

Battery-powered tools are good for the environment

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A daytime walk through a suburban neighborhood can be quite the sensory experience: the melody of songbirds and the high-pitched noise of the string trimmer; the clear blue skies and the oily blue smoke from a 2-cycle leaf blower; the aroma of freshly mown grass and the noxious odor of a poorly adjusted carburetor on the gas-powered implement. We can do better.

Gas-powered lawn care equipment emits toxic gases, and may be more detrimental than you would think. Much of this equipment uses a two-stroke engine where fuel must be mixed with oil as it lacks an independent lubrication system. Burning oil and fuel emits a number of harmful toxic pollutants into the air, including carbon monoxide, nitrous oxides (which cause smog formation and acid rain), and hydrocarbons (a carcinogenic gas that also causes smog). Surprisingly, the number of air pollutants emitted by gas-powered leaf blowers and lawn mowers exceed pollutant emissions of large automobiles, which are regulated to reduce and capture many air pollutants.

Approximately 136 million pieces of gasoline-powered lawn and garden equipment (GLGE) are estimated to be in use in the United States. A recent Environmental Protection Agency study found that: 1) GLGE is a prevalent source of toxic and carcinogenic emissions; 2) GLGE contributes substantially to nonroad emissions of benzene, 1,3 butadiene, formaldehyde, carbon monoxide, and fine particulate matter (PM); and 3) GLME accounts for a disproportionately large share of volatile organic compounds and fine PM emissions.



The battery backpack blower is quiet providing power on demand without an idling engine. [CONTRIBUTED]

In addition to air pollution, ozone is created when heat and sunlight react with nitrogen oxides and volatile organic compounds (VOCs) that are emitted from combustion engines, including lawn equipment. Therefore, small actions, like seeking alternatives to standard use of lawn equipment, can go a long way in improving regional air quality and human health.

So, what can you do? For one, switching to electric alternatives can drastically reduce the number of toxic pollutants directly released into the air. While electric models do not eliminate your contribution to greenhouse

gasses, it shifts combustion to power plants. Power plants are equipped with scrubbers that filter out pollutants, sharply reducing the overall amount of air pollution being released when fossil fuels are burned. Recent advances in battery technologies offer landscape equipment that is powerful, lightweight and clean.

The New Hanover County Arboretum recognizes the need for a shift away from gas-powered landscape maintenance equipment and is taking steps to make our grounds maintenance processes more environmentally friendly. We currently have

one battery-operated blower to clear our sidewalks, and we plan acquire more battery-powered equipment when other 2-stroke landscape equipment needs replacement. Our battery backpack blower is quiet, which I am sure our residential neighbors love. It provides power on demand without an idling engine between calls for power. It is not suited for the heavy jobs like wet leaves or heavy dirt, especially for prolonged periods of time, but it is perfect for light to moderate daily maintenance tasks.

While it may seem like an inconsequential action, changing how you do your

lawn care can have big effects on air quality, noise pollution and human health. No more dealing with oil changes, oil spills, filter cleanings, spark plugs, or carburetor adjustments. No more pulled rip cords. No more overheating or stalls. And enjoy a quieter, cleaner and more aromatic suburban neighborhood.

The Arboretum is free and open every day from 8 a.m. to 5 p.m. Lloyd Singleton is director of the N.C. Cooperative Extension Center for New Hanover County, located at the Arboretum, 6206 Oleander Drive. Reach him at lsingleton@nhcgov.com or 910-798-7660.