

August 2, 2022

**City Council | City of Holland**

270 S River Avenue, 2nd Floor  
Holland, Michigan 49423

Re: Proposal for an Improved Municipal Composting Program

The City of Holland has successfully composted a portion of its yard waste collected through curbside pickup and cart collection programs for the last several years. The composting program's current output produces enough topsoil to satisfy the needs of the municipality, although the capacity is not there at the current time to make use of all collected waste, what the city does compost has proven useful.

Municipal composting programs have several advantages:

- Removes unnecessary waste from landfills where it serves no purpose.
- Composting releases significantly less greenhouse gas emissions than landfills
- Topsoil quality improves when mixing in compost, which results in slower degradation of topsoil through runoff and reduces water demands because healthy soil retains water.
- Residential involvement has many benefits like increased public environmental awareness and improved public health. Additionally, residents can receive a share of the produced compost which entices more community support for the program.

I, Alex Wilkinson, a Catalyst Leadership Circle Fellow who worked in conjunction with the University of Michigan; The Michigan Department of Environment, Great Lakes, and Energy; and The City of Holland, propose that Holland expand the existing composting program so that it may compost all yard waste and residential food waste. Currently, the composted materials are separated and stored in two separate locations - we also recommend that all collected compostable material should be taken to a singular lot so that all materials can be combined as efficiently as possible. Finally, we propose that the collection of compost carts be expanded to year-round service rather than the April to October schedule currently administered.

Rationale

Holland, Michigan has goals to develop and incorporate concepts that focus on supporting sustainable practices for the city's operations and its community-based actions. The Community Energy Plan, released in 2011, set the goal to reduce carbon emissions from its 2010 baseline of 24 metric tons per capita down to 12.25 metric tons per capita by the year 2030, the city has established itself as a regional leader in sustainability. In 2020, the city reviewed its progress toward the goal and found it already reduced its emissions to 17 metric tons per capita, putting it approximately 2.5 years ahead of schedule for the 2030 goal.

According to Holland's Bureau of Public Works, more than 60% of carbon emissions are from Non-Residential areas. Solid waste is disposed of by the industrial sector and is a significant contributor to carbon emissions. As Holland has worked towards carbon reduction goals, the easily fixable carbon emitters have already been addressed. As the city moves further along in pursuing its emissions goals more substantial actions, like composting and waste reduction are required to make stronger leaps to lower emissions.

Based on USDA figures and U.S. Census data, the City of Holland produces approximately 7.78 million pounds (3850 tons) of food waste annually. Currently, a vast majority of that potentially compostable food waste goes to the landfill. With an estimated 60 percent participation rate of single-family households in composting food waste (there is currently 77% participation in recycling), the City would divert 4.67 million pounds (2335 tons) of food waste annually from landfills to the compost site where it would provide future value. Beyond the projections on food waste, Holland collected 1400 tons of yard waste in 2021. By running the EPA's Waste Reduction Model (WARM)<sup>1</sup> which is used to calculate greenhouse gas reduction, we found that a municipal composting program would reduce greenhouse gas emissions by 1225 metric tons annually.

2506 Holland households are currently enrolled in the Compost Cart Program. Carts are free of charge to residents, but there is a monthly service fee of \$16.85. Service currently runs from April to October, and residents are only billed for those months. The monthly revenue for this program is currently \$42,226.10, and the total revenue for the 6 months of service each year is \$253,356.60.

An expanded program with 60% compost cart participation would have an enrollment of 5820 compost carts. The monthly revenue with this many carts at the same monthly service fee of \$16.85 would be \$98,067. Multiplied out for the full 12 months of the expanded collection schedule, the city could see \$1,176,804 in yearly revenue. In the winter months, when there will be less yard waste, and compost carts will be mostly frozen the collection can be done less frequently (other municipalities that already do this often reduce collection to once a month during the winter months) and reduce overall program costs.

To recap, this program would remove 3735 tons of waste from landfills each year, which would lead to over 1200 metric tons of greenhouse gases from the atmosphere annually. Revenue from compost cart collection would also increase from \$253,356.60 to \$1,176,804 or a 464% increase annually.

#### How The Municipal Composting Program Would Work

While the exact specifications of the program would be decided by the Council and the input of city employees, we offer the following recommendations.

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<sup>1</sup> <https://www.epa.gov/warm>

1. Submit the Request for Proposal associated with this document for a consultant to bid on this program (more details are included in that document) to begin the process of program implementation.
2. The City of Holland expands its compost cart collection service for the full calendar year, which will provide more value and consistency to residents and will encourage increased program participation.
3. Combine all collected material (food waste, yard waste, brush) lots into a single location for more efficiency and ease of processing. We feel the Holland dredged material site would be best suited for this but, final decisions will be made based on the recommendations of a consultant.
4. Begin exploring ways in which compost collection can be expanded from single-family homes to more categories, including restaurants

#### Benefits And Impacts From This Program:

- Individual Households  
Changes to program development and collection schedule, including frequency and possibly the day of collection, may have both benefits and impacts on Holland residents.
- Community  
The community will see benefits and impacts as a result of the aggregate of individual household involvement in the program and the knowledge that the collective effort is making a positive impact.
- Public Health  
Reduced greenhouse gas emissions will help lead to better air quality in Western Michigan. Following the guiding principles of the 2017 Holland Master Plan, the City will be more resilient and better poised to handle future environmental demands.
- City Economy  
Revenue generated from the composting program will provide more city funds that can be reinvested into other programs.
- The Environment  
Benefits and Impacts on the environment include reduced greenhouse gas emissions, and improved soil quality through adding compost. The improved soil quality can decrease the dependence on chemical fertilizers that have negative effects on the environment through runoff and the destruction of flora and fauna.

This list is by no means comprehensive, and not all of these categories will be relevant to all legislative proposals. Holland would no doubt find over time its own approach to assessing benefits and impacts.