



sanitation

Kathryn Garcia Commissioner

**Testimony of Kathryn Garcia, Commissioner
New York City Department of Sanitation**

**Hearing before the New York City Council
Committee on Sanitation & Solid Waste Management**

Thursday, September 20, 2018

10:00 AM

250 Broadway, 14th Floor Committee Room

Oversight Hearing on the City's Organics Collection Program

Good morning Chair Reynoso and members of the Committee on Sanitation and Solid Waste Management. I am Kathryn Garcia, Commissioner for the Department of Sanitation. I am joined today by Bridget Anderson, Deputy Commissioner for Recycling and Sustainability for the Department. Thank you for holding this hearing on the status of the Department's residential organics collection program. I will make an opening statement, after which I will be happy to answer your questions.

Organic waste – including food waste, yard waste and food-soiled paper products – makes up one-third of everything New Yorkers throw away. That's a staggering 1.1 million tons per year. Putting this resource to good use is the cornerstone of sustainable waste management, not only because of our commitment to send zero waste to landfills but also because when organic waste decays in landfills it produces methane, a greenhouse gas 25 times as potent as carbon dioxide.

Sustainable organics management makes business sense and adds to our City's resiliency. We can use organic waste to our advantage. Through composting, we can create a valuable, beneficial product that enriches our soil to grow new food. And through anaerobic digestion we can create clean, renewable energy to heat our homes and fuel cars, trucks and buses. That is why New York City last week made a strong statement by signing C40's "Advancing Towards Zero Waste Declaration."

Organics recycling is the next frontier of a recycling journey that started more than 30 years ago. Curbside recycling started with a pilot program for the collection of newsprint and bottles. Today, our dual-stream recycling program accepts all kinds of metal, glass, rigid plastic, cartons and paper. Collections that were once every other week now occur weekly. And the diversion rate is growing, finally recovering from a rollback of the program undertaken during the financial crisis that followed the attacks on our city on September 11th. However, it is important to remember that even this program, which many of us take for granted today, started small and took time to build participation.

Our organics collection program also began as a very small pilot – just 3,200 households in the neighborhood of Westerleigh, Staten Island in 2013. Shortly after that pilot started, the Council passed Local Law 77 of 2013, which mandated an expanded pilot program for homes and schools. The last time this committee held an oversight hearing on the City's organics collection program was February 2016, following the submission of the final pilot report required by Local Law 77. At that time the City's curbside organics collection program served 650,000 residents. Today, just two and a half years later, this program is available to more than 3.5 million New Yorkers in all five boroughs.

In the 2.5 years since that last hearing, the program has expanded to more than 2.8 million additional residents – equal to the combined populations of Seattle, San Francisco, Boston and Portland, Oregon. It's the most aggressive and most rapid expansion of a curbside organics collection program in this country's history. That is an impressive feat for which I have to commend the hard work of my staff, our community partners, and committed residents and activists. I also thank the City Council for your consistent support of this important program.

This past May at the FY 2019 Executive Budget hearing, I testified that the Department has placed the implementation schedule for the expansion of the curbside organics collection program on hold, with the goal of increasing efficiencies and streamlining the program. I want to be clear, however, that the residential organics program continues to operate in all neighborhoods currently receiving organics collection. We continue to educate and engage residents in the newest service areas with door to door canvassing and targeted campaigns highlighting the program benefits. In FY18, our multilingual outreach team hosted nearly a thousand events, including tabling, presentations with community groups, street tree care, and 1 pound bag compost giveaways. Our program is the largest of any other municipal curbside organics collection program in the nation and one of the largest in the world.

The Department, in collaboration with the Office of Management and Budget and the Office of Labor Relations, is evaluating the program to ensure that residents receive the very best curbside organics collection service and that we are building a strong foundation for continued growth. We are hopeful that as these discussions continue we will be able to announce a new rollout schedule in the coming months.

As with any new program, we continue to assess it's effectiveness and the most appropriate tactics to achieve the City's goals.

For example, we identified new ways to achieve efficiencies in our operations by experimenting with different fleet assignments. In some districts, we had started collection on a twice-weekly basis using dual-bin trucks, with one side collecting refuse and the other collecting organics. However, we found that the side of the truck used to collect household refuse, was too small to fit couches, mattresses and other bulky items. This had caused a spike in missed collection complaints for bulky items and

forced us to run several additional trucks a week dedicated to collecting these bulky items. Over the last year, we have refined what we call the “hybrid” collection model, which uses a dual-bin truck to collect refuse and organics once a week on recycling day and a single-bin rear-loader to collect just refuse on the other collection day to better accommodate large items.

This summer, we completed the transition of the four remaining dual-bin districts to the hybrid model. We have seen consistent reductions in costs related to the organics collection program in these districts as a result, and we continue to evaluate other opportunities for efficiency.

Since 2013, we have conducted regular surveys of participation in this voluntary program. As a result, we have found that providing once per week service does not significantly impact participation or diversion rates, since residents in neighborhoods with twice weekly service typically placed out their brown bins for collection on their recycling day only. In order to grow program participation, we have also distributed zero waste bags and thank you cards to recognize program participants. Residents who don't participate receive a card encouraging them to participate in the future. On average we've seen a 12% increase in participation from this strategy.

In addition to the Department's curbside organics collection program, the Department continues to support food scrap drop off sites in all five boroughs, where residents can drop off their organic waste at Green Markets, parks, gardens and other community spaces. We also continue to support local, community composting in New York City, and we are excited to celebrate the 25th anniversary of the New York City Compost Project later this year.

The Department also continues to work with businesses in New York City to encourage food waste reduction, reuse and recycling among New York City businesses. In accordance with Local Law 176 of 2017, the Department is currently developing a food donation portal we expect to launch in March of 2019. The food donation portal is being built as a new component of DSNY's web-based and mobile donation platform, donateNYC. The goal of the portal is to reduce food waste in New York City by increasing food donations from businesses with surplus edible food by matching donor food establishments with food rescue organizations. This portal will serve the dual goals of helping to feed our most vulnerable residents while also contributing to our zero waste goals.

In the commercial sector, Department continues to implement and enforce requirements for food waste separation and recycling under Local Law 146 of 2013. Last year, we began enforcing organics separation requirements at stadiums, arenas, large hotels, large food wholesalers and large food manufacturers. Earlier this year, we adopted rules expanding these requirements to large restaurants and grocery stores along with chain restaurants. We are currently conducting extensive outreach to these new designated covered establishments and will begin conducting enforcement early next year.

The City is building a new way of thinking about food waste. We can and we should be connecting edible food to people in need, and we can change the discarded banana peel from trash to rich soil and natural gas. And it's not just about preserving the environment, unnecessary food waste increases grocery bills and the costs to operate a restaurant. We will continue to explore ambitious and comprehensive sustainability strategies to divert organic waste, reduce methane emissions in landfills, create compost, and generate local renewable energy

On behalf of the Department, I thank this Committee for holding a hearing on the important topic of our residential organics collection program today. I would also like to thank Speaker Johnson, Chair Reynoso and all the members of this Committee for their continuing support of our residential organics collection program, and the residents who participate in this important program. We look forward to working with you to continue to expand this program to meet our goal of serving all New Yorkers, and we thank you for your ongoing commitment to achieving our zero waste goals.

I am now happy to answer your questions.



PUBLIC ADVOCATE FOR THE CITY OF NEW YORK

Letitia James

**Testimony on Behalf of the New York City Public Advocate Letitia James
Before the Committee on Sanitation and Solid Waste Management
September 20, 2018**

Good morning Chair Reynoso and members of the Committee. My name is Melanie Weniger and I am a Policy Associate for the New York City Public Advocate Letitia James. Thank you for convening today's hearing on this important topic and allowing me the opportunity to present testimony on her behalf.

As the former chair of this committee, Public Advocate James has long been motivated to improve organics diversion in New York City. In the past five years, the Department of Sanitation (DSNY) under the leadership of Commissioner Kathryn Garcia, has significantly expanded the residential organics collection program, which now serves over 2 million residents in all five boroughs. Approximately 100 public schools in Brooklyn and Manhattan also participate in the DSNY curbside collection program as part of the City's Zero Waste Schools initiative.

When Public Advocate James was chair of this committee, she sponsored and ushered the the passage of Local Laws 77 and 146 of 2013, which laid the groundwork for the organics collection program. Those bills were passed with the understanding that food waste is a major contributor to greenhouse gas emissions and therefore a significant factor in climate change. Chair Reynoso, the DSNY, and Commissioner Garcia deserve significant credit for expanding the curbside collection program so widely as part of the City's efforts to achieve greater sustainability.

Despite this progress, the organics collection program has experienced some challenges. Earlier this summer, DSNY announced that it would be halting its planned expansion of the program, pending further study. This is of great concern to both the Public Advocate as well as many of the others in this room who believe in its importance.

We have seen critical environmental programs like this be undermined before. In 2003, Mayor Bloomberg attempted to eliminate the City's metal, glass, and plastic recycling program, citing inefficiencies, and eventually suspended plastic recycling for one year and glass recycling for two years. It took significant pressure from this committee and environmental advocates, some of whom are in this room today, to restore the City's full recycling program.



PUBLIC ADVOCATE FOR THE CITY OF NEW YORK

Letitia James

Our office understands that inefficiency is a real concern. Last month, we released a policy brief that analyzed the City's organics collection program and found that many of the collection trucks are operating well below capacity. Collection trucks can typically carry about 12 tons of waste, but in FY2017, organics trucks carried on average one half ton of waste from their routes.

As a result, Public Advocate James recently introduced legislation aimed at improving the efficiency of this vital program by including City-owned administrative buildings. Specifically, this legislation, Int. 1075, mandates that these City-owned buildings participate in the source separation and collection of organics by July 1st, 2019.

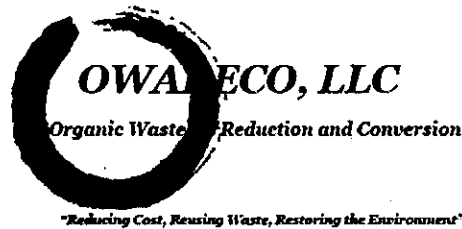
The Public Advocate believes that a mandate of this kind is critical to improving the efficiency of the current program. It will increase the amount of organic waste that can be collected by DSNY without adding an excessive burden to the agency, since these locations could be accommodated by existing routes. We believe an initial pilot or roll-out could target buildings in districts that are already being provided with curbside organics collection.

This legislation will also help to encourage greater behavior change among residents. Educating and training our considerable city workforce on the proper methods and benefits of organics collection can lead to positive ripple effects across the city, as employees take that information and replicate it in their homes and share that knowledge in their communities.

If this model proves successful, the City should consider expanding organics collection to other institutions like CUNY and Health and Hospitals facilities, which also generate food waste.

We hope that the City will continue to grow -- and not stall -- its organics collection program. It is a critical part of our collective effort to combat climate change and ensure New York City remains a viable and vibrant place to live for generations.

With some adjustments, we can significantly improve the program's efficiency, facilitate its continued expansion, and meet our Zero Waste and other sustainability goals. Our office is committed to supporting this endeavor and we look forward to learning more about the City's plans for this program. Thank you for allowing me to testify today.



Committee on Sanitation and Solid Waste Management

Date: 9/20/18
250 Broadway, 14th Floor
NY, NY

Testimony given by:
Myron Alexander, Sr. Vice President
OWARECO, LLC

OWARECO (Organic Waste Reduction and Conversion) is a waste management technology solutions company that provides a line of on-site food waste reduction systems. OWARECO is New York based business and a NYC/NYS certified MWBE. Our focus is to provide an innovative, cost effective food and organic waste reduction technology to help government agencies, businesses, institutions, and municipalities achieve their sustainability goals.

OWARECO distributes Ecovim™ systems that reduce and convert food and organic waste 70-90% in volume, on-site, within 24-hours. The systems have a processing capacity range of 66 to 3,300 pounds per cycle and are easy to install, operate and maintain. Ecovim™ systems employ a proprietary dehydration together with mechanical agitation process to convert and reduce food waste into a pathogen-free biomass, that can be used in a composting process, as waste recycled fertilizer, or used in animal feed; and potable water, that can be reclaimed for watering gardens or landscaping. Ecovim™ systems are plug and play units that require no permitting, venting or plumbing for installation and do not require the use of water, enzymes, additives or wood chips for processing. There is a net-zero impact on the environment and measurable cost savings.

Ecovim™ systems are installed at several U.S. military facilities not the smallest of which are the DeCA 29 Palms Commissary and U.S. Army installations at Fort Lee, VA, Fort Hood, TX, Camp Pendleton, CA and Quantico, VA. They have met the operational and safety criteria mandated by the federal government. The Ecovim™ has been recognized by the U.S. Army Corps of Engineers as a technology of choice and complies with the Executive Order 13514. Installations across the U.S. include restaurants, educational institutions, hospitals, correctional facilities, convention centers, hotels and casinos.

OWARECO's initial contact with DSNY began in 2014 at the advisement of then director of the Bureau of Waste Prevention, Reuse and Recycling (BWPRR), Ron Gonen. In June of 2014 we submitted a concept proposal to the incoming director of BWPRR, Bridget Anderson, entitled, *OWARECO, LLC's Food Waste Reduction & Conversion Solution for NYC* (See attached).

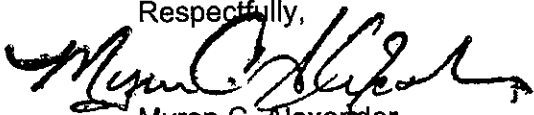
In 2016, OWARECO was one of only two companies selected statewide to collaborate with the New York State Pollution Prevention Institute (NYSP2I) at the Rochester Institute of Technology (RIT) to evaluate the efficiency of the Ecovim™ technology and explore new end-use

applications of the by-product (Case Study attached). As a result, an Ecovim™ unit is now installed at the Golisano Institute for Sustainability in their food waste valorization and biofuels testbed laboratory and serves as a showcase for New York state. In 2016, we published a Letter to the Editor, in Crain's magazine's expressing our support and willingness to assist NYC in its waste reduction initiatives. In 2017, we garnered the support of Senator Kevin Parker of the 21st Senatorial District in Brooklyn, NY. Senator Parker has been a champion of our company and technology and has written several letters of support at both the local and state level on our behalf (See attached). In 2017, we joined a coalition of MWBEs in the waste management and recycling industry represented by the New York Lawyers for the Public Interest who collectively provide a broad range of goods and services ranging from micro haulers, to consultants, to local compost operations and recyclers, to equipment providers, who can add significant value to the development and implementation of DSNY's new commercial waste zones. Our group interest has been expressed via letters to the mayor's office, the DSNY commissioner and the commissioner of NYC Small Business Services (See attached).

Since 2014 we have made several attempts to reach out to DSNY and other NYC agencies and affiliated departments (BOE, DCAS, NYCHA, DOCCS, CUNY) in pursuit of contract opportunities. At this time when NYC/NYS are focused on food and organic waste reduction, recycling and solid waste diversion goals, and given the proven track record of the Ecovim technology and OWARECO's foresight to demonstrate the science through research evaluation, DSNY has yet to respond. In addition, as reported by the NYC Comptroller's Office, DSNY has a history of omission of MWBE goals in bid solicitations and/or failure to contract with MWBEs. DSNY has maintained a failing grade in this category from 2014 to the present despite the governor's 30% mandate for MWBE contract participation and the findings presented in the 2016 NYS Disparity Study. We have learned that in the event of the issuance of MWBE goals, a waiver is issued to participating prime contractors which allows them to sidestep the MWBE participation mandate.

Recent waste management articles are replete with examples of inefficient, ineffective, unsafe, unsanitary and costly practices, that often burden and endanger lower income communities and citizens. Issues of volume, space, time, traffic, costs and GHG emissions are prevalent when addressing food and organic waste management in NYC. To date, despite the obvious need for innovation in the NYC area marketplace, and the diligence of OWARECO to follow the suggested procedures and protocol to engage DSNY and other NYC agencies, grant and discretionary fund availability, we have yet to secure a contract for Ecovim installations in the New York metropolitan area. OWARECO is confident that the Ecovim technology can exist within the scope of resolutions for sustainable food and organic waste management. It is our hope that this testimony will prompt further scrutiny into this matter for the sake of MWBEs and the many agencies, businesses and communities to be served.

Respectfully,



Myron C. Alexander
Sr. Vice President
OWARECO, LLC

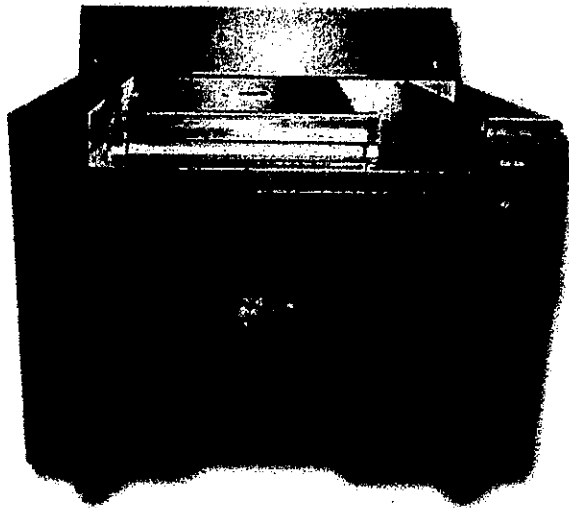
(Organic Waste Reduction & Conversion)

Reducing Cost, Reusing Waste and Restoring the Environment

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Food Waste Reduction Made Simple



OWARECO, LLC

Organic Waste Reduction and Conversion

"Reducing Cost, Reusing Waste, Restoring the Environment"

OWARECO, LLC (Organic Waste Reduction and Conversion) provides the Ecovim innovative on-site, food and organic waste reduction technology. The Ecovim system processing capacity ranges from 66 - 3300 pounds per cycle, and reduces waste 70-90% in volume, within a 24-hour period. The by-products are a pathogen-free, nutrient rich biomass that can be used in a composting process, animal feed or undergo pyrolysis for use as biochar, among other applications; and potable water that can be captured for landscapes or gardens. Ecovim units do not require water, additives, chemicals or enzymes for conversion. Minimal installation requires an electrical outlet and a drain, no venting or plumbing required, no burden on municipal waste water treatment systems.

Managing food and organic waste presents challenges of GHG emissions volume, space, time and costs. Ecovim offers an eco-friendly solution to manage and reuse food waste – ***Brilliant!***

OWARECO, LLC

Organic Waste Reduction & Conversion

Reducing Cost, Reusing Waste, Restoring the Environment

OWARECO, LLC specializes in food and organic waste management solutions. Our focus is on providing innovative waste reduction and conversion technologies that assist the food service industry, government agencies, institutions, businesses and municipalities reduce cost and achieve their solid waste diversion goals.

Vision: OWARECO's vision is one where each person, community and nation is committed and proactively engaged in sustainable practices to restore and preserve our environment.

Mission: OWARECO's mission is to actively promote awareness of the importance and benefits of Reducing cost, Reusing waste and Restoring the environment through ongoing education and marketing innovative technologies that effectively reduce food and organic waste.

Strategies: Our primary strategy is to provide cost-effective, innovative and sustainable solutions that assist consumers and help major producers of food and organic waste achieve their sustainability goals.



- Easy to operate
- Effectively controls food odors
- Reduces organic food waste by 70-90%
- Minimal energy usage
- Minimal installation
- No venting or plumbing required
- No fresh water or enzymes required
- No greenhouse gas emissions
- Reduces waste hauling and trash liner costs
- Converts organic waste into re-usable by-products
- No negative environment damage from TSS or BOD



OWARECO, LLC
Organic Waste Reduction and Conversion

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Senior Vice President

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OWARECO, LLC's Food Waste Reduction & Conversion Solution for NYC

Executive Summary: OWARECO, LLC is pleased to submit this proposal to the New York City Department of Sanitation and Office of Long Term Sustainability for contract consideration for organic and food waste reduction, conversion and diversion initiatives throughout New York City. We applaud your commitment to reduce the negative environmental and costly impact of food waste from a variety of stakeholders (residents, restaurants, medical and healthcare facilities, schools, universities as well as sports and entertainment venues). We commend your vision and recent efforts to create and implement models that may serve the diverse needs of the various contributors of food waste in New York.

OWARECO recognizes the unique opportunity to creatively support your efforts. We feel our innovative Net Zero food waste management solution can effectively support your food waste reduction and diversion goals, positively affect your environmental goals, and dramatically reduce the cost of managing food waste. Our goal is to provide a scalable food waste reduction concept model that may be applied across multiple industries and stakeholders in New York City.

OWARECO, LLC is a minority owned and operated New York-based small business (MWBE application approval pending) and an official distributor of Integrated Veterans Services, LLC a [CEV] Certified Service Connected Veteran Owned Small Business [SDVOSB]. OWARECO, LLC markets and distributes the innovative, on-site Ecovim™ food waste reduction and conversion systems to satisfy city, state, federal and corporate diversion goals. We are a member of the New York State Association of Solid Waste Management and the National Waste and Recycling Association.

The Challenge: One of the biggest challenges facing major cities is managing Solid Waste. According to a 2012 Natural Resources Defense Council paper, *"Getting food from the farm to our fork eats up 10 percent of the total U.S. energy budget, uses 50 percent of U.S. land, and swallows 80 percent of all freshwater consumed in the United States. Yet, 40 percent of food in the United States today goes uneaten. This not only means that Americans are throwing out the equivalent of \$165 billion each year, but also that the uneaten food ends up rotting in landfills as the single largest component of U.S. municipal solid waste where it accounts for almost 25 percent of U.S. methane emissions."*

New York City sends approximately 3.2 million tons of waste to landfills at a cost of \$300 million. That's an approximate average cost of \$3 million per 1 million tons of waste annually! Landfills are increasing becoming scarce and the carbon footprint associated with hauling this waste as well as the potential health impact of idling trucks in densely populated neighborhoods of the city are additional areas of concern.

How food flows from production to post-consumption in New York City is comprehensively reported in a 2010 Columbia University food supply study completed on behalf of NYC Mayor's Office of Long-Term Planning and Sustainability. The case studies in this report focus on major industry stakeholders (Food Retailers, Food Service providers [restaurants], Schools and Universities, Public and Nonprofit Institutions, and the Hunts Point Distribution Center) and document the food waste each generates along the food chain supply.

However, the consumer (including out-of-home consumption) is not accounted for directly in this study.

According to a 2011 report by the Food and Agriculture Organization capturing the collective percentages of food loss in five categories (grain products, seafood, fruits and vegetables, meat, and milk) in the USA, New Zealand, Australia, and Canada at each step of the supply chain, the greatest percentage of food waste is, by far, at the end of the supply chain with the consumer— with the overwhelming majority of this food waste going to landfills. Addressing the consumption and post-consumption behavior of consumers presents a major opportunity for reducing and diverting food waste from the waste stream and NYC's recent pilots for residential curbside pickup for composting from 100,000 homes in Brooklyn, Staten Island and Queens are examples of that strategy.

It is noteworthy that multifamily dwellings are the single largest source of green house gas emissions in New York City and consumers themselves contribute the majority of food waste going to landfills.

Solutions: The complexity and magnitude of this challenge requires vision, comprehensive planning, and innovative forward-thinking consistent with Mayor de Blasio's Vision Zero and the recognition that urban sustainability and resiliency is an urgent priority. A variety of solutions are currently used including the city's pilot voluntary curbside pickup of food waste (NYC Organic Collection), anaerobic processing of food waste by a few food service providers, donation of food waste to food banks, repackaging and reuse of food waste, local community garden composting of donated food waste, and the hauling of food waste to centralized composting facilities. The successful Food Waste Challenge that diverted 2,500 tons of food waste in its first 6 months last year is testament to the commitment of the administration and those who voluntarily participated in the challenge. The legislative incentive of Local Law 146 which becomes effective next year will further buoy Mayor de Blasio's Vision Zero.

OWARECO, LLC believes that there is no one panacea for the challenge of food waste and that it will take a variety of approaches to address the many facets of the opportunity. However, the densely and vertically populated residential buildings of NYC provide an excellent opportunity for OWARECO's Ecovim™ technology to reduce and convert food waste from the city's major contributors to the problem—consumers.

Proposal Concept: OWARECO, LLC's Zero Waste "Point of Capture" [POC] Model

In a simplistic and theoretical manner, and assuming that Ecovim™ systems were the only solution used throughout New York City to process its 3.2 million tons of food waste, that amount would be reduced by a minimum of 75% of its original volume. The Ecovim™ conversion technology would leave the city with a maximum of 800,000 tons of a dry, pathogen-free soil amendment that could be used to accelerate composting for landscaping or gardening (whether donated or sold as a profit center for the city). Additionally, the dehydration technology inherent in the Ecovim™ processing would produce approximately 640,000,000 gallons of potable water (not gray water) that could be reclaimed and reused. The city's current cost of \$300 million could be drastically reduced. The specific reduction would be a function of how many Ecovim™ systems were distributed.

The unique technology and scalable Ecovim™ on-site systems are a perfect solution for densely and vertically populated residential buildings. The Point of Capture [POC] Model's design is to process food waste at its major source site—consumer post-consumption. Rather than picking up food waste from the curb, imagine sanitation trucks picking up a dry, pathogen-free, soil amendment that is 75-93% less in volume than the

original food waste it was processed from. Sanitation trucks can potentially schedule less frequent pickups and deliveries to transfer stations in the current disposal network, as well as, help further reduce their already historically lowered particulate matter and carbon monoxide emissions. Traffic flow theory and modeling (<http://www.fhwa.dot.gov/publications/research/operations/tft/>) may help delineate optimal placement of Ecovim™ systems along the existing network (<http://www.nyc.gov/html/dsny/downloads/pdf/ShortTermContracts/DSNYREF.pdf>).

Imagine property owners donating this soil amendment to the 43 NYC Compost Project Demonstration Sites to accelerate their composting operations. Optionally, for those who did not wish to donate, the soil amendment can be used as profit centers for packaging, marketing and selling the amendment to nurseries and landscaping operations. As such, it may present job creation opportunities.

The potable water produced by the Ecovim™ systems as part of the food waste reduction and conversion process may be reclaimed and used for gardening and landscaping. Otherwise, this potable water can go down a drain hole. Unlike food waste digestors currently used in some of the city's restaurants, Ecovim™ systems do not produce gray water to further burden NYC's waste water treatment facilities.

In high density residential and commercial properties there may be the opportunity to use the potable water produced by Ecovim™'s (i.e., to flush toilets) consistent with the DEP's initiatives to increase water conservation and efficiency as well as support the energy efficiency opportunities of the emerging markets in retrofits stimulated by Local Law 87.

Ecovim™ systems batch process a minimum of 66 pounds and a maximum of 3,300 pounds of food waste all within a 24 hour period or less. No pre-separation of food waste is required and they accept a wide variety of waste: fruit and vegetable scraps, eggshells, meats, fish, chicken bones, dairy, baked goods, uncoated paper (10% of total food waste volume). No plumbing, no venting, no permitting are required to install a unit. The systems are safe and easy to operate. A floor drain hole for the potable water if the water is not being reclaimed, and a dedicated electrical outlet are required. The systems do not attract vermin and have a proprietary odor control design. The smaller units are on casters and mobile.

We envision an Ecovim™ system being placed in the same area where vertically dense residential buildings have their laundry rooms or currently collect their trash. The units can be operated by the building superintendent. Perhaps property owners can be incentivized to acquire and install Ecovim™ systems through similar energy efficiency and clean energy financing products offered through the New York City Energy Efficiency Corporation (NYCEEC) to address the city's greenhouse mitigation goals of 30 by 30 or through programs similar to New York State's Solar Property Tax Abatement Program and Green Roof Tax Abatement Program.

Obviously, food waste is generated at every step along the food supply chain. Additional opportunities exist for reducing and diverting food waste from key producers like the Hunts Point Distribution Center, Public and Nonprofit Institutions (hospitals), Schools and Universities (especially private, independent schools), and restaurants. The Restaurant Challenge and the Carbon Footprint Challenge are innovative invitations from the city to its various stakeholders to proactively join in meeting Mayor de Blasio's Vision Zero. OWARECO is confident that it can penetrate these markets and play an effective role in assisting them meet the Challenges posed by the city's initiatives and legislative coaxing.

Proposal Request:

OWARECO requests further discussion with the Mayor's Office, the Department of Sanitation and the Office of Long Term Sustainability to design a pilot as a proof of concept for the Point of Capture [POC] Model with an interested and appropriately selected multifamily, vertically dense residential property in New York City. The specific design and terms of the pilot can be discussed and negotiated.

Why Choose OWARECO, LLC?

Like New York City's Department of Sanitation and Office of Long term Sustainability, OWARECO, LLC is committed to reducing and reusing food waste while helping to restore the environment. Our Ecovim™ on-site organic waste reduction and conversion systems provide a Net Zero Waste, green technology solution to meet your objectives with the following benefits:

1. **NO** pre-separation of the food waste is required
2. **NO** water, additives or accelerants used in the reduction and conversion process
3. **NO** greenhouse gases, TSS or BOD produced
4. Convert organic food waste into potable water and a nutrient-rich, pathogen-free soil amendment as the only byproducts ***within a 24-hour cycle or less***
5. Reduce and/or eliminate the costs of transporting food waste
6. Effectively control food odor and pests
7. Minimal installation (no venting or plumbing)
8. Scalable
9. Safe and easy to use with minimal on-site training; reliable performance; energy efficient
10. On-site management and control
11. Flexible acquisition options (leasing, etc.)

Successful Installations:

- Anaheim Convention Center, California
- La Costa Resort and Spa Carlsbad, California
- Yard House Restaurant Brea, California
- Defense Commissary Agency (DeCA) Twenty Nine Palms, California
- U.S Army, Fort Lee, VA
- Santa Fe School District, Santa Fe, NM
- Veterans Administration Hospital, Phoenix, AZ

Conclusion

OWARECO, LLC is confident that our proposed Net Zero waste, Point of Capture [POC] solution will meet New York City's food waste diversion initiatives as part of its overall commitment to

- Conserve Energy
- Reduce waste
- Preserve the environment, and
- Reduce carbon emissions



**Citywide Administrative
Services**

Stacey Cumberbatch
Commissioner

July 29, 2014

Geneith Turnbull
Deputy Commissioner
Office of Citywide Procurement

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Dear Dr. Woodbine:

This is in response to your letter of June 24, 2014. Given that the New York City Department of Sanitation (DSNY) Bureau of Waste Prevention, Reuse and Recycling (BWPRR) will determine whether and how your products may be best utilized by the City, and following up on your previous contact with former Deputy Commissioner Ron Gonen, it is recommended that you reach out to Ms. Bridget Anderson, the Acting Deputy Commissioner of Recycling and Sustainability at DSNY-BWPRR, to discuss next steps. Her contact information is as follows:

Bridget Anderson
44 Beaver Street, 6th Floor
New York, NY 10004
banderson@dsny.nyc.gov
Tel: (212) 437-4672

In the event that DSNY chooses to purchase your company's products, that agency will contact my office if and as necessary to provide whatever procurement support is needed.

We appreciate your interest in doing business with the City of New York. Please feel free to contact me at (212) 386-0228 if you should have any questions or concerns. Thank you.

Sincerely,

Robert Cleary
Assistant Commissioner /
Agency Chief Contracting Officer

C: B. Anderson



"Reducing Cost, Reusing Waste, Restoring the Environment"

Crain's New York Business
685 Third Ave.
New York, NY 10017

To the Editor:

Crain's New York Business should be congratulated for highlighting the issues facing New York City, its residents and businesses as the City moves forward on its plans to significantly reduce the amount of waste (to zero) it sends to landfills. In particular businesses in NYC that produce large amounts of food waste (i.e. large hotel restaurants, stadiums) will shortly no longer be able put their food waste out in the trash.

Certainly, these requirements will mean a shift in the behavior of these businesses. In this high traffic and densely populated area factors such as time, space, volume, distance and consumption of natural resources are major considerations when evaluating approaches and methods of food waste reduction.

There exists proven innovative technology that can reduce food waste on-site up to 90% by volume through the use of mechanical agitation and convection heat (dehydration). This method does not require use of water resources, additives, plumbing or venting and produces no contaminated waste, but produces potable water and a dry bio-mass material that can be used in landscaping.

In fact, the US Military Base in Fort Lee, Virginia processes 100% of its organic food waste using dehydrators, and will be able to reduce the organic waste produced by its dining facilities by up to 93% in volume within a 24-hour cycle.

As New York City proceeds with this important initiative to reduce the amount of waste sent to landfills, there are opportunities for innovative technology to play a role in enhancing the City and region's environment and promote sustainability in the disposal of organic waste.

Leah R. Alexander, COO

OWARECO, LLC

Organic Waste Reduction and Conversion

Reducing Cost, Reusing Waste, Restoring the Environment

www.owareco.com

914.665.5651

OWARECO, LLC distributes Ecovim™ on-site, food and organic waste reduction systems. Ecovim™ processes 66-3,300 pounds of food waste, reducing it 70-90% by volume within a 24-hour period without use of water or additives.



NYSP2I Supports OWARECO, LLC with Organic Waste Reduction & Conversion

Located in Mt. Vernon, New York, OWARECO, LLC (Organic Waste Reduction & Conversion) (OWARECO) specializes in organic and food waste management solutions. Their focus is to provide innovative waste reduction and conversion system technologies that assist government agencies, institutions, businesses and municipalities with cost reduction and achieving solid waste diversion.¹

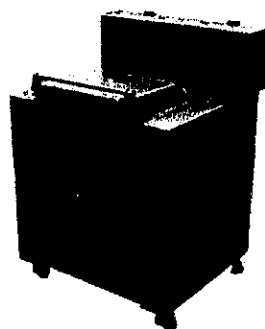
Challenge

OWARECO is the New York State distributor and installation company for IVS Ecovim technology. This technology is a standalone system that dehydrates and mechanically agitates food and organic wastes, producing a solid output material and water condensate. Food waste and other organic materials (e.g. napkins) are feedstock for the IVS Ecovim system where they undergo the dehydration process, producing both a solid and liquid byproduct.

New York State Pollution Prevention Institute (NYSP2I) supported OWARECO with assessing their IVS Ecovim-66 organic waste dehydrator system. OWARECO wanted to analyze the potential end uses of the dehydrated food waste material as well as perform a comparative analysis of the IVS Ecovim-66 system vs. established food waste management pathways in terms of energy use, greenhouse gas (GHG) emissions and cost.

Solution

NYSP2I's engineers and OWARECO utilized Rochester Institute of Technology's (RIT) resources to install the IVS-66 system dehydrator system in one of RIT's labs. NYSP2I and OWARECO were able to process seven different sources of food waste through the dehydrator over the course of several weeks. The food waste sources included a hospital, grocery store, cafeteria, food bank, and a restaurant. NYSP2I processed each food waste type using the IVS Ecovim-66 system and further assessed the material characteristics, processing energy requirements and market compatibility.



IVS Ecovim-66 System

The assessment included: chemical characterization, energy utilization and associated greenhouse gas (GHG) emissions, and a cost comparison of the IVS Ecovim-66 organic waste conversion technology vs. other food waste management options. The options for comparison included: composting, dehydration, anaerobic digestion and landfilling.

Results

NYSP2I's assessment resulted in key findings relative to possible utilization of the dehydrated food waste produced by the IVS Ecovim-66 system.

CHALLENGE

- With assistance from NYSP2I OWARECO wanted to assess their IVS Ecovim-66 organic waste dehydrator system; analyze the potential end uses of the dehydrated food waste material; as well as perform a comparative analysis to established food waste management pathways

SOLUTION

- NYSP2I and OWARECO processed seven different sources of food waste through the dehydrator over the course of several weeks
- NYSP2I processed each food waste type using the IVS Ecovim-66 system and further assessed the material characteristics, processing energy requirements and market compatibility

RESULTS

- NYSP2I determined the IVS Ecovim-66 dehydrated food waste was compatible with the following end-use markets: fish feed, cattle feed, pyrolysis, pellet fuel and compost supplement
- The IVS Ecovim-66 system provided the most competitive cost for food waste processed and sold for secondary use, as compared with composting, anaerobic digestion and landfilling
- With respect to Energy and GHG emissions, the IVS Ecovim-66 ranked second best out of four food waste management pathways analyzed: composting, dehydration, anaerobic digestion and landfilling
- OWARECO anticipates the addition of 12 NYS jobs, supporting applications of the IVS Ecovim-66 system



Myron Alexander
Senior Vice President
P.O. Box 13
119 Pondfield Road
Bronxville, NY 10708
myron@owareco.com

TESTIMONIAL

Potential Markets:

Based on the parameters analyzed, the IVS Ecovim-66 dehydrated food waste was compatible with the following end-use markets:

End Use	Compatible

Energy and GHG Emissions:

With respect to Energy and GHG emissions associated with the processing of food waste, the IVS Ecovim-66 ranked second best out of four food waste management pathways analyzed: composting, dehydration, anaerobic digestion and landfilling.

Cost:

The IVS Ecovim-66 system provided the most competitive cost for food waste processed and sold for secondary use, as compared with composting, anaerobic digestion and landfilling.

The IVS Ecovim-66 system may further provide unique benefits over incumbent food waste management options, including mitigating space, odor reduction and vermin concerns. OWARECO anticipates the addition of 12 NYS jobs, supporting applications of the IVS Ecovim-66 system

"It has been a pleasure working with the NYSP2I team at the Rochester Institute of Technology (RIT). The third-party assessment of the IVS Ecovim by-product is invaluable to OWARECO and to the exploration of sustainable waste management practices and closed loop food systems. The comprehensive character analysis and comparative assessment provided us with a clearer knowledge of the by-product, end-use applications and market potential. This project specifically helped to identify areas for new market development and clarify a vision for expansion. These research findings are significant and we greatly appreciate the technical and professional support provided by NYSP2I."

- Leah Alexander, COO
OWARECO, LLC

NYSP2I PARTNERS

R·I·T Rensselaer

UB
University at Buffalo
The State University of New York

Clarkson
UNIVERSITY

New York Manufacturing Extension Partnership

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For more information please contact us:

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Rochester, NY 14623

Tel: 585-475-2512
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E-mail: nysp2i@rit.edu

¹<http://www.owareco.com/>

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DEMOCRATIC CONFERENCE
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DEMOCRATIC CONFERENCE
MWBE TASK FORCE



SENATOR
KEVIN S. PARKER

21ST SENATORIAL DISTRICT
STATE OF NEW YORK

DEMOCRATIC CONFERENCE WHIP

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FAX 718-629-6420

e-mail:
parker@nysenate.gov

August 22, 2017

Bill Thompson
Chairman
CUNY
205 E 42nd St
New York, NY 10017

Dear Mr. Thompson:

Bill —

I am pleased to share with you a wonderful innovative technology that assists government agencies, businesses, institutions, communities and municipalities to achieve their waste reduction and sustainability goals. I met with Myron Alexander from **OWARECO, LLC** and was amazed by both the technology and its capacity to positively impact our environment. This company is extremely passionate about enhancing our environment through this effective and simple business solution. Therefore, I respectfully ask you to review the enclosed materials describing the technology and set up meetings with **OWARECO** to discuss areas of mutual interest.

OWARECO, LLC (Organic Waste Reduction and Conversion), is a waste management technology solutions company. **OWARECO** is the only NYC/NYS certified MWBE that provides this unique on-site food waste reduction technology in New York State. Their product, **Ecovim**, was proven to reduce food waste on-site up to 90% by volume through the use of mechanical agitation and convection heat (dehydration). This method does not require use of water resources, additives, plumbing or venting and produces no contaminated water, but produces potable water and a dry bio-mass material that can be used in landscaping. The safe and efficient recycling of food organic waste will lead to improved soil for future growth and climate change mitigation. In particular, businesses in New York that produce large amounts of food waste will benefit most from this technology — as well as farmers and other green space companies that could use the by-products of this process. As such, I fully support their work, and continued growth in New York City and State.

It's important for us to support this innovation as it can resolve issues facing New York City's residents and businesses as the City and State move forward on plans to significantly reduce the amount of waste in the coming years. With over 8.5 million residents in New York City and 20 million in New York State, we must endeavor to be not only environmentally conscious about production, but more so about waste reduction and recycling. I cannot speak more highly of this company, but will let their technology and innovations speak for itself. Therefore, I ask you to examine the information enclosed and reach out to OWARECO.

Thank you in advance for your favorable consideration. If you have any questions or require additional information, do not hesitate to contact me at my district office at (718) 629-6401.

Yours in Partnership,

A handwritten signature in black ink, appearing to read "Kevin", with a long, thin vertical line extending downwards from the end of the signature.

KEVIN PARKER

Deputy Mayor Richard Buery
City Hall, New York, NY 10007

Commissioner Kathryn Garcia, Department of Sanitation
125 Worth St, New York, NY 10013

Commissioner Gregg Bishop, Department of Small Business Services
110 William St, 7th Floor, New York, NY 10038

cc: Jonnel Doris, Director, New York City Mayor's Office of MWBEs

November 13, 2017

Re: Potential for Minority- and Woman-Owned Businesses in Commercial Waste Zones

Dear Commissioners:

We write to highlight the potential for a number of local minority- and woman-owned business enterprises (MWBE) and other innovative small businesses to play a substantial role in the City's new commercial waste zone system, currently in its implementation phase.

We also believe the innovation needed to achieve the City's critical goal of zero waste to landfill by 2030 can only occur if we create opportunities for emerging leaders in an historically closed industry, and that the goal of diversifying an industry that has excluded women and people of color from ownership and leadership positions can and should be included in the criteria used to select waste and recycling service providers in the new zoned system.

While a number of MWBEs focused on waste diversion are starting up in New York City, it is difficult for our small firms to break into an historically exclusive industry. Currently, only a handful of approximately 280 BIC licensees are registered as MWBEs with New York State. We also note that DSNY and the Business Integrity Commission have struggled to meet MWBE participation goals for City procurement of goods and services related to solid waste.

The experiences of other cities make us optimistic that the transition to a zoned commercial waste system can be used to incentivize the inclusion of MWBEs, innovative small businesses, and local job creation. While zones are usually awarded to established haulers with existing capital such as truck fleets and waste processing facilities, smaller firms including local MWBEs can perform essential functions as subcontractors, such as food recovery, electronics re-use and recycling, organics collection, and customer education. Cities including Los Angeles and Oakland have created significant opportunities for local MWBEs - and dozens of quality, local jobs - in these areas.

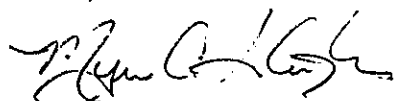
Our collective, intimate local knowledge of New York City waste generation can also be scaled up to create a new system that rewards waste reduction, reuse, and maximization of recycling. If we are serious about moving toward zero waste, a number of committed waste auditors and on-the-ground experts will be required to engage the city's huge and diverse business sector.

We can only develop and unleash this knowledge if innovators historically excluded from the industry are able to effectively participate in the new system. Mechanisms to ensure this could include:

- MWBE participation targets for waste zone collection RFPs being issued by the City.
- Goals that give commercial haulers and generators incentives to focus on reducing overall waste disposal in each zone.
- Encouraging partnerships between haulers, generators, and local re-use, remanufacture, and auditors including MWBEs.
- Structuring waste zone agreements between commercial haulers and the city to ensure that waste auditing and waste reduction efforts are financially and operationally independent from haulers.

We applaud your progress in undertaking this much needed reform of the private waste system. We would welcome the chance to meet with you to further discuss this critical opportunity to diversify and modernize this industry.

Yours,



Myron Alexander, OWARECO



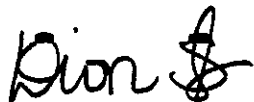
Hanah Dehradunwala, Transfer Nation



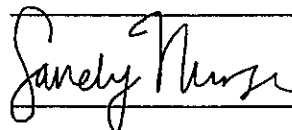
Robert Lee, Rescuing Leftover Cuisine



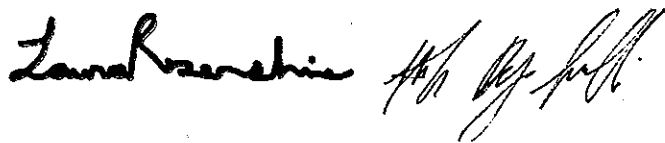
Emellie O'Brien, Earth Angel Productions



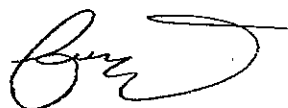
Dior St. Hillaire, Green Feen



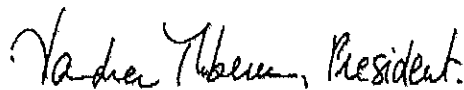
Sandy Nurse, BK Rot



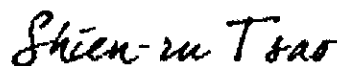
Laura Rosenshine/Meredith Danberg-Ficarelli
Common Ground Compost



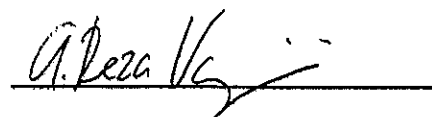
Kabira Stokes, Homeboy Industries



Vandra Thorburn, Vokashi



Shien-ru Tsao, Commit to Green, Inc.



Alireza Vaziri, RoHo Compost



*City Council Committee on Sanitation and Solid Waste Management
Organics Oversight Budget Hearing
September 20, 2018*

Good morning, Chairperson Reynoso and other members of the Committee. I am Christine Datz-Romero, Co-founder and Executive Director of the LES Ecology Center, a nonprofit that has pioneered community based urban sustainability programs since 1987. Today, The Ecology Center continues to provide leading e-waste and composting services, environmental stewardship opportunities and educational programs. We offer opportunities to all New Yorkers to learn about environmental issues and play an active role in creating a healthier and greener New York City and planet.

The Ecology Center started a compost collection program in 1990 and is currently collecting 500 tons of source separated organic waste a year through collection points in Lower Manhattan. All collected materials are transported to our East River Compost Yard, located at Jackson Street in the Lower East Side. Finished compost is used to increase soil health in East River Park and through our street tree program, as well as donated to other parks and community greening groups. We believe that local community based collection and use of finished compost is an important educational tool to raise awareness about the many benefits of composting in an urban setting.

The Ecology Center has been a branch of the NYC Compost Project since 2005, providing technical assistance, outreach and education in Manhattan.

1. Pick a study area to understand what the barriers to successful participation in program are

We are testifying in support of collecting source separated organic materials in NYC, however the current collection program needs to be improved to be sustainable. DSNY focused on rolling out its program, but never stopped to evaluate how successful participation is and what the barriers? We would like to encourage the DSNY to take any neighborhood and study what are the barriers for residents to participate in the program, and try new methods to increase participation.

2. Find capacity to develop composting capacity within NYC

Another concern we have is the lack of local processing capacity. Some of the organic materials are transported over long distances to be composted, adding a large carbon footprint to the program which might negate the environmental



benefits of source separating the materials in the first place. The City needs to find the political will to site facilities closer to the City, or within its boundaries. Locations, such as Floyd Bennet Field on the Queens/Brooklyn border come to mind as well as Hunts Point Food Market, with its large amount of organics from vendors. DSNY facilities might also be study to retrofit.

Relying on diverting organics to waste water treatment facilities is not the answer to the lack of capacity for processing organics. Waste water treatment facilities, such as Greenpoint are currently not harnessing the methane gas generated to create electricity, nor is methane harvested and used as fuel. Additionally, the resulting digestate is used as landfill cover, which is not the highest beneficial use for source separated organics.

3. Create incentives for the end use of compost

To incentive the creation of composting facilities that create a beneficial end product, City Council should create procurement rules that favor locally produced top soil with post consumer organics content for all City contracts.

4. Continue to invest in education

To garner community engagement DSNY needs to continue investing in educational programs to raise awareness about composting. Funding for such programs as the NYC Compost Project should be maintained if not increased, since this program supports many community based initiatives with technical assistance and educates residents about composting.

In closing I would like to add that turning away from organics collection is not an option for a City that wants to be a leader in climate justice. To not continue the program would be penny wise and pound foolish. We need to find ways to make the organics collection program sustainable, and I hope we have offered some ideas.

Thank you for the opportunity to testify.



Committee on Sanitation and Solid Waste Management
Thursday, September 20, 2018 @ 10:00 AM
250 Broadway, 14th Floor
New York, New York 10007

RE: Oversight - Update on the City's Organics Collection Program.

Good Morning

My name is Vandra Thorburn, founder and president of Vokashi – the eco-living compost collection service. I am now in my 8th year of operation and again I come before you to request that we put our waste dollars to work in generating green, sustainable jobs, infrastructures and natural composting initiatives. With the support of NYLawyers in the Public Interest, the loose network of community-based composters and other technologies in the waste management field were brought together to impress the City and DSNY about the serious lack of opportunities for MWBE in the waste management sector.

As you know the City spends hundreds of thousands of dollars on exporting fees for hauling residential waste to landfills in other states. Roughly one third of our solid waste is organic matter and therefore compostable. Imagine using \$100 million of these carting fees to develop innovative local food and green waste recycling efforts to improve the soils of gardens and parks and other greenspaces.

Vokashi has a community based composting model that's poised for expansion. We could provide dozens of truly green jobs, divert tons of food waste from the landfills for less than \$1 million. We invite and urge DSNY to use some of its 'waste export' budget to establish neighborhood organic recycling programs and "keep NYC's earth in business" by supporting development of MWBE.

The waste technology that we are using is EM-1® the world's leading microbial inoculant developed by EMRO Japan. EM-1® (effective microorganisms) is used around the world. Town Councils up and down England advocate bokashi as a composting method. EM-1® has many other applications in products that help restore the natural balance of nature in soils, water, air and people – using only natural ingredients. The research and development of biotechnology that EMRO Japan carries out is the cultivation of effective microorganisms, particularly focused on lactic acid, yeast and phototrophic bacterias. EM products are distributed in over 90 countries. EMRO Japan has licensing agreements with over 50 countries to manufacture EM-1® locally including in the United States in Texas and Arizona.

Putting our waste dollars to work in the community

There are hundreds of community gardens in NYC: more than 600 under the GreenThumb umbrella plus 120 in private land trusts: (Trust for Public Land; Bronx Land Trust; Brooklyn Queens Land Trust and the New York Restoration Project).

In addition, there are public parks, green spaces, botanical gardens, hundreds of vacant and blighted sites owned by city agencies, not to mention private properties seeking greening opportunities. According to GreenThumb, approximately 150 of their gardens compost enough to meet their needs; another 300 gardens have composting areas but require assistance, which leaves 300 gardens with no composting at all.

Nevertheless, GreenThumb as the main provider to community gardens uses multiple sources for compost even purchasing compost and topsoil at the cost of \$700 per 25 cubic yards.

A win for gardens, organic waste management and recycling

Vokashi sees a great opportunity to generate healthy neighborhood green jobs as community composters and recycling educators. NYC has thousands of acres of green space, community gardens and urban farms that require mulch, soils, and compost. Community gardens and urban farms are rebuilding urban agriculture producing fresh fruits, herbs and vegetables and establishing neighborhood markets. At the center of this restoration there needs to be vigorous composting initiatives to maintain healthy vibrant soils for growing foods. Being a community composter is another great entrée into community gardens to learn about gardening and growing fresh food and marketing.

There are challenges to urban composting. Fermentation, however, delivers us from the first problem 'rotting food' and opens the door to the many possibilities for managing fermented organic waste. There are capital requirements too for building out and improving urban composting. Designs for flexible vector proof composting bins, corrals and portable units and covers: mulching machines, pulpers, sifting wheels, packaging and storage are some of the items needed.

Community composters needs to be a bona fide green job with the attendant training and education. Along with learning the sciences involved in composting: study and testing of soils, microorganisms, worms and fungi; composting requires carpentry and building skills and Vokashi introduces all the accoutrements of fermentation.

Respectfully submitted,

Vandra Thorburn
Founder and President
Vokashi – kitchen waste solution

Testimony for Meredith Danberg Ficarelli
Director
Common Ground Compost
meredith@commongroundcompost.com

**New York City Council
Committee on Sanitation and Public Waste Management**

Oversight - Update on the City's Organics Collection Program

September 20th, 2018

Thank you for holding this hearing. My name is Meredith Danberg-Ficarelli. I am the Director of Common Ground Compost and have been a resident of NYC since 2007.

I work in the recycling industry as a consultant, setting up composting and recycling programs, and running a bike-powered food scrap collection program in Manhattan. Our services focus on education and awareness about waste and the small changes we can make in our daily lives to reduce waste and act as more environmentally responsible individuals and businesses. This always includes composting, whether it's in a commercial kitchen, and office building, or the home.

During my time with Common Ground Compost I have led trainings for more than a thousand people, and I can tell you: people are genuinely interested in trash. They want to know where their garbage goes, they are curious about how recycling works, they are intrigued (and sometimes shocked) to learn about the conditions and tasks of the workers that collect and process their waste, and they want to participate in organics recycling once they learn that it can reduce the exorbitant costs we currently face to ship our waste to landfills outside of the City.

I am glad to see the City adapting to the challenges of high collection costs due to a lack of participation in the brown bin program -- I have seen DSNY trucks tipping organics at a transfer station for pre-processing and noted that the loads tipped did not come close to meeting the trucks' capacity. The current focus on a distributed network of residential drop off points for DSNY brown bin collection is a great approach, and I have enrolled in the program through the community garden that I help to run in the East Village. At this site, the small compost collection operation that I run already operates a free compost drop off program for residents, and my program staff process these organics in the garden. This program has a few correlaries across the City, but is not common. In fact, the majority of gardens (not to mention community spaces like churches and other organizations) do not have the capacity or the dedication to manage a compost bin, even if they are not processing the material themselves.

Enrolling in the brown bin program was straightforward - a DSNY staff person met me at our garden, walked me through the options, and made sure that I understood all the caveats of the program. But we are an outlier, already operating a compost program, and willing to internalize the human resource costs associated with stewarding a brown bin. Sure, some other organizations will do the same, but this decentralized community drop bin program assumes that community organizations are capable of managing public infrastructure - something that the City should be funding as yet another element of the Organics program expansion.

We face the question of systems change, and the costs associated with wide-scale behavioral change. We are halfway up the mountain now - the NYC residential organics program is already the largest program in the country, but we face an issue where only early adapters are using the program. I understand that brown bins stand at curbs unused or seriously contaminated. I have heard (many times) of supers and landlords removing the bins, hiding them from residents, or even taping them shut to bar residents from using them. Many people do not understand *why* they should use their brown bins.

I hope that the City continues its support for residential organics recycling. Additional effort needs to be made to educate and engage with residents, not only about how to recycle and compost, but about the importance of waste reduction. People react to different things - the same narrative and explanation will not work on everyone. Some different approaches that we use include:

- Long term economics: landfills are not a sustainable use of space, and transport is incredibly expensive. By participating in the brown bin program, residents will increase the demand for local and regional processing capacity for organics. The growth of organics processing capacity closer to the City can reduce transit miles and disposal costs for 34% of the residential waste stream, creating jobs and producing a valuable soil amendment.
- Pest mitigation: while no formal studies were conducted in NYC (that I know of), it's a simple common sense argument: food in black trash bags is an easy-access meal for rats, while food in hard plastic containers is not. Remove the food source, reduce the rat population.
- Food and nutrition: our food is less nutritious than it was 70 years ago because our agricultural soils are incredibly depleted. Over the last century, humans broke the food system - creating a linear process that grows food and then buries waste. All of earth's systems are cyclical, and bringing food scraps back to the soil as compost adds biodiversity, nutrients, and tilth and support the growth of healthy food.
- Resource allocation: in general, landfills are a poor use of natural resources. Land is finite, and we should not use it to bury garbage, especially organic waste, which produces methane in anaerobic environments.

We have received feedback and comments from residents that have received bins without any advanced warning (we understand that DSNY sends mailers and has outreach staff on the road during the day). Additionally, in neighborhoods with very high rental unit turnover, and dense tourist populations, (like Williamsburg, for example), the mailer and in-person delivery approach will only educate the person that is present at the time of delivery. What about wall murals, street signs, social media, bigger and bolder signage, and a giant URL printed on the bin for more info? We need to pull out all the stops if we want to get participation rates up.



**STATEMENT OF THE NATURAL RESOURCES DEFENSE COUNCIL
BEFORE THE NEW YORK CITY COUNCIL
COMMITTEE ON SANITATION AND SOLID WASTE MANAGEMENT
REGARDING OVERSIGHT ON NYC'S ORGANICS COLLECTION PROGRAM**

September 20, 2018

Good morning, Chairman Reynoso and members of the Committee. My name is Eric A. Goldstein, and I am New York City Environment Director at the Natural Resources Defense Council ("NRDC"), which as you know is a national, non-profit legal and scientific organization that has been active on a wide range of environmental health, natural resource protection and quality-of-life issues around the world and right here in the nation's largest city since NRDC's founding in 1970. We have been engaged on New York City solid waste issues for three decades, with the goals of transforming the city's current system from primary reliance on landfilling and incineration to one that has as its four cornerstones enhanced recycling, composting, waste prevention and equity for all city residents.

We thank you for your continuing leadership on these issues and are pleased to be here today to testify regarding the state of the city's residential composting program.

In short, we believe that the city's residential curbside organics collection program is one of the most important initiatives undertaken in recent years by the Sanitation Department in terms of the potential it holds to reform the city's waste collection services, enhance sustainability, cut global warming emissions and ultimately reduce the cost of waste disposal to city taxpayers. Having said that, we are concerned about several aspects of the implementation of this essential and irreplaceable program and believe that City Council action is necessary to provide continuing forward momentum in the years ahead.

Make no mistake. Although it gets relatively little attention on a crowded New York City public policy agenda, the Sanitation Department's commitment to provide citywide curbside composting collection is the most fundamental waste policy reform advanced here since the adoption of the city's mandatory recycling program almost thirty years ago. Organics – food waste and yard waste – are the single largest portion of the residential waste stream, accounting for almost a third of the total trash placed out for collection by city homeowners and apartment-dwellers. The overwhelming bulk of this material is sent, even today, to distant landfills, where it is buried, breaks down in the absence of oxygen and forms methane – an extremely potent global warming gas. Landfills are the third largest source of methane emissions in the

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nation and curbing these discharges is and should be an essential governmental objective. Moreover, it will be impossible to achieve Mayor De Blasio's ambitious Zero Waste goals without full implementation of an effective organics collection program. Composting the collected organic materials, or first sending them to an anaerobic digester to capture the energy they produce, turns a "waste" product into a valuable resource, with compost used as a natural fertilizer, and additive that enriches and stabilizes soil. Ultimately, delivering organics material to composting or anaerobic digestion facilities will save taxpayer dollars since the tipping costs at such facilities is typically considerably less than the cost of shipping such moisture-laden, heavy waste to far-away landfills or incinerators.

Commissioner Kathryn Garcia recognized the importance of advancing this program and sustainability more generally on the very day she was named Commissioner and deserves credit for prioritizing sustainability as a central part of the Department's mission.

Despite that commitment, the city's residential organics collection program needs help. For one thing, the program has suffered from a communications shortfall. Homeowners and apartment dwellers in districts already served by the voluntary program need more information regarding why and how to participate. Public education efforts that would support this program have been conspicuous in their absence. Second, curbside organics collection schedules need to be at least as frequent as traditional trash collections so that they are convenient for program participants. We have heard from NRDC members and other residents in some neighborhoods that participation in the program decreased dramatically when organics collections were cut back from twice to once a week. Third, some residents have complained that the brown organics pails are not raccoon-proof and that raccoons have knocked over and gotten into these pails; that only needs to happen once or twice to persuade even devoted participants to abandon the program.

Due to these and other problems, participation levels among the 3.5 million residents who live within the districts where the current program is offering collections have declined. According to reported DSNY figures, only about 10 per cent of residents who have access to organics collection are separating their food and yard wastes and placing them out for collection. Not surprisingly, this has contributed to program inefficiencies. Most of the Department's organics collection trucks are completing their routes with large amounts of excess capacity.

These facts should not be grounds for pessimism. Many major programs encounter start-up difficulties. And the Sanitation Department and the De Blasio Administration are certainly able to tackle these challenges and turn the organics program into a flagship initiative and lasting legacy.

Here are five recommendations for action:

- The Sanitation Department should complete a detailed assessment of what is working and what is not re: implementation of the program and submit that assessment to this Committee within four months. This document should include an implementation plan for actions the Department will take in 2019 to address the problems now facing the organics program.
- The De Blasio Administration should fund a multi-faceted public education initiative that will inform New Yorkers about the importance and advantages of composting and the details of participating in the program. Funds for this program should specifically be provided in the city's FY 2020 budget.
- This Committee should advance legislation requiring that all city agencies and city owned buildings separate their food wastes for collection. Public Advocate Tish James has introduced thoughtful legislation along these lines, which would encourage city employees to set an example for program participation while also boosting the capture rate and increasing the cost-effectiveness of the Department's organics collections.
- Sanitation union officials should cooperate with the Department and Administration to pave the way for organics collection vehicle route adjustments, with the goal of maximizing the program's cost-effectiveness in a manner that is equitable to workers.
- This Committee should advance legislation that expands voluntary organics collections to all residents citywide by 2020 and that makes the organics separation program mandatory by 2022. Such a move would be consistent with implementation of organics collections in such cities as San Francisco and Seattle; it took those jurisdictions approximately ten years from start-up of composting collections to mandatory citywide participation.

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We would be happy to work with you, Chairman Reynoso, on ways of moving forward with these ideas and to develop legislation that is necessary to ensure that New York City's organics program becomes a national model of sustainability. Thanks again to you and your talented staff for your leadership on all of these important sanitation issues.



TESTIMONY OF THE MANHATTAN SOLID WASTE ADVISORY BOARD

City Council Committee on Sanitation and Solid Waste Management
Organics Oversight Budget Hearing
September 20, 2018

Good morning, Chairman Reynoso and the other members of the Committee. I am Marc Shifflett, and I serve as Chair, Organics Committee of the Manhattan Solid Waste Advisory Board, or Manhattan SWAB.

As an organization committed to reduce, reuse, recycle, the Manhattan SWAB fully supports the city's efforts to source separate organic material from the waste stream for the purposes of beneficial reuse. Given the importance of organics collection to the city's long term climate resilience, solid waste management and soil remediation goals, we are hopeful the city can develop a new way forward to expand organic diversion citywide while cutting costs of providing this essential service. Below are several recommendations that we believe will help cost effectively build on the successes of the city's organic program while at the same time recognizing that significant challenges remain.

1. Improve Efficiency of Existing Curbside Collection Program

It is no secret that the City is spending millions of dollars to divert a tiny fraction of residential organic waste. According to analysis of DSNY's 2017 Waste Characterization Study by the City's Independent Budget Office, more organic material is collected as contamination of the Metal/Glass/Plastic stream than it is in the curbside collection bin program.¹ Curbside collections must be made more efficient if it is to become economically feasible.

Potential ideas we ask the City to consider in order to improve the efficiency of the City's curbside program include:

- Reduce weekly pickups within the curbside collection program
- Establish centralized block collections where feasible like consolidating curbside pickups within difficult to traverse neighborhoods
- Contract micro haulers to move and consolidate residential organics using low or no-emission vehicles such as pedal-assist electric cargo-bike
- Connect smaller residential buildings with nearby local processors and increase drop-off locations at convenient locations such as subway stops
- Encourage bin sharing

¹ In FY2017, 7,112 tons of food waste was collected in the metal glass plastic stream compared to 6,115 tons of food waste collected in the organics stream.

2. Create and Distribute Best Management Practices and Residential User Guides

It goes without saying that just like for mandatory recycling, organics diversion participation could be increased significantly behind a mass scale awareness building campaign. Until those funds could be allocated, perhaps it's most feasible to leverage outreach opportunities that exist intra-buildings.

According to the DSNY research, misperceptions about the issues associated with organics collection represents a significant barrier to uptake of the curbside collection program. But strategies for overcoming the challenges along with BMPs and user and design guides exist, and are an essential part of envisioning a new road ahead. With the input of building staff and residents, BMPs will give clear guidance to building managers and coop/condo boards to more effectively develop their own unique sustainability programs. It is beyond critical that everyone be engaged in the process and understands their roles.

Capitalizing on MSWAB's experience studying high-rise, high density buildings in NYC we can highlight some key learnings from our own use-case studies:

- Educate residents about the benefits of organics collection, including climate mitigation and soil remediation. Deal head-on with the barriers to uptake by underscoring the unique design features of the brown rolling, rodent-free carts.
- Establish new habits by providing residents with kitchen collection caddies and a starter set of compostable bags
- Schedule launch events and workshops to underscore social norming

3. Support and Expand Existing Small-Scale Organics Programs

We recommend that the City look for ways to build on the successes of existing small scale organics programs. It can do this by expanding managed community food scrap drop-off sites through DSNY as well as organizations like GrowNYC and the NYC Compost Project, assist in increasing the capacity of local community garden processors through the NYC Parks GreenThumb Program, partner with groups like Green City Force and Harlem Grown to tap into a youth recruitment base to educate and conduct outreach in low-income neighborhoods and NYCHA residents, and finally study ways to develop additional small- to medium-scale organics processing sites on city-owned property.

Many such programs exist. For example, in three years of accepting organics inputs from the community, the Pleasant Village Community Garden in East Harlem has increased its processing capacity to approximately 3 tons annually with the potential to easily double that amount. Though still a small fraction of NYC's overall organics output, with over 700+ gardens citywide, community processors can make a significant impact on diversion rates.

These programs should be encouraged to grow, and funding should be made available for this purpose. The Manhattan SWAB in collaboration with Citizens Committee has been awarding community composting grants since 2011. We have distributed over \$100,000 in micro-grants to hundreds of community and school groups throughout the five boroughs. The number and types of composting projects grow each year.

In addition, we advocate for increased investment in local startups as a way to build entrepreneurial innovation through the use of no-carbon micro-hauling, mobile apps and technologies that can track scheduled collections and provide all stakeholders with the ability to easily share information and create year round jobs in areas where unemployment is highest.

Finally, DSNY- and NGO-managed organics drop-offs at farmers markets, community gardens and transit hubs provide a natural and convenient space for promoting and educating residents around the importance of organics diversion. These drop-offs should be expanded to bike share and key commuter bus, subway and water taxi interchanges to make it easy for people to deposit their organic waste.

Conclusion

Community engagement and education is crucial to moving the city to a mandatory residential organics program. Public education, in particular, is needed to raise awareness for, and an understanding of the critical importance of organics diversion and to have any hope of meeting Zero Waste goals. Much like the City's infamous blue and green bin cartoon characters, and other Citywide recycling campaigns, we feel public awareness is essential if we are to have a successful Citywide organics diversion program.

Though we like to call ourselves New Yorkers, we are really a city of many small towns. We should be exploring ways to capitalize on that rich diversity and the competitive nature of our neighborhood affiliations. The savings gained through rationalizing the inefficiencies and improving upon existing programs can make the process less taxing and allow for greater experimentation through innovative pilots, best practices, private-public partnerships and borough-wide community education campaigns.

Thank you for the opportunity to testify on behalf of the Manhattan SWAB.

The Manhattan Solid Waste Advisory Board (SWAB)

Chair: Sarah Currie-Halpern; Vice-Chair: Laura Rosenshine; Secretary: Katherine Hanner; Assistant Secretary: Christine Johnson; Treasurer: Diane Orr

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The Manhattan Solid Waste Advisory Board (MSWAB) is a volunteer citizens' advisory board dedicated to helping NYC achieve its zero waste goals. We advise the Manhattan Borough President, City Council, City Administration and others on policies and programs regarding the development, promotion and operation of the City's waste prevention, reuse and recycling programs. We are a Board comprised of solid waste management industry, waste reduction and diversion consultants, sustainability professionals, and concerned citizens, appointed by the Manhattan Borough President's Office.

**Testimony of Melissa Iachan at
New York City Council Committee on Sanitation and Solid Waste
Management Oversight Hearing on Department of Sanitation Organics
Program
Dated September 20, 2018**

Good morning, my name is Melissa Iachan, and I am a Senior Staff Attorney in the Environmental Justice Program at New York Lawyers for the Public Interest. I am here representing NYLPI and the Transform Don't Trash NYC Coalition to underscore the importance of ensuring that our City diverts waste from landfills and continues to make the necessary investments in a robust organics program to achieve the Mayor's Zero Waste goals.

We strongly support DSNY's organics program, which diverts food waste from landfills. Organic matter decomposing in anaerobic conditions in landfills is a major source of methane emissions, and recycling this material via composting or controlled anaerobic digestion processes is essential to reducing our City's greenhouse gas emissions. .

We also understand that DSNY faces significant cost-related challenges with the current curbside organic waste recycling program which have caused the concerning pause in the program's expansion to every neighborhood in the City.

While we are sympathetic to the difficulties the Department faces in ramping up participation rates and tonnage on the relatively new curbside collection routes, we believe that there are creative solutions that would increase the efficiency of the residential program while tackling the even larger problem of commercial organic waste. The commercial waste stream is estimated to be about equal to the residential one – about 3 million tons of putrescible trade waste per year – and about 1 million tons of this huge stream are organic material. Troublingly, private transfer station reports filed with the DEC show that very little of this material is diverted to compost or digestion facilities.

We also hear from business owners who want to participate in composting programs that commercial waste haulers simply do not offer this service at a scale

or a price that makes sense, particularly for small and medium-sized food businesses.

We believe DSNY could substantially increase small business participation in organics recycling *and* improve the efficiency of existing compost routes by offering brown-bin organics service to small businesses in communities where DSNY already operates residential organics service. Such a program would allow workers to fill existing organics trucks, allow small business owners to divert far more of their waste from landfills, and boost business participation in a meaningful recycling program in advance of the new commercial waste zone system.

DSNY could help to offset the cost of such a combined residential-commercial collection program by charging a modest, competitive price to participating businesses for brown bin service. This would accomplish the goal of increasing the volume of organic waste we divert from landfill by including commercial waste, and also address the efficiency obstacles that have caused DSNY to pause their expansion of curbside organics collection. This would also provide expanded options to small businesses and commercial enterprises who would like to reduce their carbon footprint and reduce landfill bound waste.

We know that Commissioner Garcia and DSNY share our desire to make strides in the push to zero waste, and hope that together with the City Council, you will seriously consider this idea as a possible path forward towards expanding curbside organics.

Thank you.

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I represent: RECYCLING & SUSTAINABILITY

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Name: MARC SHIFFLETT

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I represent: MSWAB (SOLID WASTE ADVISORY BOARD)

Address: _____

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Name: MEREDITH DANBERG-FILARELLI

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I represent: COMMON GROUND COMPOST

Address: 407 E 12th St. Suite 1RSE NY 10009

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