

An Open Letter to the Mount Vernon City Council

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The Case for Preserving and Recapturing Green Space in Mount Vernon

There is a Japanese practice called “shinrin-yoku”. In English this means “forest bathing”. The idea is simple: spending time among trees helps one to fend off sickness. How is this possible?

Trees and plants produce volatile organic compounds called *phytoncides*. Phytoncides are antimicrobials that help defend plants and trees from infestation by bacteria, fungi, and insects. Phytoncides are “volatile” in that they have a low boiling point, which means they vaporize easily into the air. So, in spaces where plants and trees exist, phytoncides are in the air, and when humans enter these spaces, they breathe in the phytoncides.

The effects of phytoncides on human health have been studied and the results are encouraging. The evidence suggests that phytoncide exposure offers humans robust direct health benefits in at least 2 ways:

1. A boost to the immune system. Breathing in phytoncides induces production of a type of large granular lymphocyte called “natural killer” cells, which are critical to the innate immune system and adaptive immune response.ⁱ
2. Stress reduction. Laboratory studies indicate that exposure to phytoncides can lower blood pressureⁱⁱ and lower cortisol, the human hormone associated with stressⁱⁱⁱ.

The benefits of “forest bathing” are not limited to direct chemical and hormonal responses, and they are not limited to the forest. There is strong evidence to support the therapeutic benefits humans derive from frequent exposure to nature in general^{iv}, and these benefits are being studied in a variety of applied therapies, such as ecotherapy and horticulture therapy. Broadly speaking, connecting with natural green spaces through our senses- *looking at, listening to, smelling, and touching environments rich with flora*- is an essential component of human well-being.

Some Mount Vernon residents own or rent homes with sufficient land for trees, plants, and gardens. If so inclined, these residents can cultivate and reap the essential health benefits of their green space. However, many Mount Vernon residents do not have such easy access to nature and the essential health benefits it has to offer. Rather, the feature of the environment that these residents contact most frequently is concrete. Concrete- not flora- is the dominant feature of their sensory landscape and concrete does not contribute to human well-being it degrades it. This is an environmental injustice and it must be corrected. How?

To start, we might make these 2 public commitments:

- 1) We will require that with every request a developer makes for land use in the City of Mount Vernon, there will be a meaningful, substantive plan for the preservation and/or allocation of green space where people can reap the health benefits that the natural world has to offer.
- 2) We will recapture *green spaces* and convert superfluous city-owned concrete and other vacant detrimental space to rich floral landscapes where people can reap the health benefits that the natural world has to offer.

These 2 public commitments should be foundational principles of our much discussed and greatly anticipated Comprehensive Plan.

What can we do in this moment?

Right now, *when viewed through the lens of preserving and recapturing green spaces for Mount Vernon residents*, there are (at least) 2 development projects^v seeking zoning variances from the City that are highly questionable:

- 505 Gramatan Ave: This is a senior housing complex that includes no green space whatsoever. The lot will be wall to wall concrete and asphalt. Seniors are among those who benefit most from frequent contact with nature and this proposed development offers them none.
- 1 Bradford Road: This is a parcel of land within Willson's Wood Park, the largest green space in the city. The current owner is a construction company whose stock in trade is concrete. The city seems to be bending over backwards to craft an ordinance whereby the intended use of this land is compatible with park land. But no matter what cartwheels and backbends you (or your lawyers) do, the ordinance won't convince reasonable people that

a construction company – with its dump trucks and pallets bricks- is anything but a threat to those seeking health and well-being in Willson's Woods Park.

Why not be visionaries? Why not push to broker a deal so Westchester County can purchase 1 Bradford and make Willson's Woods a unified green space? I can envision a community garden and a horticultural teaching facility in that 3-acre space, can't you? Why not insist that 505 Gramatan Ave. and any other residential developments seeking to deviate from existing zoning requirements include outdoor green spaces for residents? It's the right thing to do.

You can be revered by your neighbors for seeking our collective well-being. Seize this opportunity to be bold. The community will rally behind you.

Sincerely,

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ⁱ Li Q, Kobayashi M, Wakayama Y, Inagaki H, Katsumata M, Hirata Y, Hirata K, Shimizu T, Kawada T, Park BJ, Ohira T, Kagawa T, Miyazaki Y. Effect of phytoncide from trees on human natural killer cell function. *Int J Immunopathol Pharmacol*. 2009 Oct-Dec;22(4):951-9. doi: 10.1177/039463200902200410. PMID: 20074458.

ⁱⁱ Kawakami K, Kawamoto M, Nomura M, Otani H, Nabika T, Gonda T. Effects of phytoncides on blood pressure under restraint stress in SHRSP. *Clin Exp Pharmacol Physiol*. 2004 Dec;31 Suppl 2:S27-8. doi: 10.1111/j.1440-1681.2004.04102.x. PMID: 15649280.

ⁱⁱⁱ Eun-Sook N, Dong-Choon, U. (2008). Effects of Phytoncides Inhalation on Serum Cortisol Level and Life Stress of College Students. *Korean Journal of Adult Nursing*, V 20, I 5, P. 697-706.

^{iv} Kuo, M. (2015). How might contact with nature promote human health? Promising mechanisms and a possible central pathway. *Front. Psychol.*, 25 August 2015 | <https://doi.org/10.3389/fpsyg.2015.01093>

^v A 3rd project is the senior residential facility at 208 N. Fifth Ave, but I'm not familiar enough with the proposal to comment on the extent of green space contemplated in the plan for that development.