to the annoyance of many, the incessant droning of leaf blowers.

But blasting fallen foliage with powerful winds isn't just problematic because of the noise. Gasoline-powered leaf blowers also spew [toxic chemicals and planet-warming emissions](#) into the air and disrupt natural habitats, experts say.

A [new report](#) on the impacts of gas-powered lawn and garden equipment in Massachusetts estimated the devices generated more than 600,000 tons of carbon dioxide in 2020 — an amount equivalent to the pollution from about 135,000 standard cars.

The report released recently by MASSPIRG Education Fund, an advocacy group, is the latest research to support transitioning to electric lawn equipment, which advocates argue is less polluting and quieter than many gas models.

Multiple cities across the United States have already implemented bans or limits on the use of these tools, including [D.C.](#), [Miami Beach](#) and [Evanston, Ill.](#) Starting next year, California [will enact a statewide ban](#) on the sale of new gas-powered lawn tools.

“When you think about what the benefit of a gas-powered leaf blower does, the cost-benefit ratio just doesn't make sense,” said Karen Jubanyik, an emergency medicine physician at Yale University who has [advocated for a ban on gas-powered leaf blowers](#) in New Haven, Conn.

Here's what to know about the effects of gas-powered leaf blowers and what you can do instead to manage leaves this fall.

Emissions

Many leaf blowers are powered by two-stroke engines, which run on a mix of oil and gas.

“These are very inefficient engines,” said Jamie Banks, founder and president of [Quiet Communities](#), a nonprofit dedicated to reducing noise pollution, “and so they emit a lot of these toxic pollutants.”

In 2020, lawn equipment across the United States produced more than 68,000 tons of nitrogen oxides as well as more than 350,000 tons of volatile organic compounds, according to the recent MASSPIRG report, which included national data. The report noted these tools were responsible for emitting more than 20 million pounds of benzene, a carcinogen, into the air.

The equipment also produced more than 30 million tons of carbon dioxide and nearly 19,000 tons of methane, according to the report.

These are just the pollutants that come out the back end of a leaf blower, Jubanyik said.

“Out the front end these winds are going at over 200 miles an hour and they’re blowing all the stuff that’s on the ground up into the air,” she said. “That’s herbicides, fungicides, pesticides and metals, including lead.”

Noise

If the deafening whine of a leaf blower feels inescapable, you’re not imagining it.

Leaf blowers produce a low-frequency buzz that “allows loud sound at harmful levels to travel over long distance and readily penetrate walls and windows,” said Banks, who published a peer-reviewed paper in 2017 analyzing noise pollution from the gas-powered lawn equipment.

The pilot study found that the loud noise produced from the machinery could travel up to 800 feet away from the source.

Short- and long-term exposure to noise pollution has links to a host of health impacts, including, in some cases, increased risk of heart attacks, strokes and other serious heart-related problems, and hearing loss. The Centers for Disease Control and Prevention lists gas-powered leaf blowers and lawn mowers among the sources of loud noise that can damage hearing over time.

Electric leaf blowers are quieter. After testing both types, Consumer Reports gave electric devices an average score of 2.9 for noise at the ear, compared to 1.7 for gas models. (The lower the score, the worse the noise.) And when the sound was measured 50 feet away, the electric leaf blowers earned an average score of 4.8 versus 2.5 for gas.

“It dissipates over a much shorter distance and it can’t penetrate walls and windows easily either,” Banks said.

Wildlife impacts

Noise from leaf blowers could spell trouble for animals, particularly species that rely on sound to communicate, said David Mizejewski, a naturalist with the National Wildlife Federation, a nonprofit conservation organization.

Clearing the fallen leaves with a leaf blower also disrupts the habitats for critical pollinating species such as bees, butterflies and moths, as well as other critters including amphibians and small mammals like chipmunks.

“We typically use it to sweep away prime habitat for a lot of creatures,” he said.

Changing lawn care

While electric lawn and garden equipment is becoming more common in the United States, the commercial landscaping industry has a way to go, said Dan Mabe, founder of the American Green Zone Alliance, an organization that promotes lower-impact landscape maintenance.

There are roughly 700,000 landscaping companies in the United States, Mabe said. Of those, only an estimated 300 to 400 are fully electric, he said. Many companies also offer hybrid services.

For landscaping companies, cost can be a barrier to transitioning to electric equipment, he said.

Some local governments that have enacted restrictions on gas-powered machinery are providing financial assistance. For example, D.C. has a rebate program and California allocated \$27 million for small landscaping businesses to use toward electric tools.

In the meantime, if you’re still using gas-powered leaf blowers, it’s important to take steps to protect yourself. Jubanyik, the emergency medicine physician, recommends that workers wear N-95-type masks and hearing protection. Whenever possible, she and other experts encouraged people to swap out their leaf blowers for rakes.

People can also reconsider their landscaping choices, Mizejewski said.

“If we minimized our lawn, we added more garden beds and just let the leaves lie where they fall, then you have a lot less need to have these giant high-power leaf blowers, gasoline or electric,” he said.