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November 16, 2021

Mayor, City Councilmembers, and Environmental Quality Commission of Menlo Park

Re: Gas-Powered Leaf Blower (GPLB) Ban (Agenda Item N1., 11-16-2021)

Dear Menlo Park City Council,

Thank you for the opportunity to comment on a proposed ban of the use of gas-powered leaf blowers (GPLBs) in Menlo Park. I am a faculty pediatrician (specifically a pediatric cardiologist) at Stanford's Children's Hospital, and I will offer my personal views on the health-related hazards of GPLBs for all Menlo Park citizens, but especially for our kids. I will briefly discuss views that are my own and do not necessarily represent the views of Stanford University.

Decades of rigorous scientific research have taught us that pollution and environmental exposures disproportionately affect our children. My training in pediatrics and my current practice in the pediatric intensive care unit provides me a constant reminder of why this is the case: babies and children breathe faster than adults, they inhale a larger volume of air when indexed to their body weight, and they spend more time at ground level--crawling, walking, or sitting where many environmental toxins settle. Finally, and perhaps most importantly, children's developing lungs, hearts, and brains are uniquely sensitive to environmental exposures as they mature. An important principle in my daily practice in the intensive care unit is that children's lungs continue to develop and grow alveoli (the gas-exchanging sacs of the lung) at least through the ninth year of life - therefore any toxic exposure experienced today will be amplified on a logarithmic scale in the future.

There are two negative health effects of the use of GPLBs that I would like to highlight: air pollution (both from dust/particulate matter and chemicals) and noise pollution. These concepts have been very well summarized by Leah Elkins in the Environmental Quality Commission agenda item C-2 document from September 22, 2021.

Air Pollution: GPLBs combust a mixture of oil and gasoline, and unlike cars they have no exhaust filter or catalytic converters. The emissions contain carcinogens such as uncombusted gasoline, benzene, formaldehyde, and ozone. For reference, GPLBs release three hundred times as much hydrocarbon as most cars and trucks.

Particulate Air Pollution: All leaf blowers (both gas-powered and electric alike) work by propelling particulate matter into the air. With air speeds as high as 200 miles per hour, they send dust into the air - and into kids' lungs--that contains everything from brake lining powder that has settled on road surfaces, to chemicals such as herbicides, and microscopic particles of soil. This particulate matter damages lungs - it's harmful for everyone today and deleterious for decades for the developing lungs of our kids.



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Noise Pollution: The motors in GPLBs emit approximately 100 decibels of low-frequency noise (greater than 85 decibels is considered dangerous). Research demonstrates that this noise increases blood pressure and the risk of heart attack and stroke, it impairs development and learning in children, and increases stress hormones like cortisol. It also disrupts critically important sleep as it passes through windows and walls, even at a distance of 100 feet away. You may ask: "Who sleeps at 10 in the morning, as our laws require leaf blowers to be used during daytime?" Our most vulnerable - our babies and small children - rely on this sleep during the day for brain development and growth.

I appreciate that there are important economic, political, and societal implications of imposing an immediate ban on GPLB use. I will trust experts in these respective fields to offer a creative and equitable proposal that addresses the needs of the workforce using the GPLBs and the community who needs their yards and fields kept tidy. I am not an expert in these areas, but I will submit that this ban will also help protect the health of the gardeners, workers, and citizens using GPLBs and inhaling the gas and particulate matter as they work. They, too, deserve protection from these environmental toxins.

I am proud to support the submitted written commentary of my fellow citizens - many of them physicians and experts in child health -- in urging us to lead an immediate ban on the use (not just the sale) of GPLBs in Menlo Park. It is our duty--in fact a mandate for our city- - to protect our children and banning the use of GPLBs is one small step that will put us on the right side of history.

Sincerely,

Handwritten signature of David M. Axelrod

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