

Fact Sheet: Gas Leaf Blowers

The US landscape maintenance industry depends on gas-powered equipment – 2-stroke engines (eg, leaf blowers, edgers, trimmers) and 4-stroke engines (mowers). They generate deafening noise and clouds of toxic, carcinogenic air pollution around our neighborhoods, schools, and public spaces. Leaf blowers are often used in ways that violate industry guidelines (eg, simultaneous use of multiple machines) and state environmental protection laws. These practices come with high costs for our health and environment.

- Two-stroke engines of blowers, trimmers, and edgers burn an oil-gas mixture, generate high levels of fine particulate matter (PM2.5) and ozone-forming chemicals at ground level where they are easily inhaled [1,2].
 - In a head-to-head study 30 minutes of leaf blower operation produced as much pollution as a 6,200 lb Ford Raptor truck driven 3,900 miles – the distance from Texas to Alaska! [3]
 - More recently the California Air Resources Board equated pollution from an hour of leaf blower use to 1,100 miles driven in a 2016 Toyota Camry [4]
- Ozone and fine PM are well known causes / contributors to early death, heart attack, stroke, congestive heart failure, asthma, chronic obstructive pulmonary disease, cancer, [5-10] and possibly other serious health conditions, including autism [11]. Even short term exposure can be harmful. Workers, children, seniors, and people with chronic illness, are at greatest risk.
- Noise from commercial leaf blowers ranges from 95–115 decibels at the ear of the operator [12-14]. These levels are orders of magnitude (the decibel scale is logarithmic) beyond those deemed safe for workers or those in close proximity [15-17]. Health effects range from agitation to heart disease [18]. A recent study estimates more than 100 million Americans are at risk for noise-related health problems at a cost of \$3.9 billion/year [19].
- Every year leaf blowers and vacuums and other lawn and garden equipment consume 1.6 billion gallons of gasoline [20], generate tens of millions of tons of carbon dioxide, spill millions gallons of gasoline into the ground and storm drains [21], and adds millions of pounds of toxic and non-recyclable waste to our landfills.
- The high velocity air jets of leaf blowers – 150-280 mph – can destroy nests and habitats, desiccate pollen, sap, other natural plant substances, and injure or destroy birds, small mammals, and beneficial insects. High chronic noise levels decrease biodiversity in affected areas [22].
- Instead of nurturing our landscapes, leaf blowers damage plants, remove beneficial topsoil and mulch, desiccate and compact soil, diminish plant health and contribute to the spread of invasives. This increases dependence on use of fertilizers, herbicides and pesticides.

The good news is there are alternatives. Landscape companies are emerging in locations around the country to provide zero emissions, low noise maintenance. Innovative products and approaches are being developed and communities are taking action. ***A quiet, clean transition is coming!***

References

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