

February 10, 2020

**To: House Environment and Transportation Committee**

**From: Dr. Sara Via, Professor and Climate Extension Specialist,  
University of Maryland College Park**



**Re: Testimony in support of HB0279**

HB 279 will protect the right of Marylanders to landscape their property using environmentally sustainable low-input practices IF THEY SO CHOOSE. Without this legislation, HOAs can continue to require that front yards and open space be dominated by mowed turfgrass, an environmentally damaging monoculture that reduces biodiversity and causes significant air and water pollution.

This legislation is a positive opportunity for HOAs to go on record as champions of environmental sustainability by allowing, even favoring, the creation of beautiful landscapes that will reduce carbon emissions and air pollution while improving water quality and stormwater management. HOAs that work to achieve these outcomes will stand among the environmental stewards of our state.

In contrast to the negative impacts of traditional turfgrass, low-input sustainable landscapes have multiple benefits for Maryland:

**1. Mowed turfgrass doesn't grow very well in Maryland, so fertilizer and chemical use is high.**

Keeping lawn healthy and lush in Maryland is difficult because our state lies in the "transition zone" between regions where cool season and warm season grasses grow most vigorously<sup>1</sup>.

Because lawn grasses in the transition zone don't grow very well, lawn maintenance requires irrigation and assiduous application of a large array of fertilizers, pesticides, fungicides and herbicides. Even so, Maryland lawns are often sparse and stressed, making them subject to constant encroachment by weeds, insects and plant pathogens. The result is often a lawn riddled with brown and bare spots – a far cry from the lush green expanse that we idealize.

**2. Lawn maintenance causes significant health risk and environmental damage.** The 1.3 million acres of mowed turfgrass in Maryland is a significant source of air and water pollution while providing no food, fiber or useful environmental services.

***a. Lawnmowers and other yard tools cause significant air pollution that accelerates climate change and threatens health.***

Highly inefficient gasoline powered yard tools are responsible for 5% of all US carbon dioxide emissions. For example, one lawnmower emits up to 40 times as much carbon pollution per hour as a new car.<sup>2</sup> The millions of lawnmowers, weed whackers, leaf blowers and edgers in Maryland also emit high levels of PM<sub>2.5</sub>, NO<sub>x</sub> and volatile organic compounds, significantly increasing the formation of ground level ozone and aggravating the already serious health risks in Maryland from air pollution caused by vehicular traffic and coal-fired electric generating plants.<sup>3</sup>

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<sup>1</sup> Maryland Home & Garden Information Center. <https://extension.umd.edu/hgic/topics/challenge-growing-lawn-maryland>

<sup>2</sup> Columbia University, The Earth Institute. <https://blogs.ei.columbia.edu/2010/06/04/the-problem-of-lawns/>

<sup>3</sup> American Lung Association, State Report Card 2019. <https://www.lung.org/our-initiatives/healthy-air/sota/city-rankings/states/maryland/>

**b. Fertilizer and lawn chemicals pollute Maryland's waterways.** The application of synthetic fertilizer, even at University-recommended rates, results in significant runoff of nitrogen and phosphorous, polluting our streams and increasing the dead zone in Chesapeake Bay.<sup>4, 5</sup> In fact, nutrient and chemical runoff from lawn is estimated to be 10 times more than from cropland.<sup>2</sup> Although Maryland farmers are required to adhere to strict nutrient management regulations, homeowners are not. Indeed, despite recommendations from the EPA,<sup>6</sup> most homeowners probably have little knowledge of how much fertilizer to use, when to apply it to minimize runoff, or even how to set their spreaders to apply recommended amount of fertilizer.

**c. It is likely that many Maryland residents overapply fertilizer and use lawn chemicals incorrectly.** The calculations for correct fertilizer application can be complicated. For example, the University of Maryland Extension recommends the annual application of no more than 1.8 lbs. of nitrogen per 1000 sq. ft. Using the guide to calculations on their website,<sup>7</sup> this amounts to about 65 lbs. of 30-0-12 fertilizer per year for a ¼ acre lot, split between two applications. The description of calculations required to calculate the correct amount of fertilizer exceeds two pages, and instructions for how to calibrate a spreader to dispense the correct amount of fertilizer or other lawn chemical are equally complicated. How many homeowners are willing to go through this long process? Though commercial landscaping companies must follow the guidelines, they depend on fertilizer and chemical applications for much of their income so there is little incentive to reduce their use.

### **3. Low-input landscaping practices will benefit Maryland's environment and beautify our suburban landscapes.**

People who are unfamiliar with low-input sustainable landscaping often think it will look messy and unkempt. This is far from the truth. Substituting well-defined beds of perennial plants and groundcovers for small areas of lawn provides color and habitat for pollinators and other beneficial insects.<sup>8</sup> These beds DO NOT harbor rodents, ticks or mosquitos. Because many native perennials have deep roots, they improve the water holding capacity of soil and allow stormwater to soak in, making landscapes resilient to flooding and drought. Deep rooted plants even sequester carbon in the soil, acting as a natural climate solution.



Homeowners interested in sustainable landscaping are generally experienced gardeners who avail themselves of new developments like grass seed mixes that require less fertilizer, water and mowing than traditional lawn grasses. These “low mow” grass mixtures maintain the aesthetic quality of traditional lawns while reducing damaging emissions and nutrient runoff.



**I strongly urge a favorable report on HB 279.** Allowing residents the option of using environmentally sustainable landscaping practices will beautify our suburbs and benefit all Marylanders by reducing air and water pollution while rebuilding pollinator populations.

<sup>4</sup> D. Biello, Scientific American, 2008. <https://www.scientificamerican.com/article/fertilizer-runoff-overwhelms-streams/>

<sup>5</sup> C. Mooney, Washington Post, 2015. <https://www.washingtonpost.com/news/energy-environment/wp/2015/03/11/forget-what-your-neighbors-think-stop-dousing-your-lawn-with-so-much-fertilizer/>

<sup>6</sup> US. EPA. Nutrient Pollution. <https://www.epa.gov/nutrientpollution/what-you-can-do-your-yard>

<sup>7</sup> Maryland Home and Garden Information Center. <https://extension.umd.edu/learn/how-much-fertilizer-do-i-need-fertilize-my-lawn>

<sup>8</sup> Maryland Home and Garden Information Center. <https://extension.umd.edu/hgic/topics/lawn-alternatives>