

**DC COW Testimony, July 2, 2018**

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My name is Jamie Banks. I am the Executive Director of QC, an independent non-profit organization. Our mission is to help transition landscape maintenance to low noise, zero emissions practices with positive solutions to protect the health of workers, children, the public and the environment. I was trained as a health care scientist and worked for many years in health outcomes, economics, and policy, before turning to environment. I hold master's degrees from MIT and Dartmouth Medical School, and a PhD from the University of Kent in the UK. I have been asked to testify about the impact of leaf blower noise on communities and on the health and well-being of community residents.

Today, gas-powered leaf blowers are ubiquitous throughout the country. They are widely used in the commercial landscaping industry, today worth around \$66 billion in annual revenues.

While gas blowers emit all manner of unhealthy pollutants, today we are focusing on the noise they emit. Noise emitted from gas blowers is part of the cumulative environmental noise in which we all live. Today, large numbers of people are involuntarily exposed to levels that are harmful to both hearing health and general health. Increasing concerns about environmental noise levels have earned it the label, "The New Secondhand Smoke."

Slide 1 (Organizations concerned with GLB noise)

Many health organizations are concerned with the noise produced by gas blowers and their potential health effects. Here's an example.

Slide 2 (HMS Special Report quote)

Slide 3 (Noise effects on health)

Extensive evidence from the medical and scientific communities has shown that high levels of noise have adverse health effects, ranging from heart disease and hypertension, to sleep disturbance, to psychological, cognitive, and learning issues, as well as plain old annoyance.

Low frequency noise is particularly concerning. In its community noise guidelines the World Health states, "If the noise includes a large proportion of low-frequency components, values even lower than the guideline values will be needed, because low-frequency components in noise may increase the adverse effects considerably."

The effects of excessive noise are particularly acute for children, seniors, people with hearing disorders and neurological conditions like autism and sensory deficit disorders – and those who are arguably among the most exposed – the more than 1 million workers in the landscape maintenance industry, over half of whom are Hispanic and Latino.

For those operators, noise at the ear is much louder than noise reaching anyone else.

#### Slide 4 (Popular models of GLB - sound levels)

Popular commercial models of gas leaf blowers are shown here – more than 100 dB at the operator’s ear and up to 83 dB at 50 feet. Two are among the 3 gas blowers tested in the acoustic study. These levels are orders of magnitude above occupational and public health standards.

To examine the community impact of gas and battery blower noise, we applied the sound levels recorded in the acoustic study and applied them to a hypothetical urban neighborhood with 1/8 acre zoning. For each of the seven blowers tested, we calculated the number of homes affected by unhealthy levels of outdoor daytime noise defined as 55 dB by the World Health Organization and Environmental Protection Agency.

#### Slide 5 (neighborhood impact)

For the battery blowers, unhealthy noise affects between 1 and 6 homes. For the quietest gas blower, up to 23 homes are affected. For the other two gas blowers, up to 91 homes are affected.

In everyday terms, this means that unhealthy noise from a single gas blower can intrude into an area encompassing more than 90 homes, and presumably any outdoor playgrounds, parks, and schools in the neighborhood. This situation would be exacerbated if more than one gas blower is used on a property and/or when several properties in the neighborhood are being maintained.

The distress caused by gas leaf blower noise has prompted 170 communities across the country to enact legislation to ban or restrict their use. Many others are making similar efforts. Beyond the community level, the State of MA recently put out nation’s the first technical specifications for commercial grade battery powered equipment to encourage state agencies, public schools, and municipalities to transition. Big-campus universities including Harvard, Yale, Florida State, NC State, Cal State, and U TX Austin are transitioning from gas to battery-powered equipment. In 2016, South Pasadena, CA became the first city in the nation to maintain all municipal lands and some routine work on its golf courses, year round with BPE. The Town of Southampton, NY is doing the same. More than 140 companies, some of which you’ll hear from today, are now operating with battery powered equipment and manual tools at competitive prices. The National Association of Landscape Professionals named battery powered equipment among its top trends for 2018 stating that “Many lawn mowers, leaf blowers and similar equipment feature low or no emissions, are battery-powered, and are quieter.” Finally, the Outdoor Power Equipment Institute has formed a committee and is developing standards for battery electric equipment.

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## Concerned with GLB Noise

- o American Speech-Language-Hearing Association
- o Children's Environmental Health Center
- o Children's Environmental Health Network
- o State Medical Societies
  - o New York
  - o Massachusetts
- o National Institutes of Health
  - o NIDCD
  - o NICHD
- o The National Academy of Engineering/Sciences
- o US CDC
- o US EPA
- o World Health Organization

CDC: Centers for Disease Control; EPA: Environmental Protection Agency; NICHD: National Institute of Child Health and Human Development; NIDCD: National Institute for Deafness and other Communication Disorders


## Harvard Medical School: Special Report

**The noise that causes sensorineural hearing loss is usually not one deafening bang but decades' worth of exposure to the high-decibel accessories of daily life: leaf blowers, car horns, traffic, movie theater sounds, and so on.**

Source: *Hearing Loss: A Guide to Prevention and Treatment*, 2016.

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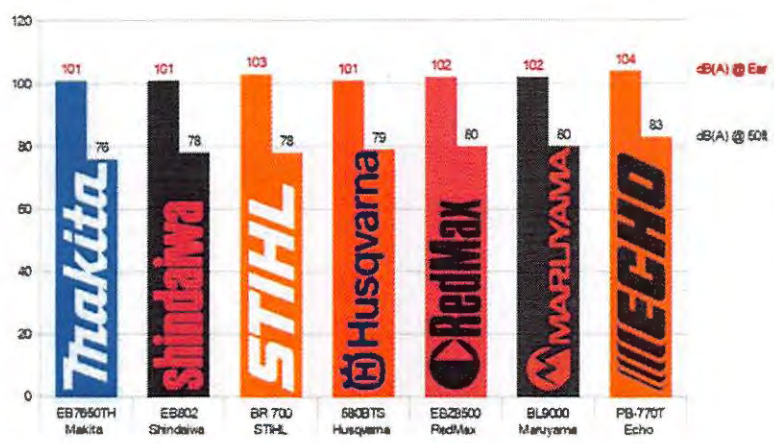
**Noise pollution is an increasing public health problem.**  
 -- US Centers for Disease Control



- Hearing loss
- Tinnitus
- Cardiovascular effects\*
- Immune system suppression
- Stress hormone release
- Sleep disturbance
- Impaired childhood development
- Impaired cognition
- Mental health problems
- Reduced work and school productivity
- Reduced quality of life

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**Cover Your Ears**  
 "No, really, cover your ears! All this great power from the best backpack blower shootout comes at a cost, or several costs. No matter how you slice it, they're loud." -- Quote from OPE Reviews, Dec 2017



Brand/Model	dB(A) @ Ear	dB(A) @ 50ft
Makita EB7650TH	101	76
Shindaiwa EB802	101	78
STIHL BR 700	103	78
Husqvarna 580BTS	101	79
RedMax EB28500	102	80
Maruyama BL9000	102	80
Echo PB-770T	104	83

\* indicates models with asterisks in the original image.

