



New York State

**Centers of Excellence in
Children's Environmental Health**



Dedicated to the Health and Well-Being of Children in New York State

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**NYS Center of Excellence in
Children's Environmental Health at
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January 8, 2015

To the Huntington Town Board:

We are writing in support of a proposal to limit or ban the use of gas-powered leaf blowers in order to better protect the health of residents, especially children.

The New York State Centers of Excellence in Children's Environmental Health (NYSCECEH) are dedicated to protecting and improving the health of the state's children as pertains to the effects of adverse environmental factors. The NYSCECEH at Stony Brook operates in the public service of Nassau and Suffolk County residents. We endeavor to provide timely and accurate information on the effects of environmental factors in our region, for the purposes of educating parents, educators, community organizations, media outlets, policy makers, et al.

Regarding environmental factors, children are the most vulnerable members of our communities. Notably, they are exposed to more toxicants compared to their size than adults (as when breathing polluted air and consuming polluted food and water), and they are uniquely vulnerable to organ damage. A child's brain, lungs, cardiovascular system and metabolism in general are, by definition, immature. Toxicants can interrupt proper development and permanently damage organs. Early damage lasts a lifetime, resulting in increased need for medical and educational services, and compromising the achievements of our society as a whole. Children are, unfortunately, the canary in the coal mine for the hidden hazards we expose ourselves to.

Gasoline-powered leaf blowers GLBs may seem innocuous, but they pose distinct threats to human health in the form of increasing particulate matter and chemical pollutants in the air we breathe. They generate noise of such magnitude that it is both a quality-of-life issue and a physiologic stress stimulus that can interrupt learning and neurodevelopment.

Specifically, **particulate matter** can irritate mucous membranes, causing immediate symptoms such as cough and respiratory distress, especially in people with asthma. The **chemical pollutants** generated by the leaf blower's inefficient gasoline engines, include combustion products such as carbon monoxide, nitrogen oxide species, and hydrocarbons. GLB exhaust combines with sunlight to produce ground level ozone which can cause immediate respiratory symptoms along with exacerbating long-term lung disease. GLB exhaust contains carcinogens such as benzene, 1,3-butadiene and toluene. **Noise** can cause hearing damage, interrupt learning and sleep, and may contribute to what's often called "toxic stress"—the



persistent disruption of a person's physiologic ability to regulate stress which disproportionately affects impoverished and otherwise disadvantaged children.

For more detailed information on the health hazards associated with GLBs, please see the comprehensive report authored by the California EPA.¹

If the use of GLBs is unavoidable, the adult using a GLB should wear personal protective equipment (PPE) to protect him or herself from these health hazards. PPE's are often not worn, thus exposing workers to unnecessary risks. We should be especially cautious of the effects on children nearby who are not protected and are most vulnerable.

As is often the case in children's environmental health, the extent of harm is assessed in retrospect. To ensure the health of children, we strongly endorse the precautionary principle: if potential harm can be reasonably avoided, it should be, such is the case with GLBs, Many municipalities across the country have already banned or limited their use and we very strongly recommend similar measures in the Town of Huntington.

Sincerely,



Cappy Collins, MD, MPH



Evonne Kaplan-Liss, MD, MPH

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Stony Brook**

¹ Steele NLC, Rowland S, Carter M et al. A report to the California legislature on the potential health and environmental impacts of leaf blowers. California: California Air Resources Board; Feb 2000. 68 p. California Environmental Protection Agency. Accessed Jan 6, 2015: <http://www.arb.ca.gov/msprog/mailouts/msc0005/msc0005.pdf>

