Date: 2-12-21

To: UP Town Council and Mayor Carey

From: UP Policy, Rules, and Municipal Structure Committee (PRMSC)

Re: PRMSC Recommendations for Prohibiting the use of Gas-Powered Leaf Blowers Starting January 1, 2023 [REVISED]

INTRODUCTION

The U.P. Policy, Rules, and Municipal Structure Committee (PRMSC) requests that the U.P. Town Council enact an ordinance prohibiting the use of gas-powered leaf blowers in University Park starting January 1, 2023. University Park would be a leader in the immediate College Park/Riverdale/University of Maryland area, and would be following the footsteps of our neighbors in Washington, DC and of Chevy Chase Village. This memo summarizes the Committee's arguments in favor of prohibiting use of gas-powered leaf blowers, including the public health case for the usage ban. Additionally, the PRMSC asks that the Council include in the ordinance an assignment to the appropriate Town Committee to develop an education and outreach plan informing town residents of the upcoming prohibition. Furthermore, the PRMSC also requests that there be an immediate moratorium on UP expenditures for gas-powered leaf blowers.

OBSTRUCTION OF PEACE

Many who live in University Park like to think of it as a peaceful hamlet. U.P. is a lovely town with playgrounds and parks, Cape Cods and Colonials, large front porches and lots of red brick homes, tucked within groves of over-story trees and burgeoning gardens. Yet it is commonplace in University Park for that peace to be shattered by the voluminous roar of gas-powered leaf blowers, often starting at 7:00 a.m. and continuing at a constant rate at different points in Town throughout the day until dark. It is difficult to enjoy a walk on our pleasant streets without the chirp of birds, buzz of bees, and the laughter of children being drowned out by the noise from these leaf-blowers. Even the peace and privacy of one's own backyard can be ruined by the ever-constant din of gas-powered leaf blowers. In support of residents of University Park who want to enjoy our small-town atmosphere without

constant auditory intrusion of yard maintenance equipment, the PRMSC recommends a ban on gas-powered leaf blowers to begin roughly two years from this date.

DETRIMENTS TO PUBLIC HEALTH

Perhaps equally compelling as the noise nuisance argument is that gas-powered leaf blowers are a danger to public health. The engines used in gas-powered leaf blowers are extremely dirty; operating these machines for even a short period of time is comparable, in terms of pollutant emissions, to driving a modern car or truck thousands of miles (Refs. 1 & 2). The reason they are so dirty is that the vast majority of these leaf blowers use two-stroke or two-cycle engines (as opposed to the four-stroke engine most common in automobiles; the name refers to the number of up and down movements of a piston in the power cycle). Two-stroke engines are lubricated by mixing oil with gasoline, which causes significantly high pollutant emissions, and run at very high speeds (~9000 rpm).

The most significant pollutant caused by gas-powered leaf blowers is particulate matter (PM), especially fine particulates, < 2.5 microns in diameter ($PM_{2.5}$), which can lodge deep in the lungs. These are produced not only by combustion but also by the very operation of the blower, which throws debris into the air. Particulates are linked to cardiopulmonary disease and respiratory ailments (Refs. 3, 4, & 5). In addition to particulates, the small engines used in leaf blowers and other garden equipment emit significant amounts of volatile organic compounds (VOC) and toxic air pollutants, which can be harmful in their own right (e.g., benzene is a carcinogen) but also react with nitrogen oxides to produce ground-level ozone. Like particulates, ozone causes a variety of respiratory and cardiopulmonary harms (Refs. 6 & 7).

Another health-harm comes from noise. Hearing loss from noise is a growing problem (Ref. 8) Gas-powered leaf blowers can be as loud as ~100 decibels at the ear of the operator, well past the threshold for hearing damage. But a recent Harvard School of Public Health study found that the sounds of the equipment can

be higher than WHO outdoor noise standards as much as 800 feet away, and that the characteristics of the sound emitted by gas-powered leaf blowers, dominated by low frequencies, is both especially penetrating and associated with stress-related health effects (Refs. 9 & 10). Research also points to the non-auditory effects of noise, which range from stress, with attendant cardiovascular responses, to cognitive impairment (Refs. 11 & 12) Other sources of these harms exist (for example, the busy roads that run alongside the town) however unlike other major sources of noise pollution, gas-powered leaf blowers are within the immediate control of the town.

The population most at risk of any of these adverse effects are operators of such equipment, either lawn service workers or homeowners. But other people near the areas where these types of equipment are also affected, particularly those with existing health conditions like asthma or other health vulnerabilities common in the elderly. Furthermore, the increase in remote work sparked by COVID-19 has made University Park a much busier community during daylight hours, with individuals and families outside walking, running, and bicycling.

The issue would perhaps be less ripe for action if no alternative to gas-powered leaf blowers existed (other than a rake or a broom). But comparable battery- or electric-powered equipment, both commercial and consumer grade, is widely available and cost competitive (Refs. 13 & 14). The transition to electric leaf blowers will impose a modest cost on residents or lawn care companies. A replacement leaf blower that runs on a battery pack currently costs around $300-$400, and can be fully depreciated by the end of an operational life of seven years (Refs. 15 & 16). A back-of-the envelope calculation suggests an annual cost of less than $50 translates into a dollar or two each time they are used, a small burden on U.P. homeowners or their lawn service companies. There may be lost efficiencies for lawn care companies when the ban goes into effect (although operating with a set of battery packs rather than cans of gas is a simple change). However, businesses are dynamic and will adjust quickly to new technologies. The medium-term effect on prices will be very modest, especially given the promise of continuing

technical change. This change will also impose some costs on the town's Department of Public Works (DPW). The council asks the DPW Director to make a summary estimate of costs of the change for budgetary purposes and to estimate lost efficiencies, if such exist. While the town should be willing to pay in support of the public health gains from this change, the Council should be prepared for any budgetary impacts.

A significant and growing number of jurisdictions in the U.S. have acted to limit or ban the use of gas-powered leaf blowers and other gas-powered lawn equipment, most notably in Washington D.C. (Refs. 17 & 18). Jurisdictions in Prince George's County are also considering this question, for example Hyattsville, and University Park should take steps to exhort them to follow our lead. This will enlarge the market for electric alternatives. The PRMSC is requesting an outright ban of gas-powered leaf blowers starting January 1, 2023, education and outreach to Town residents well in advance, and an immediate moratorium on UP expenditures for gas-powered leaf blowers.

SANCTIONS FOR VIOLATING GAS LEAF BLOWER BAN

The PRMSC recommends that, following the passage of the gas-powered leaf blower ban, the mayor assign back to the PRMSC the responsibility for proposing options for sanctions for violating the ban.

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