

OPENING STATEMENT OF  
RON GONEN, DEPUTY COMMISSIONER  
FOR RECYCLING AND SUSTAINABILITY  
NEW YORK CITY DEPARTMENT OF SANITATION

THE NEW YORK CITY COUNCIL  
COMMITTEE ON SANITATION & SOLID WASTE MANAGEMENT  
250 BROADWAY, 14<sup>th</sup> FLOOR  
THURSDAY, JUNE 27, 2013 - 10:00A.M.

Good morning Chair James and members of the Committee on Sanitation and Solid Waste Management. I am Ron Gonen, Deputy Commissioner for Sustainability and Recycling for the Department of Sanitation. Thank you for holding this hearing on Intro No. 1107 authorizing the creation of a pilot program to collect organic material from residences. The Department also appreciates the opportunity this morning to share with you some of our early findings to date in our new pilot organics collection program. Before I begin, the Department would like to publicly thank Speaker Quinn, Councilmember Brewer, Councilmember Jackson, Councilmember James, Councilmember Rose, Councilmember Oddo, and all of the participating residents and school staff in our organics programs. I will make a brief opening statement, after which I will be happy to answer your questions.

Organic material, which is comprised of food scraps, soiled paper and leaf and yard waste, comprises more than 30% of the Department-managed daily refuse collected by the Department. Recognizing that we currently pay over \$85m annually for nearly all of this material to be exported to out-of-state landfills for disposal, and that landfills are one of the largest emitters of greenhouse gases, the Department began taking steps to divert organic material from the waste stream going to landfills. We began with supporting the Green Market Drop-Off Program, where residents can drop off their organic waste for collection and now exists in all five boroughs. In September of 2012, the Department partnered with the Department of Education to establish a school food waste collection program that began in select schools in Manhattan, Brooklyn, and Staten Island. We hope to have all of the City's schools participating by the end of the 2014-2015 school year.

The Department is also conducting a pilot program at high-rise residential buildings. The first two buildings to participate in the program are the Helena high-rise apartment building in midtown, and Morningside Gardens, a large apartment complex in Morningside Heights. In the coming year we will continue to expand the high-rise residential pilot program in all five boroughs.

Most recently, the Department initiated an organics collection pilot program for single-family homes. The first neighborhood is the Westerleigh neighborhood on Staten Island. The program will expand to neighborhoods in all five boroughs this Fall. In the Westerleigh neighborhood, there are presently 3,215 households participating on a voluntary basis. Since the inception of the pilot through June 22nd, we've collected more than 54 tons of organic material

from participating households. During the pilot program for both schools and residential properties, organic material that City would have paid to export to landfills will instead be converted into either compost, an organic fertilizer that is donated to local parks and gardens or sold to local landscapers, or converted into natural gas via the anaerobic digesters at the Newtown Creek wastewater treatment facility operated by the City's Department of Environmental Protection.

As part of Mayor Bloomberg's ambitious and comprehensive sustainability strategy under PlaNYC, we aim to double the amount of Department-managed waste that is diverted from landfills to 30% by 2017. Our goal is to promote and support a system of sustainable solid waste management that minimizes waste and maximizes recycling. At the forefront of the Department's plan to reduce the amount of materials sent to landfills is to increase the amount and types of material that can be accepted in our recycling program and to provide the infrastructure and outreach to encourage residents to participate in our expanding recycling program. In order to achieve these goals, organic material, as contemplated by this legislation, should be separated and diverted from the waste stream. Additionally, we expect the proper and environmentally sound collection of food waste to help New York City reduce odor and vermin issues. Currently we place our food waste with our refuse in black bags that sit on the curb waiting for Department collection. This can attract vermin which easily smell and access the food waste. With the proper and environmentally sound collection of organic material, organics are placed in special organics containers that are sealed tight with a lid, which means that vermin cannot smell the food waste nor access it. Separating organic material is a valuable environmental and economic opportunity for New York.

In addition, a bill recently introduced in the Council would ban polystyrene foam from food service establishments. While polystyrene foam is problematic due to the damage it causes to expensive recycling equipment when it gets into the recycling stream, it is an even greater hindrance to the growth of an environmentally-sound organics program. Polystyrene is difficult to remove at best, and is considered a dangerous contaminant in compost since it never biodegrades. Fundamentally, a robust and successful organics collection program cannot exist with a significant presence of polystyrene foam in the waste stream.

In addition to letters from numerous community organizations supporting the ban, cities with successful organics programs like San Francisco, Seattle and Portland have sent letters detailing the importance of their own polystyrene foam bans to their organics programs. Banning foam in New York City will ensure a successful organics program and the creation of a valuable compost product.

Diverting organic materials from the Department-managed waste stream will reduce our overall waste disposal costs. At our current average landfill disposal rates, the Department pays over \$85 million annually to export organic material to distant landfills. Diverting a significant amount of our organic material would save the City tens of millions of dollars annually in disposal fees, generate a valuable organic fertilizer for parks and gardens, and generate local renewable energy via anaerobic digesters.

The proposed legislation under consideration today is an important first step that will allow the Department to study the feasibility of organics collection with an emphasis on participation rates and tonnage diversion, and thus allow the Department to establish the most cost efficient waste collection system for the City of New York.

In closing, the Department wishes to thank this Committee for bringing the subject of organics composting to the forefront today for public discussion and debate, and also for providing me this opportunity today to help illustrate the positive benefits and respond to any misconceptions on this important initiative. We look forward to working with you to accomplish the mutually-agreed goals of this important legislation. I'm now happy to answer your questions.

OPENING STATEMENT OF  
JOHN DOHERTY, COMMISSIONER  
NEW YORK CITY DEPARTMENT OF SANITATION

THE NEW YORK CITY COUNCIL COMMITTEE ON  
SANITATION & SOLID WASTE MANAGEMENT  
250 BROADWAY, 14<sup>th</sup> FLOOR  
THURSDAY, JUNE 27, 2013 - 10:00A.M.

Good morning Chair James and members of the Committee on Sanitation and Solid Waste Management. I am John Doherty, Commissioner for the Department of Sanitation. I am here to testify on the Department's private contracts in connection with our winter storm operations and management. I am also joined by Bernard Sullivan, First Deputy Commissioner for Operations, and Ron Gonen, Deputy Commissioner for Recycling and Sustainability for this hearing's second topic on organics composting. I will make a brief opening statement, after which I will be happy to answer your questions.

In responding to snow events, the Department follows its long-established operating guidelines and protocol for managing over 17,000 roadway lane miles. Priority must be given to the City's primary highways and streets so that emergency vehicles and other vehicles delivering essential goods into the City, such as food and medicines, are able to travel safely.

Following the Blizzard of 2010, an extensive review by the Administration, the City Council, and the Department was undertaken to determine how we respond to the removal of snow during extreme winter storms and what measures we could adopt to enhance our operations and management of snow events. In November 2011 and November 2012, we published and distributed copies of the Department's borough-based snow plans. These plans serve as a step by step guide on how the Department fights a snowstorm and are provided to all Council Members, Borough Presidents and Community Boards.

Also as part of this comprehensive review, the Administration developed a 15-point plan to enhance our ability to address large snowstorms. One of the points in this plan is to expeditiously utilize private contractors for assistance. To ensure that the City is able to use private contractors promptly and to position them before a large snowstorm begins, the City determined that it would need to compensate vendors to be on "standby" for the City. This type of contract structure has been successfully implemented by the Port Authority of New York and New Jersey.

The Department issued two procurements to obtain contractor assistance for large winter storms – one for plowing tertiary streets and one for piling and hauling snow and towing. These contracts did not result in any loss of jobs or reduction in the workforce. For the 2012-2013 winter season that covered last November through this past April, the Department had entered into contracts with five (5) separate contractors who were to provide 103 pieces of equipment for

plowing all tertiary streets in the City's 37 community districts that have such streets. These contractors are paid a flat fee per "Snow Event" plus a lump sum annual "Standby Fee" to compensate the contractors for committing their equipment exclusively to the Department during the winter season. These contracts may be activated, at the Department's option, when six inches (6") or more of snow has been forecasted for the City by the National Weather Service.

Additionally, during the February 8<sup>th</sup> snowstorm that dumped 10 inches in the City, the Department had contracts with 17 contractors for 131 specified pieces of equipment required for piling and hauling operations and for towing. These contractors are paid at an hourly rate for each piece of equipment, and the operators and equipment must be available on "standby" to supplement the Department's snow clearance and removal operations and for towing private vehicles interfering with plowing operations during and after heavy snowfalls as needed. Contractors are also paid a "Standby" Fee per piece of equipment reserved for Department needs. This contract can be similarly activated by the Department if there is a forecast of six inches or more of snow. Under this contract, equipment is specifically assigned to one of the seven Department citywide zones. The Department deployed certain equipment under this contract in advance of the February 2013 snowstorm.

Prior to these two procurements, the Department needed to declare a procurement emergency to obtain contractor assistance for major snow events. Such procurement declarations had always occurred after a major snowstorm hit the City.

Lastly, during the 2012-2013 winter snow season, the City had 24 inches of snow, and overall the Department spent \$38 million for snow plowing, road de-icing operations, and overtime to handle this season's ten snowstorms.

I will now turn over the microphone to Deputy Commissioner Ron Gonen who will testify on the organics portion of this hearing.

Testimony of Helena R. Durst  
Vice President, The Durst Organization

New York City Council  
Committee on Sanitation and Solid Waste  
Hearing on NYC Collection of Compostable Waste  
June 27, 2013  
10:00am  
250 Broadway, 14<sup>th</sup> Floor

Good morning Chairperson James and members of the City Council's Sanitation and Solid Waste Committee. Thank you for providing the opportunity to speak today. My name is Helena Durst and I am a fourth generation family member of The Durst Organization. We are a builder, owner, and manager of over nearly 15 million sq. ft of residential and commercial real estate here in New York City.

For six years we have had composting programs in tenant cafeterias and restaurants in our commercial properties. We later expanded our composting program to our own offices and asked people to compost their food in our offices. Initially there was a learning curve for employees, but through time, reinforcement and sticking to our plan we've been able to make great strides in our offices.

With our office program running well, and wanting to push the bar higher, we launched the first composting program in a residential tower with the department of sanitation. There was a lot of planning and training that went into making this voluntary project happen and having room for recyclables on each tenant floor was critical to the implementation and success of residential composting. A key component was resident enthusiasm; the tenants have been great stewards of this project and we anticipate continued success of the program.

Like the MGP and paper programs, there is a learning curve. But recycling has come a long way and people now get it. We believe voluntary composting programs can be enormously successful. If people want to recycle their organics they will, and we believe as the word gets out, more and more people will want to participate in residential composting.

My family's passion for trash goes back a long way. Nearly 20 years ago we invested in an organic farm in Dutchess County with a substantial composting facility. Today, we compost over 35,000 yards of agricultural material each year on the farm and have the capacity and willingness to do more.

Done well, composting is a great complement to New York City's waste reduction efforts and we are eager to share what we have learned on both the collection and composting side of the equation with the city and other building owners.

Thank you all once again for your time.

## Presentation for City Council Hearing on Collection of Compostable Waste

June 27, 2013

250 Broadway, Room 14

Dear Councilmember Rose and other interested parties

Let me first thank Councilmember Rose for the opportunity to present my views on this important matter. It's a great privilege to be able to address the council on something as dear to my heart as composting.

I as well as many of my fellow composters were indeed very excited to read in the local press on Monday June 17<sup>th</sup> that the City was about to launch a city-wide mandatory composting program. But as we all know, the devil is in the details and to me the composting program as outlined in the proposed law seems surprisingly limited in its scope. It will cover initially only 30 schools out of 1,500 schools operated by the Department of Education. For residents, the proposed program will cover only sizable apartment buildings in the vicinity of these schools. Unaddressed at all is where the wastes will be converted into compost. In fact, we believe that most of the wastes will end up in the Newtown Creek biodigesters, where no compost will be generated at all, only methane gas and sewage sludge, or "biosolids" as it is now more politely termed. At present these biosolids, once they are "dewatered", end up in landfills.

We have collectively watched with gnashing teeth as other cities, notably San Francisco, Seattle, Portland OR and Toronto launched aggressive mandatory composting programs. We were saddened to see our own City remove metal, glass and yard wastes from the recycling programs, and watch our diversion rates from the landfill dip to below 15% while the other cities continued to raise their rates, with talk of 50, 60 and even 70% diversion rates be purported in some west coast cities.

This lackluster performance on the part of our Sanitation Department is all the more astonishing when it is compared with the stellar performance of other City



agencies, most notably Transportation, Health, Education, Police and Taxi and Limousine.

None of the innovative program initiatives launched by these other agencies have come without costs and push back from residents and not all have succeeded. But many have been very successful and attracted nation-wide, even world-wide attention.

Sanitation stands almost alone in its lack of significant progress. Yes, the food waste collection programs at the Farmer Markets are nice and the work of Grow NYC, the NYC Composting Project, Added Value, Waste Matters and BIG have all added to the rates of composting. But in total, the City's diversion rates have decreased and the aforementioned composting programs deserve barely a footnote in the Sanitation Department's budget.

On a more personal note, about nine months ago I was granted an interview with Ron Gonen to present my proposal for a community-based bike carting and composting business. I arrived full of high hopes and expectations only to find out that my interview was not with Ron, who apparently had more pressing matters to attend to, but rather with an intern. After about ten minutes of discussion, I was advised by the intern that Ron would be made aware of my proposal. Of course I never heard anything further about the matter. According to my detailed business plan, copies of which I have here for your perusal, the City could have diverted some 40 tons a day of compostable material from its waste stream, at little or no additional cost if implemented City-wide. The program would have created some 200 jobs in low-income neighborhoods, made compost readily accessible to community gardeners and area residents, decreased the number of truck trips in the city, decreased air pollution and traffic congestion. All that would have been required was a pilot study and the tweaking of some City and State regulations.

It was in light of this history that a small group of like-minded composters met last Monday night under the auspices of the Brooklyn Solid Waste Advisory Board. After a general sharing of what we felt to be the Sanitation Department's weak performance, those present agreed to meet again on July 22nd to form a group

tentatively called Waste Alternatives. This group would act, as Transportation Alternatives has done so admirably in the area of transportation, as both an advocacy and watchdog organization for matters related to waste. The purpose of the meeting will be to refine our mission and agree upon a name. If you too are concerned about the City's sub-par performance on recycling, composting and waste diversion, please join us. We unlike the Sanitation Department will welcome your input. Please contact me after the hearing for more information.

Again, allow me to thank Councilmember Rose for this opportunity to express my thoughts at this hearing. I look forward to your questions.

TESTIMONY OF HARRY NESPOLI

PRESIDENT UNIFORMED SANITATIONMEN'S ASSOCIATION,  
LOCAL 831, INTERNATIONAL BROTHERHOOD OF TEAMSTERS  
BEFORE

NEW YORK CITY COUNCIL SANITATION AND SOLID WASTE  
MANAGEMENT COMMITTEE HEARING  
CONCERNING  
PRIVATE CONTRACTS AND SNOW MANAGEMENT

HON. LETITIA JAMES  
CHAIRPERSON

JUNE 27, 2013

GOOD MORNING, I WOULD LIKE START BY THANKING THE CHAIRPERSON, MS. LETITIA JAMES AND THE MEMBERS OF THIS COMMITTEE FOR ALLOWING ME TO JOIN YOU ON THIS WARM SUMMER MORNING TO DISCUSS SNOW REMOVAL.

MORE SPECIFICALLY, I WOULD LIKE TO ADDRESS THE DEPARTMENT OF SANITATION PROGRAM WHICH PROVIDES PAYING ADVANCE "STAND-BY FEES" TO OUTSIDE CONTACTORS ON THE PROMISE THEY WILL CLEAR TERTIARY STREETS DURING AND AFTER SEVERE SNOW STORMS.

ALLOW ME TO PROVIDE THIS COMMITTEE WITH SOME HISTORY BEHIND THE CREATION OF THIS COSTLY, AND INCONSISTANT PROGRAM: THE DEVISTATING "CHRISTMAS STORM" OF DECEMBER 26, 2010.

TRAGICALLY IT PROVED TO BE A "PERFECT STORM." ALLOW ME TO EXPLAIN:

I WILL BEGIN WITH DEPARTMENT STAFFING. DESPITE NUMEROUS WARNINGS FROM ME AND OTHERS, WARNING AN EFFECTIVE RESPONSE TO A MAJOR STORM WOULD REQUIRE A MINIMUM HEADCOUNT OF 6,200, THE HEADCOUNT IN DECEMBER 2010 WAS JUST OVER 5,700!

THAT IS 500 LESS THAN WHAT WE CONSIDERED A BARE-BONES MINIMUM, AND OUR THIRD LOWEST STAFFING LEVEL IN 25 YEARS. BY COMPARISON, OUR 1985 OUR HEADCOUNT WAS 7,200 – THAT'S A LOSS OF MORE 1,400 MEN AND WOMEN!

NOT ONLY WAS OUR DEPARTMENT SHORT STAFFED -- STAFFING LEVELS THROUGHOUT CITY GOVERNMENT WERE REDUCED BECAUSE OF THE CHRISTMAS HOLIDAY. IN FACT, BOTH THE MAYOR AND THE DEPUTY MAYOR FOR OPERATIONS OUT OF TOWN, WHEN THE STORM – THE THIRD LARGEST SNOW STORM SINCE RECORDS WERE KEPT – STRUCK.

SO WHEN THE STORM DUMPED 20-INCHES OF SNOW ON OUR CITY IN LESS THAN 24-HOURS, THERE WAS NO ONE AT CITY HALL AVAILABLE TO LAUNCH THE EMERGENCY RESPONSE PLAN – WHICH IN PART WOULD HAVE KEPT CARS AND BUSES OFF OF THE STREETS.

WITH STREETS BURIED IN SNOW AND WITH CARS AND BUSES BLOCKING INTERSECTIONS AND HAMPERING OUR BEST EFFORTS OUR CITY WAS PARALYZED FOR NEARLY A WEEK.

IN THE STORM'S AFTERMATH AND IN RESPONSE TO PUBLIC OUTCRY AND HEARINGS CONDUCTED BY THIS BODY, A BOROUGH SPECIFIC SNOW REMOVAL PLAN WAS DEVELOPED.

AND, SINCE THIS ADMINISTRATION CAN NEVER RESIST AN OPPORTUNITY TO HIRE OUTSIDE CONTRACTORS, THE HEART OF THE PLAN CALLED FOR DOING JUST THAT.

NOT ONLY DID THE CITY REACH AGREEMENTS WITH PRIVATE CONTRACTORS TO CLEAR THE TERTIARY STREETS, THE CITY PAID THEM "STANDBY FEES" IN ADVANCE OF ANY WORK. THAT'S RIGHT PAY OUTSIDE CONTRACTORS TO DO NOTHING BUT WAIT TO BE CALLED.

SINCE 2011 THOSE CONTRACTORS HAVE RECEIVED MORE THAN TWO MILLION DOLLARS. THAT INCLUDES COVERAGE FOR 2012, WHEN THEY WERE NEVER CALLED.

THIS PAST FEBRUARY, WHEN THEY WERE FINALLY CALLED UPON, THEIR PERFORMANCE WAS DISMAL.

COMPANIES HIRED TO CLEAR THE STREETS IN THE BRONX, BROOKLYN, QUEENS AND STATEN ISLAND AND PAID FOR THEIR PROMISES TO WORK SOLEY FOR THE CITY WERE EITHER UNPREPARED; FAILED TO HAVE PROPER INSURANCE; RESPONDED WITH THE WRONG EQUIPMENT, AND IN SOME CASES FAILED TO SHOW UP AT ALL.

AT THE END OF THE DAY IT FELL TO MY MEMBERS, THOSE 6,200 WELL TRAINED, PROUD AND ALWAYS PREPARED WORKFORCE WHO CLEANED UP THE STREETS ABANDONED BY THE PRIVATES.

AS I HAVE SAID THOUSAND TIMES GIVE US THE PEOPLE AND THE EQUIPMENT AND WE WILL GET THE JOB DONE AND GET IT DONE RIGHT. MY MEMBERS, NEW YORK'S STRONGEST HAVE BEEN DOING IT FOR 100 YEARS, AND WITH HELP AND SUPPORT FROM OF CITY HALL WE'RE READY BUILD ON OUR RECORD OF SUCCESS.

THANK YOU.

## TESTIMONY OF THE MANHATTAN SOLID WASTE ADVISORY BOARD

*NYC City Council Committee on Sanitation and Solid Waste Management  
Thursday, June 27, 2013 at 10:00 a.m., 14th Floor Committee Room, 250 Broadway  
Hearing in relation to the collection of compostable waste*

Good morning, and thank you for this opportunity to speak to the Committee. My name is Robin Barton, and I serve as the Secretary of the Manhattan Solid Waste Advisory Board. The point I hope to make today is that development of the organics collection program under review today is very important and exciting, but should be seen as part of a larger picture that must also include meaningful development of community based composting.

The MSWAB encourages the growth of community-based composting through a mini-grant program, partnered with Citizens Committee of NYC. Together, we have awarded funding to 66 community composters of which approx. 1/3 are schools, 1/3 Community Gardens, and 1/3 neighborhood groups or other. Community-based composting recycles organic material as locally as possible, mostly at the neighborhood level, and the compost is used for food and flower gardens, urban farms, local parks, street plantings, and bioswales for improved stormwater management.

There are over 200 community compost sites in New York City. The sites include not only many community gardens, but also larger sites affiliated with urban farms like Brooklyn Grange and Red Hook Community Farm, non-profit groups with strong recycling programs like the Lower East Side Ecology Center and Build It Green!, conservation groups like New York Restoration Project, Battery Park Conservancy, and Gowanus Canal Conservancy, and universities such as St. Johns and Columbia University dormitories. Many of these sites can manage two tons or more of food waste at a time, and several compost over 200 tons of organics per year that would otherwise wind up in landfills at taxpayer expense.

The importance of these programs is two-fold. First, they maximize sustainability, because the organics diverted from the waste stream stay within or close to the community that generated the material, and composting contributes much less to greenhouse gases than does landfilling, and because the finished compost is used to green those very communities, which has proven to enhance neighborhood values. Second, they maximize citizen participation and the benefits that brings. All programs directly or indirectly offer citizens a path to contributing their organics to local greening projects that matter to them, some offer those same individuals an opportunity to use the finished compost for their own greening projects, and many offer individuals the chance to participate in the composting operation with shovels and pitchforks and sifters – this gives them an opportunity to actively engage in recycling in a way not possible with materials like glass, metal, and plastic, and by all accounts strengthens a connection to our broader goals for solid waste management, including a keener appreciation for separating out the contaminants, which is a key detriment to the success of any compost facility.

Thus, the municipal residential collections should not *compete with*, but instead should , *compliment*, community composting. To ensure that happens, I respectfully request an amendment to the draft bill calling for the report due in 2015 to also reflect a plan for implementing community composting citywide. If the bill cannot be amended, then I respectfully request that the Committee schedule a hearing to focus on community composting and its challenges. Thank you for your time.



NATURAL RESOURCES DEFENSE COUNCIL

**STATEMENT OF THE NATURAL RESOURCES DEFENSE COUNCIL  
BEFORE THE NEW YORK CITY COUNCIL  
COMMITTEE ON SANITATION AND SOLID WASTE MANAGEMENT  
RE: COLLECTION OF COMPOSTABLE WASTE**

**June 27, 2013**

Good morning, Chairperson James and members of the Committee. My name is Eric A. Goldstein and I am an attorney with the Natural Resources Defense Council ("NRDC"). As you know, NRDC is a national, non-profit environmental organization that has been active on a wide range on New York City environmental and quality-of-life issues including solid waste since shortly after its founding in 1970.

We are pleased to be here today to testify on proposed amendments to section 16-308 of the Administrative Code of the City of New York, relating to voluntary residential organic pilot programs.

In short, NRDC strongly supports this legislation.

The proposed legislation would expand the current voluntary curbside food waste collection program recently initiated by the New York City Sanitation Department. Specifically, it would direct the Sanitation Commissioner to establish a voluntary residential organic collection pilot program in areas designed by the Commissioner no later than September 1, 2013 and to operate such program until at least July 1, 2015. In addition, the legislation would require the Commissioner to establish an organic collection pilot program at least 30 schools in two boroughs by September 1, 2013. As part of the school program, the Department would be required to collect organic wastes from residential buildings, on a voluntary basis, where such buildings are located along the collection routes established for the school organics program. The proposal further requires that the pilot programs be expanded in at least one area in other boroughs every three months during the first year of the program. By October 1, 2015, the Commissioner would be required, under the proposed legislation, to report to the Mayor and the Council on the results of the pilot programs and include in that report, among other things, a plan for implementing a citywide residential organic collection program and a schedule for extending the program to additional areas in the city.

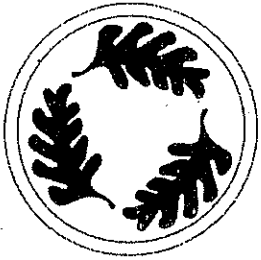
NRDC believes that the proposed legislation makes sense for a variety of reasons. First, curbside organics collections are good for the city's environment. By facilitating the collection of food wastes and yard wastes for composting or anaerobic digestion, the legislation will help cut emissions of methane, a global warming gas that is 20 times more potent than carbon dioxide. Second, curbside organics collection creates useful end-products – compost and land stabilizers (which improve soil health, increase drought resistance and reduce the need for fertilizers) and biogas (whose energy can be utilized in a variety of municipal, residential and agricultural settings). Third, over time, organics collections can cut the costs of waste-handling in New York. This is so because, based upon national experience, the per ton costs of delivering such wastes to compost operations or other organics treatment facilities are lower than the costs of shipping such materials to landfills. And successful curbside organics programs have allowed other jurisdictions to make cost-effective adjustments to other waste collection services.

In addition, the proposed legislation is consistent with the direction that Mayor Bloomberg and Sanitation Commissioner Doherty have been moving in on the issue of food waste composting. Passage of this legislation would insure the continuation of this visionary program after its creators, including Deputy Sanitation Commissioner Ron Gonen, and other program supporters within the Bloomberg Administration leave office. The beauty of this legislation is that it sets forth a clear path for expanded implementation of curbside organics collection while also providing the Sanitation Department with adequate lead time to test out key program elements, adjust and refine them as needed and resolve whatever challenges surface to insure smooth implementation before the program could go citywide.

Finally, the proposed legislation – if successfully implemented -- would help move New York City into a position of national leadership on solid waste issues. Already, curbside organics collections are taking place in more than 150 communities across North America. They include Seattle, San Francisco, Oakland, Portland, Boulder, Cambridge, and Princeton, as well as Toronto and Ottawa. And similar to the approach contemplated by the proposed legislation before the Committee today, the programs in cities like Seattle and San Francisco also began as voluntary operations; this allowed city officials to address any implementation challenges before curbside collections were phased in city-wide in those municipalities.

With the full cooperation of and encouragement from the New York City Council, the New York City Sanitation Department is now in the midst of an exciting, if not revolutionary, change in the way it is thinking about waste-handling for the 21<sup>st</sup> century. The changes now underway or in development could transform our waste program – making it more cost-effective, more sustainable and more equitable for all New Yorkers. We believe the proposed legislation would take the city further down this path. And NRDC is pleased to give this bill our wholehearted endorsement.





### Hearing in relation to the collection of compostable waste

#### *NYC City Council Committee on Sanitation and Solid Waste Management*

Thursday, June 27, 2013 at 10:00 a.m., 14th Floor Committee Room, 250 Broadway

My name is Christine Datz-Romero and I am testifying on behalf of the Lower East Side Ecology Center, a non-profit organization offering composting programs since 1990.

We are very excited about the recent developments for composting to become an integral part of our solid waste management tools, as the City's Recycling Law of 1989 (LL 19) outlined and envisioned 21 years ago. Since then we have seen the creation of curbside pick up program of yard waste in 37 out of NYC 59 community districts, serving all of Queens and Staten Island and sections of the Bronx and Brooklyn. LL 40 of 2006 made it mandatory for people living in community districts where yard waste pick up is offered to participate, and at the height of this program 19,000 tons of yard waste were collected at a cost of \$3 Million. Unfortunately this successful program has been suspended since 2003 due to budget constraints.

It strikes me as a step backwards to see a law introduced in 2013 that calls for the creation of a voluntary residential organics collection pilot program, while the mandatory yard waste collection program is still suspended. We need to reinstitute and expand the yard waste collection program, especially because we have the needed infrastructure to process these collected materials locally at DSNY compost facilities in Staten Island and Soundview.

We also need to create pilot programs for the collection of food waste. A pilot for schools and residential buildings is actually well under way, with 41 schools participating in the program together with several apartment buildings. However, before expanding this effort, it would be important to receive a report from DSNY, documenting participation, diversion, tonnage collected and costs of collecting before the pilot is extended.

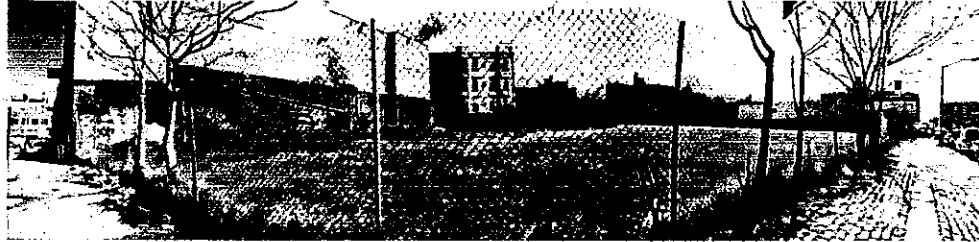
Another concern that comes to mind is the City's capacity to process these collected materials locally. Bringing source separated organic materials to compost facilities that are not close to the City would severely limit the environmental benefits of such a program and is not sustainable. The work of siting compost facilities, through a Compost Facility Siting Task Force, mandated by the Solid Waste Management Plan (SWMP), was never successfully completed and as a result the City does not have any sites in the pipeline to create the infrastructure to handle food waste locally.

However, many local programs have sprung up over the last decade handling food waste from New Yorkers. There is a robust compost community, which has grown organically, ranging from small projects at community gardens to larger undertakings, most of them housed on city owned property. The Ecology Center would like to see this network of community-based programs nurtured to create diverse programs and approaches for the management of organic waste. Our City is made up of diverse communities and through a community based approach we will be well positioned to create various programs that deliver cost effective solutions, which then can be rolled out over time once processing capacity for our organic waste is created.

# WARSOFF WILDS

48 Warsoff  
Brooklyn, NY 11026

T 727-504-3948  
E [warsoffwilds@gmail.com](mailto:warsoffwilds@gmail.com)



June 27, 2013

Committee on Sanitation and Solid Waste Management  
250 Broadway  
New York, NY 10007

Dear Committee on Sanitation and Solid Waste Management,

We, Warsoff Wilds, are a farming collective in process of securing licensing with the Department of Sanitation. As representatives of Warsoff Wilds we are here today to testify at the hearing of this bill to express our support and interest in the amendment of the administrative code of the city of New York in relation to the collection of compostable waste; the bill proposing to reletter section 16-308 with the added subdivision proposing a voluntary residential organic collection pilot program for the diversion of compostable waste from department-managed solid waste.

Furthermore as the committee begins selecting locations for the purpose of introducing this new system of waste management we request that the lot at the address 48 Warsoff, Brooklyn NY be considered for incorporation with the proposed pilot program. We seek to act in accordance with the waste management methods stipulated in this bill. We ask for the consideration of our collective, Warsoff Wilds, as entrusted participants in the composting pilot program.

Sincerely,

Marissa Provenza & Oliver Lamb on behalf of Warsoff Wilds

Two handwritten signatures in black ink. The top signature is 'Marissa Provenza' and the bottom signature is 'Oliver Lamb'. Both are written in a cursive, flowing style.

Testimony of Tanya Bley

New York City Council Committee on Sanitation and Solid Waste Management

Hon. Letitia James

June 27, 2013

Hearing in relation to the collection of compostable waste

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Good morning, Chairwoman James and Committee Members. My name is Tanya Bley and I am an ardent supporter of composting in New York City. I am a certified Master Composter and volunteer with and support the following community based composting operations: the North Brooklyn Compost Project in McCarren Park, Earth Matter on Governor's Island, the Added Value Community Farm in Red Hook, Composting Gowanus at the Gowanus Canal Conservancy, the former Western Queens Compost Initiative which became BIG Compost at Build It Green and various other smaller composting initiatives. I am also a regular observer at the Brooklyn Solid Waste Advisory Board meetings and at the meetings of the Newtown Creek Monitoring Committee. My professional background is in Financial Risk Management.

Thank you for allowing me to testify before you today. I am in fact very pleased to see composting come to New York City on a larger scale and I commend Mayor Bloomberg for finally taking some of the necessary steps in this direction. I have no doubt that the collection of compostable waste from households and schools can be successfully implemented in the city. New Yorkers are intelligent, resourceful and adaptable and might soon in larger numbers discover that the source-separation of their waste at the origin brings with it more benefits than trouble.

However, I have strong doubts that the city is adequately dealing with this compostable waste once it is picked up. Whereas it does concern me when I read about compost fires at the Staten Island Fresh Kills compost site<sup>1</sup>, I am even more concerned when I hear that food waste is being introduced into the Newtown Creek Wastewater Treatment Facility. I particularly deplore that the city agencies are not fully and adequately informing the public about the circumstances of the lauded biogas and energy production from said compostable waste. Whereas the city proclaims to be running a *composting* pilot program, the biodigestion of food waste in the wastewater treatment facility results in energy and sludge, the latter of which is subsequently landfilled. Hence, this part of the *composting* pilot program should more adequately be called a waste-to-energy-to-landfill program. From among the other aspects of this operation that I perceive as troubling I would just like to address two here: capacity

---

<sup>1</sup> A Compost fire at this site on April 9 and 10 of this year took 200 fire fighters to contain. Compost fires are dangerous, costly and show that the expertise for handling compost is woefully lacking.

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and cost. By utilizing some of the capacity of a wastewater treatment facility for food waste disposal, this capacity is presumably not available during wet weather events, thereby potentially exacerbating CSO (combined sewer overflow) events and further diminishing water quality. As regards costs: One of the rationales of the composting pilot program is to save the city money by diminishing the amount of waste that goes to landfill. Operating a wastewater treatment facility is a costly endeavor. The Newtown Creek facility is just about to complete an upgrade that cost \$5 Billion. Shipping sludge to landfills certainly also costs money. The questions that arise are whether the value of the energy produced offsets the costs of treating food waste in this manner or whether this aspect of the composting pilot just comes down to the DEP footing the bill for cost savings at the DoS.

I would like to ask the committee to obtain detailed project plans from the city agencies involved in the composting pilot program and to exercise due diligence when examining these project plans. Furthermore, I would like to ask the committee to request the city agencies to work even more closely with community composting operations that have proven to be reliable and competent partners for the processing of compostable waste in the city.

Thank you.

Thursday June 27, 2013

Good Morning. My name is Lisa Maller. I am here today representing the District 3 Green Schools Group, a group of public school parents in Community School District 3 on the Upper West Side of Manhattan who volunteer to make our schools more environmentally sustainable.

From February 27 – June 27 2012, 8 District 3 schools housed in 4 buildings totaling more than 3,600 K-8<sup>th</sup> grade students separated paper boats, compostable sugar cane trays and all food waste. The food waste was collected by IESI and was taken to a commercial composting facility in Delaware. We collected data during the course of the pilot and were able to document an 85% reduction in cafeteria garbage by volume on average for all schools in the pilot. An analysis by weight showed that, on average, 76% of the cafeteria waste stream were organics, 11% recyclable metal/glass/plastic (prior to the recent expansion of plastics recycling), and 13% non-recyclable non-compostable garbage. Based on the success of our pilot, the DSNY agreed to take over the collection and composting of the material from the 8 pilot schools in Fall 2012, and expanded the program to include more than 40 additional schools both in Manhattan and in Brooklyn.

We support the expansion of the school food waste composting pilot proposed in Intro number 1107-2013, with some caution. There needs to be a comprehensive plan for doing outreach and education to school staff and students regarding the composting program in advance of starting the collection program. Clear signage needs to be produced and displayed in the cafeterias when the program is started. Adequate staff or volunteers must be on hand at composting/recycling/trash receptacles for at least the first two weeks of implementation to answer students' questions and to ensure the program is implemented smoothly, and then must check in again periodically throughout the school year, particularly after long holidays or school breaks, and again at the beginning of every school year.

In order to improve the quality of the material that arrives at the composting facility, educational efforts should focus on reducing the amount of contamination that goes into the food waste collection bin. Contaminants are largely plastics. It sounds obvious to us, but it must be stressed to students who are usually in a rush to get/eat/discard their lunch in 20 minutes, that food must be unwrapped before placing it in the food waste bins. Much of the contamination we found in our pilot food waste collection bins was plastic food packaging. Plastic utensils used to scrape food from the trays into the compost bin often fall into the bin and also contaminate the compost.

(continued)

The Departments of Sanitation and Education must also collaborate to design school lunch that generates less packaging waste. Reducing the waste at the source will result in fewer problems at the compost facility. The feasibility of using compostable cutlery should also be explored.

The PTAs at the 8 District 3 2012 pilot schools paid for the compostable sugar cane trays to replace the standard DOE-issued Styrofoam trays. In spring 2013, the DOE received a grant for compostable trays for all pilot schools for just Spring 2013. The provision of compostable sugar cane trays to all public schools participating in the food waste composting in perpetuity will eliminate the possibility of Styrofoam trays contaminating the compost, and will also significantly reduce the amount of garbage generated by each school.

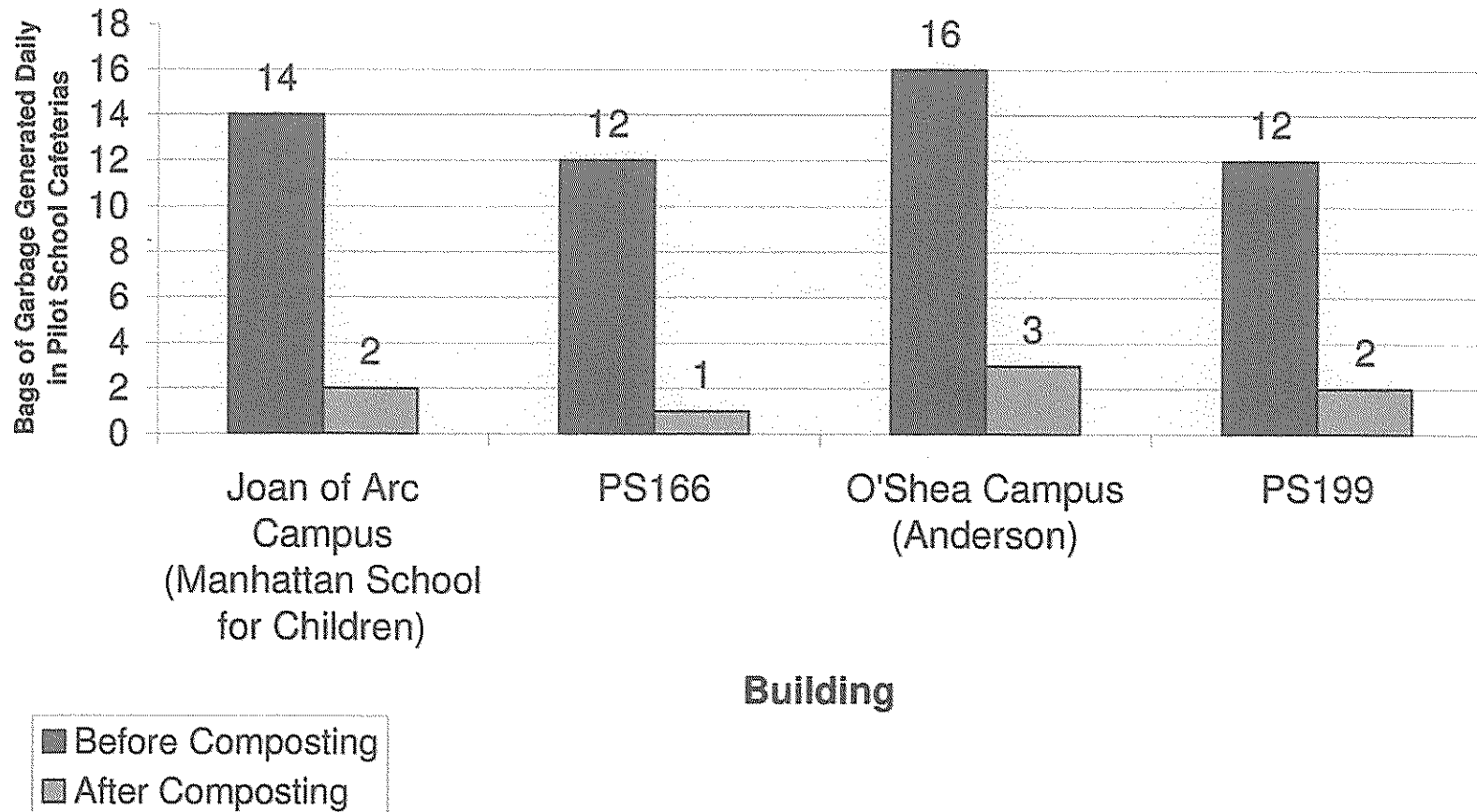
Lastly, provisions should be made to provide ongoing feedback to pilot schools and to receive feedback from pilot schools. DOE and DSNY should consider creating a place on their websites where participating schools can go to get updates on how the program is going and to post questions or comments.

Thank you.

For more information on the 2012 D3 Food and Tray Waste Composting Pilot, please visit the project website at [www.greenschoolsny.com](http://www.greenschoolsny.com)

## D3 Green Schools Group -- Food and Tray Waste Composting Pilot

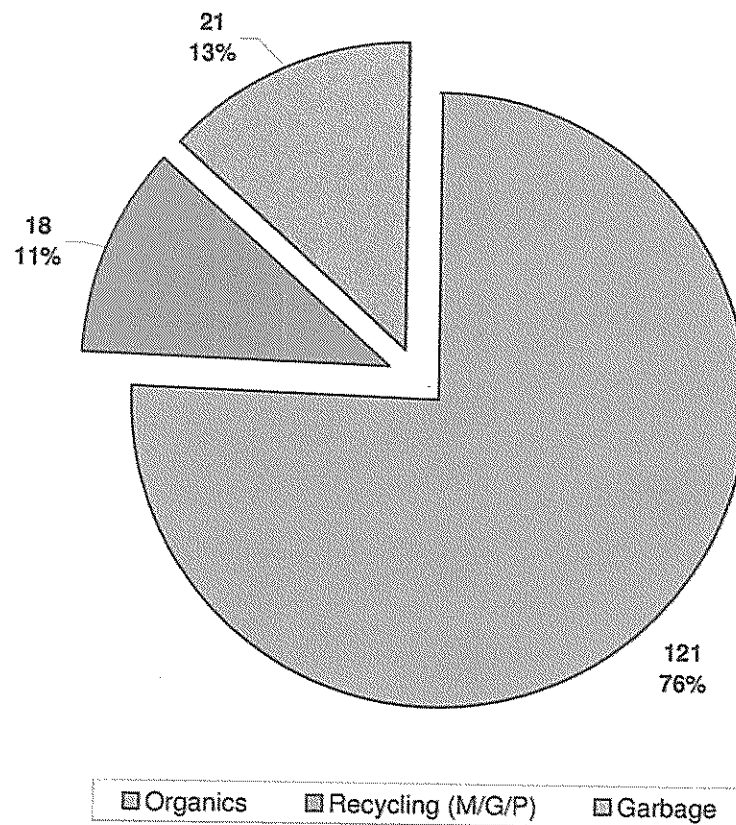
85% Overall Reduction of Cafeteria Garbage by Volume



## D3 Green Schools Group -- Food and Tray Waste Composting Pilot

Overall Diversion Rate (by Weight) as % of Total Cafeteria Waste

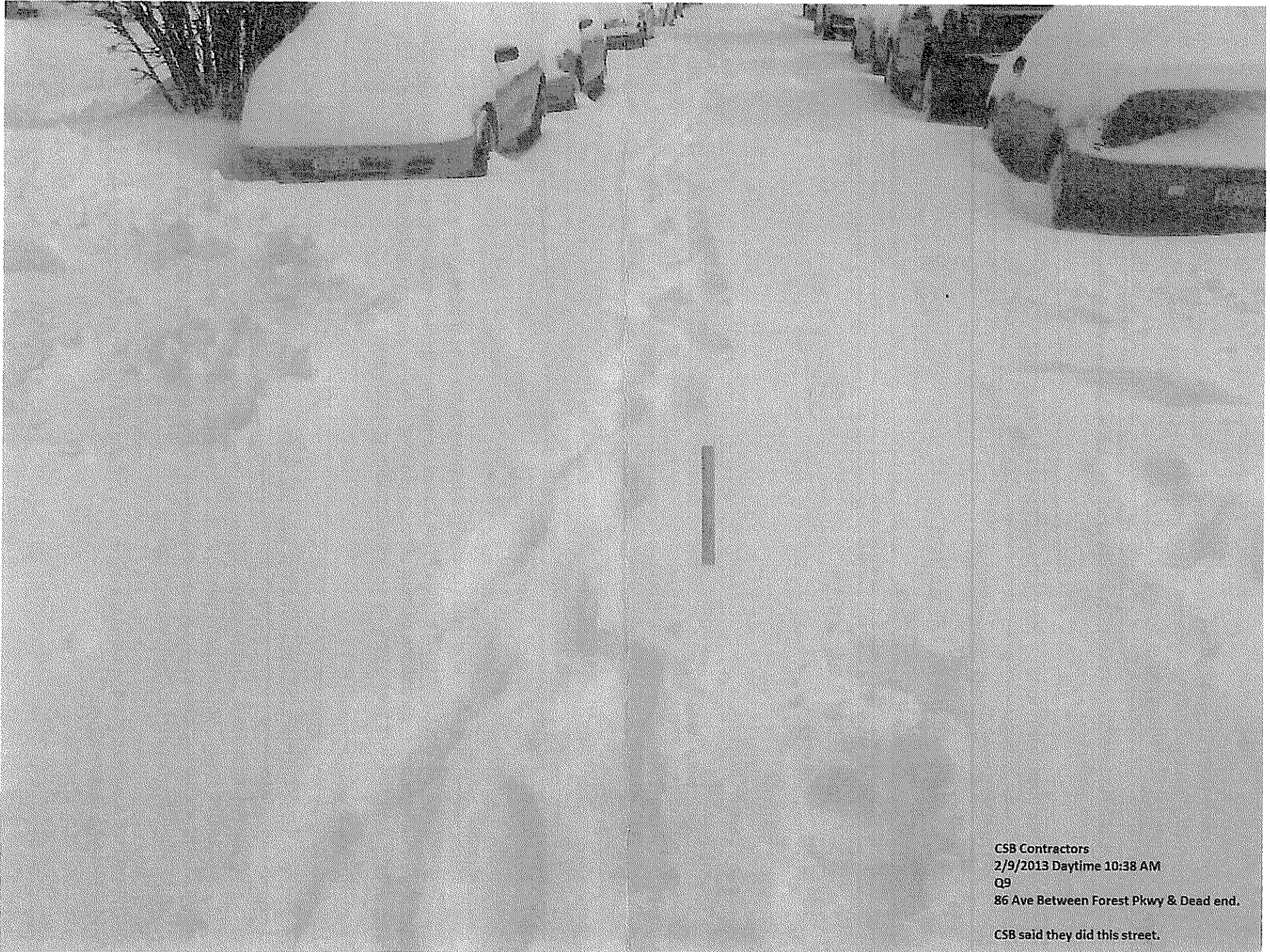
Average Daily Weight of Cafeteria Waste Streams (lbs)











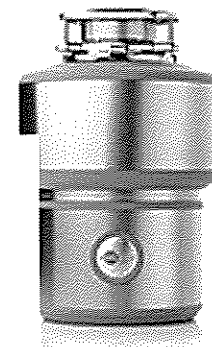
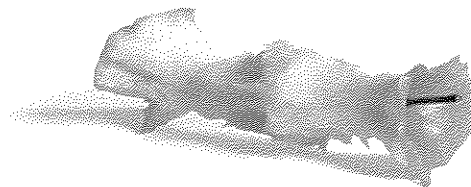
CSB Contractors  
2/9/2013 Daytime 10:38 AM  
Q9  
86 Ave Between Forest Pkwy & Dead end.

CSB said they did this street.

# Got Food Scraps?

Committee on Sanitation & Solid Waste Management  
City Council – New York City - June 27, 2013

in **sink**erator®





KENDALL CHRISTIANSEN

**Principal, Gaia Strategies**

- **Founding Asst. Director, NYC's Recycling Program ('89-'91)**
- **Chair, NYC Citywide Recycling Advisory Board (several yrs)**
- **InSinkErator - Senior Consultant (US/Canada)**
- 75-year history
- Wisconsin-based
- Emerson Electric division
- World-wide sales (100+)
- Commitment to environmental research
- Commitment to sustainability

# Suggestion

- **Expand proposed pilots** to include broad range of tools, programs, systems for managing food scraps as resources (water, energy, silo amendments)
- **Follow US EPA food scrap management hierarchy**
  - **Reduce** (see UK's Love Food/Hate Waste campaign – credited with reducing food waste by 15%; see also LeanPath system for institutions/schools)
  - **Compost on-site** – backyards, community gardens, etc.
  - **Capture/produce** energy (biogas) and convert organics to fertilizer products
  - **Collect** via truck for centralized composting

# Nature of Food Scraps

- 70% water
  - fruits/veggies 90%+
  - “tons” = 75% water
- Energy-rich (not yet digested)
- Easily converted into slurry (<3mm particle size)
- Travels easily through sewers/pipes/pumps
- Beneficial impact on treatment plants
  - Clean water, biogas, fertilizer
- Deteriorates rapidly (putrescible)
  - Odors
  - Food for rodents/vermin/vectors
  - Yuck factor

# Include Food Waste Disposers

- **Sanitation Dept.** leadership
  - 1992 Solid Waste Plan (following adoption of '89 Recycling Law) included aggressive organics diversion recycling goal;
  - Commissioner asked DEP to fully legalize, mandate and incentivize household food waste disposers
  - DEP Commissioner agreed
- **City Council** (LL74/1995) compelled DEP to do **two-year pilot**
  - three apartment complexes; @ 250 disposers installed
  - reported no significant concerns; OK'd
  - East Harlem EAC project verified pest management benefits
- **Council** (LL71/1997) legalized disposers citywide
- **Council** (Intro 100/1998) considered mandate
- **NYCHA/Battery Park City Authority** require/major developers installing



# Perspective: Disposers Help Achieve Green Goals

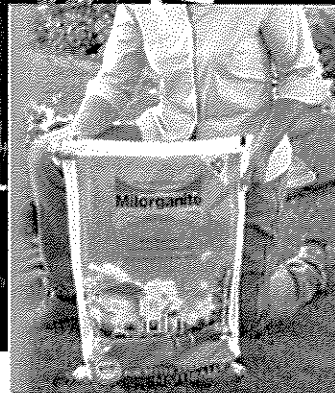
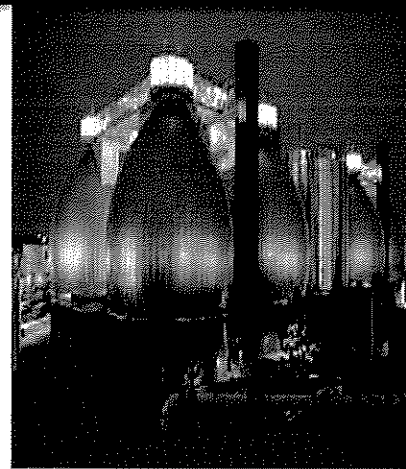
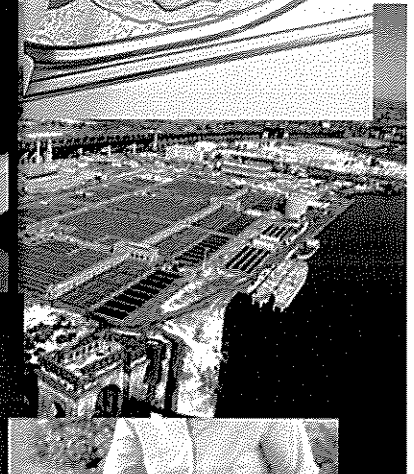
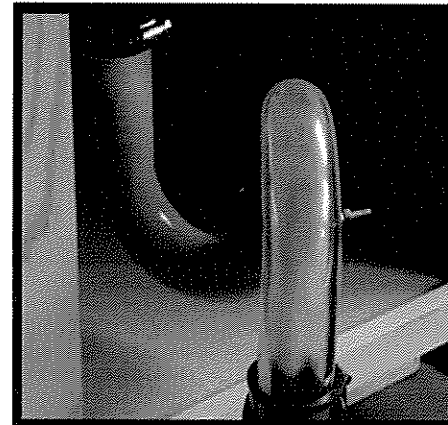
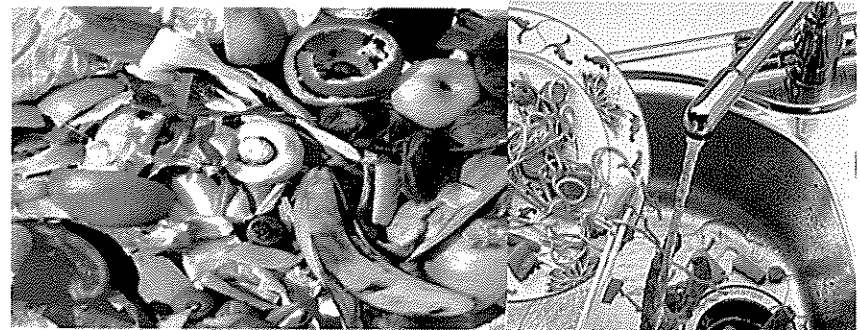
- **Shared Goals:**

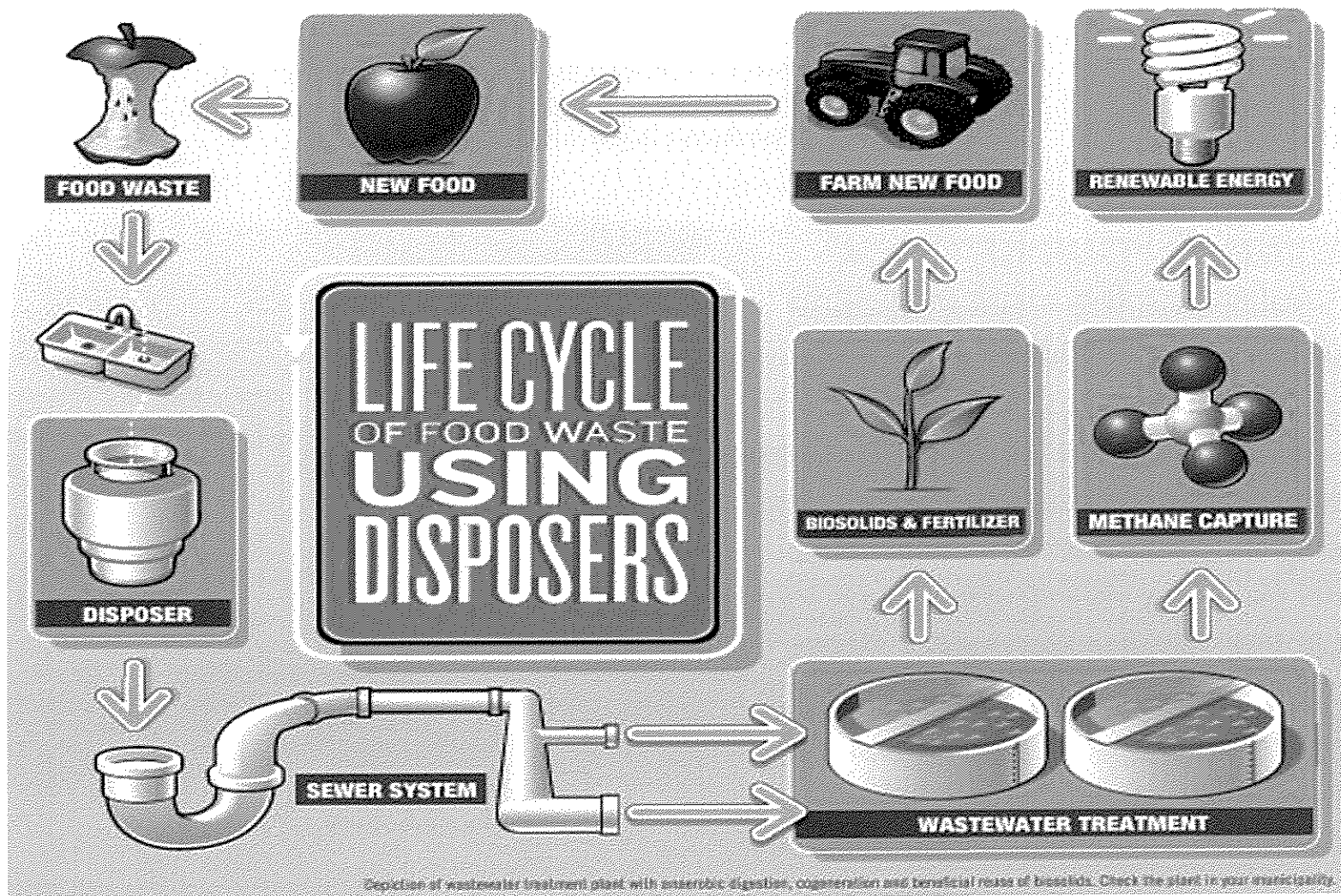
- Divert food scraps from disposal
- Convert to clean water + renewable energy + soil products

- **Method:**

- Food scraps as liquid resource
- Utilize existing assets

- **Tool:** food waste disposers as *feedstock preparation devices*





Depiction of wastewater treatment plant with anaerobic digestion, cogeneration and beneficial reuse of biosolids. Check the plant in your municipality.

## UNITED AIRLINES – HEMISPHERES

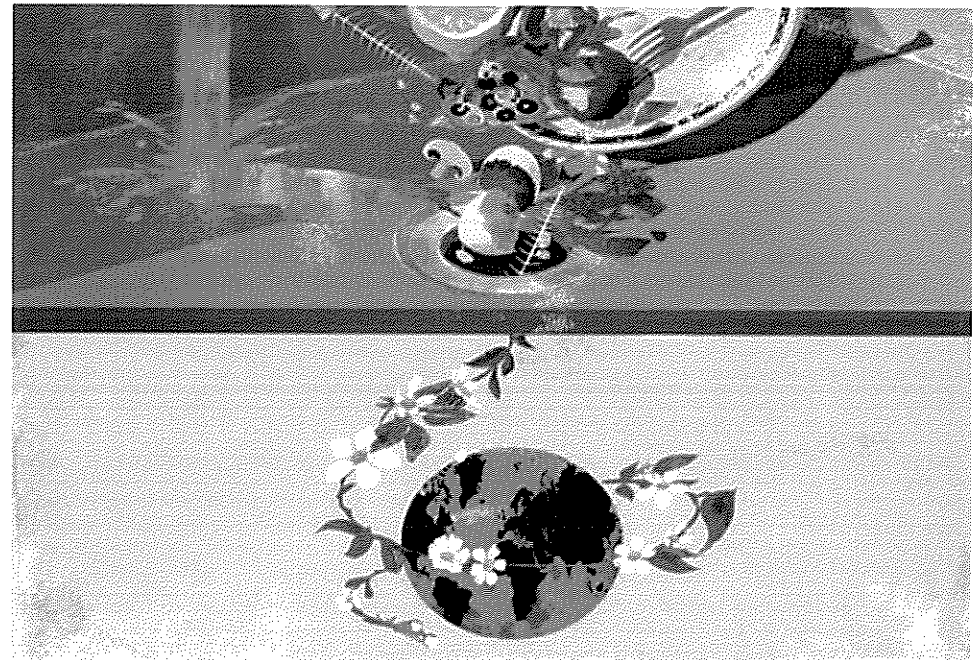
June 2013 - Tech

### Chop and Change

*How last week's pasta is on track to become  
the next big thing in environmental sustainability*

**Author** Hillary Rosner **Illustration** Eva Vázquez

***HIDING IN YOUR KITCHEN,*** disguised as the most mundane appliance imaginable, might be the next great tool for urban sustainability. **We're talking about your garbage disposal unit,** the thing that sits beneath your sink and chomps your food scraps into oblivion. Maybe you use it daily ... and each time you flick the switch you wonder, "Is this thing bad for the environment?"



# Why? Why Now?

- **Current trends**
  - Food scraps targeted (40% wasted)
  - States adopting landfill bans (CT/VT/MA)
- **Water resource recovery centers**
  - MWRA/Boston,
  - MWRD/Chicago
  - Oakland/EB MUD
- **Extensive research**
  - Deep technical
  - Broad “best practices”
  - Minimal water/electrical use
- **Widespread adoption**
  - 60 million
  - 50%+ (North America)
  - West coast – 80%+
  - US Census

## Food Waste Disposer Installation Rates in Selected U.S. Cities

Source: US Census Household Survey

| City/Region          | All Housing<br>Total/Last 4 Yrs | Owner Occupied<br>Total/Last 4 Yrs | Renter Occupied<br>Total/Last 4 Yrs |
|----------------------|---------------------------------|------------------------------------|-------------------------------------|
| <b>Chicago</b>       | 39.4                            | 52.3                               | 18.9                                |
|                      | 74.9                            | 82.8                               | 61.5                                |
| <b>Detroit</b>       | 68.4                            | 73.0                               | 66.9                                |
|                      | 89.8                            | 55.6                               | 52.1                                |
| <b>New Jersey</b>    | 14.5                            | 19.1                               | 7.5                                 |
|                      | 43.0                            | 49.8                               | 36.2                                |
| <b>New York City</b> | 7.2                             | 9.3                                | 5.9                                 |
|                      | 21.6                            | 16.1                               | 27.1                                |
| <b>New Orleans</b>   | 44.1                            | 52.6                               | 35.6                                |
|                      | 56.3                            | 59.5                               | 53.6                                |
| <b>Philadelphia</b>  | 49.4                            | 56.4                               | 37.4                                |
|                      | 79.8                            | 90.6                               | 58.0                                |
| <b>Seattle</b>       | 65.8                            | 69                                 | 60.7                                |
|                      | 92.3                            | 97.6                               | 81.1                                |

# Serious Stuff

in sink erator

**RECYCLE YOUR FOOD WASTE.**

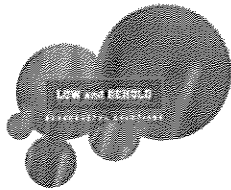
Local Government Association

WERF  
Water Environment Research Foundation  
Collaboration. Innovation. Results.

Operations Optimization

FINAL REPORT

Sustainable Food Waste Evaluation



## The potential of food waste disposal units to reduce costs

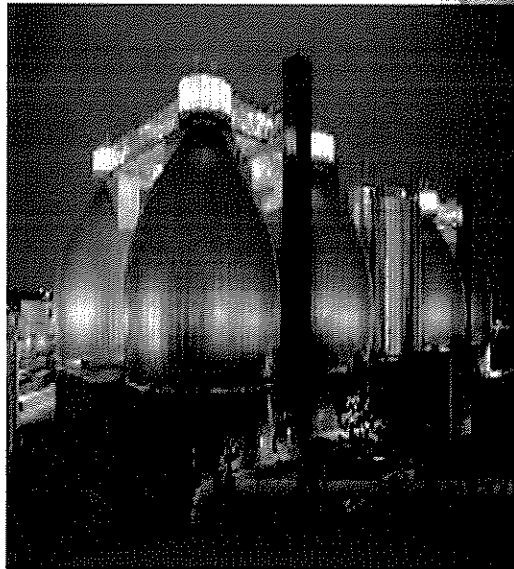
A literature review

# Wastewater treatment plant, or *Utility of the Future?*

## Water Resource Recovery Center

(*Water Environment Federation*)

- Renewable energy (biogas)
- Fertilizer products (biosolids)
- Clean water



# Emerald Cities Initiative

- Targeted cities w/sustainability goals
  - Increase landfill diversion
  - Increase renewable energy
- Demonstration project/case-studies
  - Exploit existing research
  - Affirm efficacy as waste management tool
- **Research protocol**
  - Target discrete areas
  - Identify/enlist homes w/out disposer
  - Install @ 100
  - Educate/train/cajole
- **Evaluate**
  - Waste reduction/waste composition
  - Social/behavioral research
- **Translate**
  - On-going policy/program initiatives



# Milwaukee Metro Sewerage District

**Don't be the cat throwin'  
food scraps in the trash.  
Use a disposal instead.  
We can turn your food waste  
into energy.**



For more information, go to [www.mmsd.com](http://www.mmsd.com)

## How it Pays To Use Your Disposal

Food waste fuels lower sewer bills. Food scraps produce methane gas that MMSD captures and turns into power to run our facilities.

We also use food scraps to help make a fertilizer called Milorganite that's sold around the country.

# Current Partnerships Assessing Disposers

- **Philadelphia**
  - April 2012 – June 2013
  - Two neighborhoods/200 FWDs
- **Chicago (200)**
  - 2 neighborhoods (south/north)
  - Blue-cart expansion
- **Milwaukee (100)**
  - Hispanic neighborhood
  - City offering compost bin option
- **Boston (Multi-residential; Fall 2013)**
  - Calgary, Vancouver



# Tacoma, WA

 **HEALTHY** homes  
**HEALTHY** neighborhoods

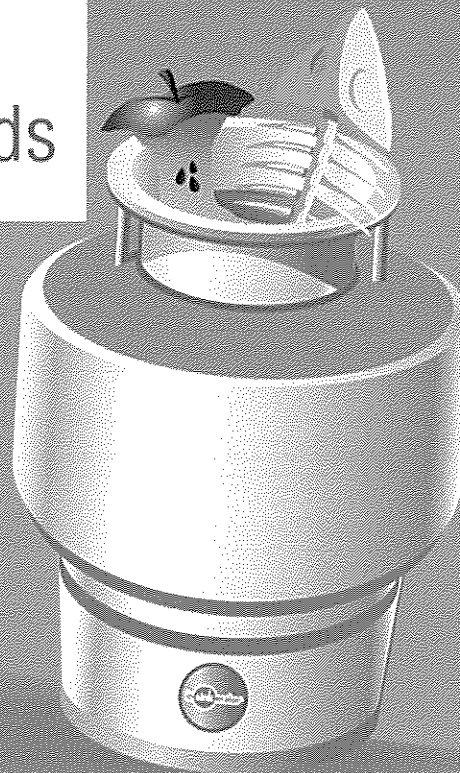
100 homes

Installations  
underway

Bi-weekly  
transition

## KEEP YOUR KITCHEN GREEN AND WAPATO LAKE CLEAN

Fill out the reverse side to apply for a  
**FREE Food Waste Disposer**



Food waste disposers are small, quiet appliances installed under your kitchen sink to grind up leftover food scraps - including fruits, veggies, and pasta... even chicken bones!

Disposers are easy to use, and they help get rid of kitchen odors and reduce the number of smelly garbage bags you have to haul to the curb. That means fresher kitchens, fewer rodents and a cleaner greener Wapato Lake.

To be eligible\* to participate in a special study organized by the City of Tacoma, please indicate your interest in receiving a **FREE InSinkErator®** food waste disposer installed by a licensed plumber. Simply complete the reverse side and give it to the city's representative today.

\*Participation is limited to product supply and study criteria.

Why is the city behind this program? Food waste disposers recycle food scraps that are sent to Tacoma's wastewater treatment plants, where they are turned into clean water, renewable energy and TAGRO. Sending food scraps to Tacoma's advanced treatment plants is a better environmental choice than the landfill, and helps to save all of us money.



**Tacoma** Environmental Services  
Office of Sustainability

# Philly Results – Sneak Preview

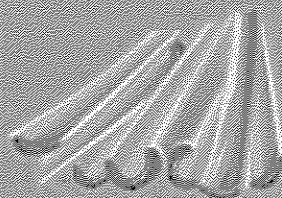
- **Two focus groups (20) + Survey research (40%)**
- **Top-line**
  - Participants Overwhelmingly Pleased
  - 60% *Almost Always* Used Disposer (meal-prep/cleanup)
  - 75% Put *All* Food Scraps Down Disposer
  - Trash reduced from 2.4 to 1.5 bags per week
  - Community group outreach essential
- **Water use insignificant**

# Educational Materials – Tip Cards

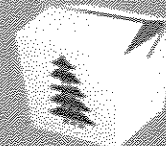
## TIP #8 Did you try?



Banana peels?



Old celery?

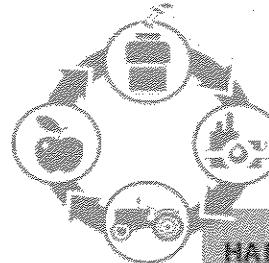


Leftover rice?

All of those things – and more – can be ground up by your food waste disposer, by feeding it gradually, and running a moderate flow of water to help turn it into a liquid carried away through your pipes.

Besides making your kitchen cleaner, you help improve the environment – simply by using your food waste disposer.

**That's because Tacoma's wastewater treatment plants turn food waste into renewable energy and beneficial fertilizer.**



**HAPPY GRINDING!**

# International: Cities Rethink/Encouraging Disposers

- **Stockholm Water Board**
  - Minor restrictions removed in 2010
  - Endorsed by Green Party
- **UK** – demonstration projects; Worcester incentives
- **Denmark** – Odense (700K) reversed ban (2013)
- **Toronto/Region of York** – reconsidering historic bias
- **China /Sao Paulo** – adopting building code mandates

# Worcester County, UK “Sink Your Waste” initiative



# NYC's Opportunity

- Leverage existing laws and assets
- Help achieve NYC's diversion goals
- Complement to truck-based collection programs
- Solution for multi-residential buildings
- Research supported; precedents elsewhere

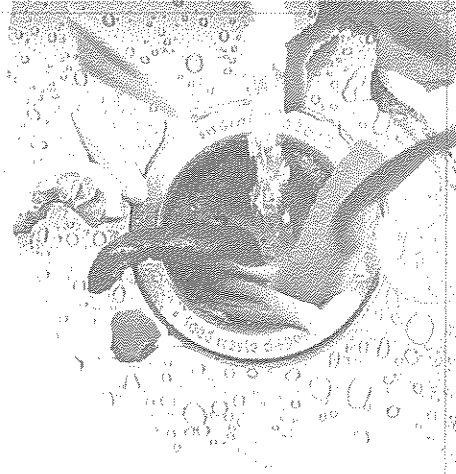


For more info....

- Kendall Christiansen – Gaia Strategies  
kendall@gaiastrategies.com  
917.359.0725
- [Insinkerator.com/green](http://Insinkerator.com/green)



# Food Waste Disposers and the Environment



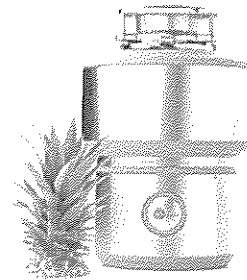
How can disposers help reduce carbon footprints and create renewable energy?

- Disposers divert food waste from landfills, helping to reduce greenhouse gas emissions from decomposing waste and trucks transporting it.
- Food waste can be recycled into renewable energy at capable wastewater treatment plants.\*
- Wastewater treatment plants can process food waste into fertilizer.\*
- Disposers use about 1% or less of a household's total water consumption.
- Disposers cost less than 50¢ a year in electric usage.

\*Check the treatment plant in your area.



Approved for points toward National Green Building Certification. Visit [www.GreenApprovedProducts.com](http://www.GreenApprovedProducts.com) for details.



### Food Waste Facts

- More than 13 million tons of food scraps end up in landfills (2008).
- Decomposing food waste in landfills can produce the greenhouse gas methane.
- Composting is great for those who enjoy it and disposers help by grinding non-compostable meat and dairy.
- Disposers grind food to less than 1/4 inch - safe for household and municipal pipes.
- Don't put fats, oils or grease down any drain.

For more information, visit [www.insinkerator.com/green](http://www.insinkerator.com/green)



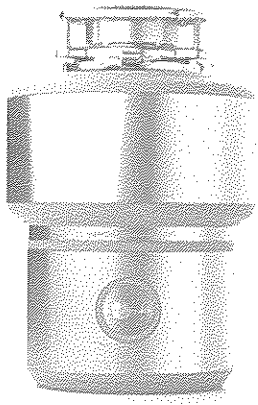
1-800-551-5700  
[www.insinkerator.com](http://www.insinkerator.com)

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EMERSON  
Environmental Solutions  
1000 Emerson Drive  
St. Louis, MO 63103  
www.emerson.com

# WHAT WOULD YOU CALL A 13-INCH TALL MACHINE WITH THE POTENTIAL TO CREATE RENEWABLE RESOURCES?



WE WENT WITH FOOD WASTE DISPOSER.

You may not realize it, but a disposer can play an important role in helping to solve waste management challenges. Using a disposer can help divert landfill waste and reduce greenhouse gas emissions. It can also help capable wastewater treatment plants turn waste into renewable energy and fertilizer (check the plant in your area). One plant in Milwaukee, Wisconsin estimates that energy derived from solids digestion generates savings of \$1.2 million annually. To learn more or explore studies on the issue, visit [insinkerator.com/green](http://insinkerator.com/green) or contact us at 1-800-958-5712, ext. 5219 or [disposers.environment@emerson.com](mailto:disposers.environment@emerson.com).



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# Policy Position Statement

## Food Waste Disposers

### Purpose

This Policy Position Statement outlines the main issues relating to the use of food waste disposers (FWD) in the management of food waste from domestic kitchens. FWDs are installed beneath sinks to separate food waste at source and grind it in order that it can be treated via the wastewater collection and treatment system. FWDs are an alternative to disposing food waste with solid waste. The issues include the effect of food waste on the wastewater system, diversion of food waste from landfill to recycling (CEC, 2008a), avoidance of extra vehicle movements for separate collection, avoidance of vermin attraction, improving yield of dry recyclables and avoidance of storing putrescible food waste in or close to kitchens with its associated health and odour implications.

### CIWEM calls for:

1. Policies and strategies should be evidence based.
2. In addition to providing energy, anaerobic digestion (AD) conserves the nutrients from the feedstock into the digestate and using this digestate on land helps to maintain soil organic matter and complete nutrient cycles.
3. Ground food waste is valuable biogas substrate.
4. In-sink FWDs are an environmentally acceptable option for separating food waste at source and conveying it to treatment and use via existing infrastructure.
5. In-sewer processes can reduce or remove dissolved load before it reaches wastewater treatment works (WwTW).
6. The global warming potential of FWD to public sewer and AD is as good as kerbside to AD and better than centralised composting, incineration or landfill.
7. Exclusive emphasis on kerbside collection of source segregated biowaste has been mistaken.
8. A diversity of environmentally valid options for biowaste will ensure as many citizens as possible are willing to participate.
9. FWDs are an opportunity for cost saving to society as a whole.
10. Regarding the management of food waste, 'one size' will not fit all; home composting fits some, kerbside collection fits others and FWD fit others, especially (but not exclusively) people in flatted properties.

The Chartered Institution of Water and Environmental Management (CIWEM) is the leading professional body for the people who plan, protect and care for the environment and its resources, providing educational opportunities, independent information to the public and advice to government. Members in 98 countries include scientists, engineers, ecologists and students.

# Policy Position Statement

2008/09 for England and Wales) to conserve organic matter and complete nutrient cycles.

6. FWDs save at least £30 /hhd.year for food waste collection and treatment or disposal and appear to have little or no effect on the cost at WWTW, probably because of in-sewer acclimated biofilms. There is negligible impact on water resources. Where there is AD and biogas utilisation, FWDs contribute to wastewater treatment financially.
7. CIWEM considers that in this, as in all other aspects of water and environmental management, policy and strategy should be evidence-based.

## Conclusions

1. CIWEM considers the evidence demonstrates that FWDs are valid tools for separating kitchen food waste at source and diverting it to treatment, use and recycling via the existing infrastructure and that they offer the opportunity for cost savings compared with other routes.
2. CIWEM considers that FWDs offer the opportunity for wider participation in resource recovery from wastes by a greater proportion of the population than has been the case with exclusive advocacy of kerbside collection, which whilst acceptable to some, is not acceptable to all.
3. CIWEM considers food waste and other organic residuals should [wherever possible] be treated and then used on land to conserve soil organic matter and complete nutrient cycles. The use of biosolids and other organic resources on land should be viewed from the perspective of the soil rather than from the origins of the materials. It is important to move to a holistic view of all aspects of organic resource production, use, soil protection, countryside stewardship, water protection, air protection and crop and livestock production. CIWEM considers there is scope for simplified, proportionate, science-based regulation of all organic resources and for co-treatment.

February 2011

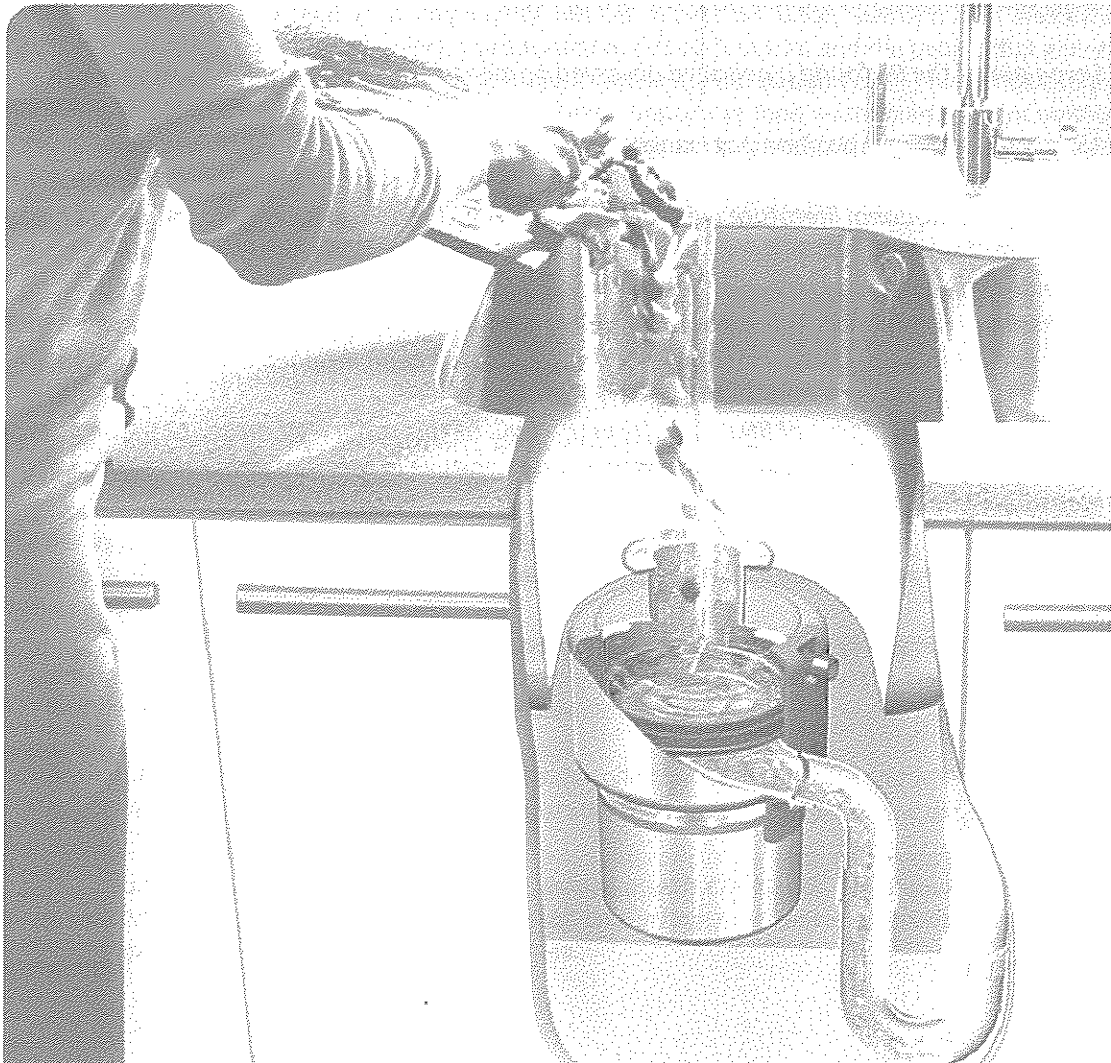
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# The potential of food waste disposal units to reduce costs

## A literature review



## Analytical Methodology

Each food waste management method was developed assuming energy efficient practices. For example, the WRF was assumed to have anaerobic digestion and combined heat and power (CHP). The landfill was assumed to collect the landfill gas and fuel an engine-driven generator. The assumptions common to all food waste management methods are as follows:

- Food waste production was based on a city of 100,000 people producing 3,930 tons/year.
- The chemical composition of the dry fraction of food waste was approximated by C21.5H34.2O12.7N1.
- Food waste characteristics were assumed to be: 69 percent water; 82 percent biodegradable; Density: 31 lb/ft<sup>3</sup>; 1,870 ton/yr COD (chemical oxygen demand); 1,530 tons/yr biodegradable COD; 1,220 ton/yr total solids.
- Cost analysis parameters included: Discount rate of 6 percent (includes inflation); 20-year life cycle period; Cost of electricity: \$0.1/kWh.

This analysis quantified the carbon footprint as a result of carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O) emissions due to food waste processing in each method. Because the overall global warming effect of each of these gases differs, the global warming potentials of each gas were used to normalize the greenhouse gas (GHG) emissions to a common unit: the carbon dioxide equivalent, or CO<sub>2</sub>e. By convention, the global warming potential of carbon dioxide is equal to 1, while the global warming potentials of CH<sub>4</sub> and N<sub>2</sub>O are 25 and 298 tons/ton CO<sub>2</sub>e, respectively. Emissions of GHG were separated into nonbiogenic and biogenic sources. Nonbiogenic sources included any emissions from electrical use or the combustion of fossil fuels, such as diesel. Methane and nitrous oxide emissions were considered nonbiogenic, regardless of the source of the emissions.

Where possible, capital and operating costs were based on typical industry values and literature cost curves. If literature values were used to estimate costs, the Engineering News-Record construction cost index was used to inflate them to 2009 dollars. If general cost guidance was not available, estimations were made based on labor costs for new assets, energy costs, and other operational and maintenance costs. Unless otherwise noted, all operating and maintenance costs reported in this study were assumed to be constant over the 20-year lifespan of the analysis.

For the landfill method, it was assumed that the food waste was commingled with MSW at the residence and transported to a transfer station. From the transfer station it was hauled to the landfill for disposal. The landfill operations were assumed to use soil for daily cover and compactors to spread and compact the waste. Leachate was assumed to be trucked and treated offsite at a WRF, as this is the most common form of leachate management for MSW landfills. The moisture content of food waste is more than adequate to allow for biological decomposition; therefore, biological degradation of food waste within the landfill was assumed to proceed spontaneously. Biogas produced from the decomposition of landfilled food waste was assumed to be captured in a tiered progression over time based on the age of the cell. Captured biogas was used to fuel an internal combustion engine-driven generator to produce electricity only (no heat recovery).

For the composting method, it was assumed that source separated food waste is first collected from residences alone and transported to the composting facility, where it is mixed with a bulking agent and piled into windrows. Because the bulking agent is such a critical component of the composting process, all of the calculations for the composting analysis included the extra mass of bulking agent required to effectively compost the food waste. It was assumed that the windrows were mechanically turned using self-propelled turning equipment that straddles the windrow. After active composting, the material is then moved into curing piles and subsequently transported offsite for land application.

For the food waste disposer method, it was assumed that the WRF had influent screens and grit removal, primary clarification, activated sludge treatment for carbonaceous biochemical oxygen demand (BOD) removal, hypochlorite disinfection of treated effluent, solids thickening, anaerobic digestion with CHP, biosolids dewatering, and biosolids land application. Each household was assumed to use a food waste disposer to preprocess and dispose of food waste into an existing sewer infrastructure for conveyance to the WRF. Essentially this method is a form of codigestion with many preprocessors located in residences.

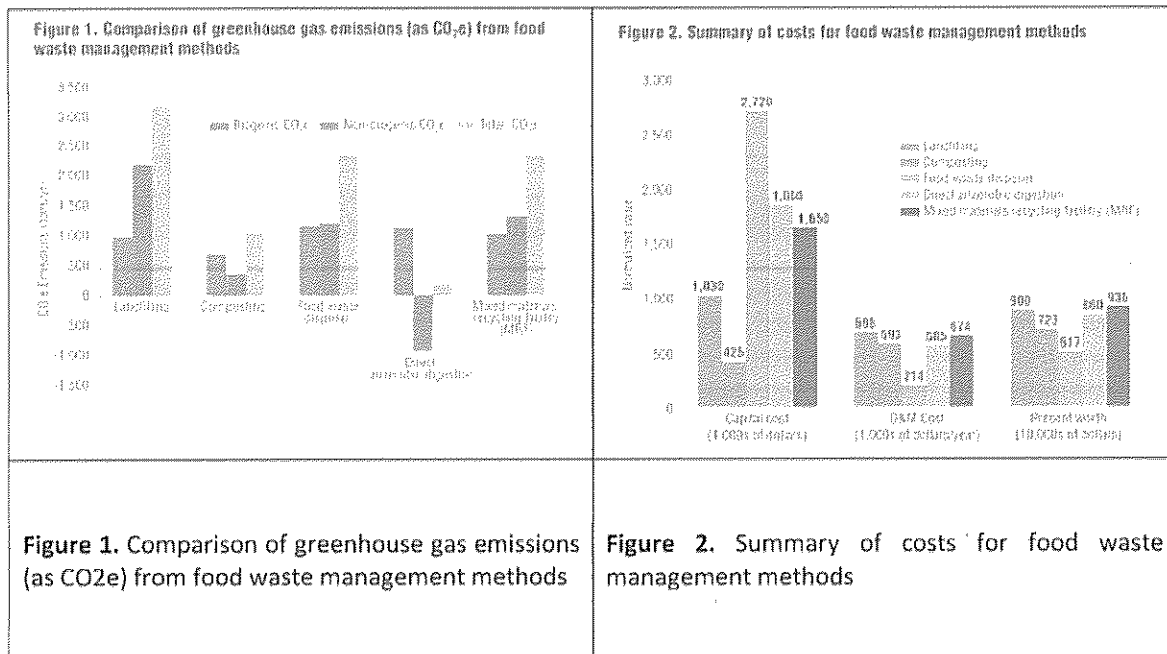
For the direct anaerobic digestion method, source separated residential food waste was assumed to be collected curbside and transported to a local WRF. At the WRF, the food waste was processed and pumped directly into an anaerobic digester. The design of the digester was the same as that used in the food waste disposer method, with the exception that a sludge screen was installed on a circulation loop to further reduce particle size and remove inert materials. Biogas produced from the digestion process was collected and utilized in a CHP engine and residual biosolids were hauled offsite for land application.

For the mixed MRF method, it was assumed that recyclable materials were separated and extracted from a mixed MSW stream. MRFs typically employ several unit processes, each dedicated to extracting specific materials, such as metal, glass, plastic and organic matter (including food waste). While the technology for processing source separated recyclable materials is well established, the technology for the separation of mixed MSW is sometimes proprietary. The separation process used for this analysis is as follows: Food waste is unloaded to a receiving area, where it is visually inspected for hazardous materials and subsequently loaded onto conveyors for separation. The separation process splits the waste stream into sorting lines where the readily recyclable materials are removed. Then, a series of specialized, mechanical equipment provide additional sorting for metals, glass and organic matter. The organic fraction is ground and then hauled to a WRF for digestion. Overall, it was assumed that approximately 30 percent of the organic matter entering the facility is recovered for digestion, and the remaining 70 percent could not be recovered and was trucked to a landfill for disposal. The design of the landfill and WRF were the same as those assumed for their respective methods described above.

### **Carbon Footprint**

Biogenic, nonbiogenic, and total CO<sub>2</sub>e from the five food waste management methods are presented in Figure 1. In general, it was found that the carbon dioxide impact from each method was driven more by the biological degradation of the food waste stream than any of the processing or transportation steps.





The biogenic CO<sub>2</sub>e emissions from each method were relatively consistent, with compost showing a slight reduction compared to the other methods due to a high degree of carbon sequestration in the compost product. The sequestered carbon included both the carbon in the food waste and in the composting amendment. For the landfill, the relatively high nonbiogenic CO<sub>2</sub>e emissions were due to a large percentage of uncaptured methane gas. The direct anaerobic digestion method had the lowest total CO<sub>2</sub>e emissions compared to the other methods due primarily to the electricity generation from the biogas produced from the digesters. This production offset is greater than similar production offsets in the landfill and food waste disposer methods, as more organics are broken down anaerobically and more methane is available to be captured and beneficially used.

The food waste disposer method had moderately high GHG emissions associated with fugitive methane release in the sewers. Little is known about the anaerobic decomposition rates in the sewer system. Thus, the impact of this assumption is large and provides a high degree of uncertainty to the results of CO<sub>2</sub>e emissions for the food waste disposer method. Out of all the five food waste management methods examined, the practice of using landfills to dispose of food waste had the highest carbon footprint.

### Costs

Costs of each of the management methods were estimated based on engineering knowledge, similar project experiences and unit process cost curves. Figure 2 shows the summary of estimated capital, operating, and present worth costs.

Composting had the lowest estimated capital cost due primarily to the simple nature of the process. It should be noted that although composting may require the lowest capital investment, it also had the largest footprint of the methods. Therefore, municipalities with limited space availability may find that composting is logistically unfeasible. The highest capital cost was calculated for the food waste disposers method, although it is unlikely that this cost would be necessary because existing infrastructure would be used (e.g., installed residential disposers, existing sewer infrastructure and water reclamation facilities). For consistency, each method assumed that the additional food waste loadings to the process would result in an incremental increase in infrastructure. However, it is unlikely that the added food waste loadings to an existing WRF would cause the plant to exceed design capacities.

It should be noted that the WERF analysis did find that the food waste disposer method may, in fact, require the lowest capital investment when there is adequate capacity in the existing wastewater infrastructure to handle the additional loads. Also, while the food waste disposer method had the highest capital cost when incremental increases in infrastructure were assumed to be needed, the operating costs were the lowest in today's dollars (present worth). The landfill and mixed MRF methods had the highest present worth costs, driven primarily by the high operating costs. The compost and direct anaerobic digestion methods had similar present worth estimates, despite significantly different capital costs.

## Conclusions

Based upon the examination conducted in this study, there were advantages and disadvantages to each method of food waste management, which are summarized below:

The landfill method is currently the most prevalent means of handling food waste. Landfill disposal of food waste results in the highest emission of GHG and requires a relatively large area to implement. Further, landfill method costs appear to be among the highest of the food waste management methods. However, because most modern landfills capture and beneficially use landfill gas, the overall environmental and economic impacts are somewhat comparable to other common food waste management methods.

Composting had low carbon dioxide equivalent emissions and low present worth cost. However, the large area footprint requirement may make this method logistically unrealistic for municipalities limited on space. Composting of food waste is becoming more common as it is often collected with green waste.

Use of a food waste disposer for handling food waste within the existing sewer system for treatment at the WRF is economically attractive, having the lowest present worth cost of all the methods. The method also has minimal area footprint requirements. This method, however, requires potable water to convey the food waste in the sewers. While there is greater electricity demand for secondary aeration due to additional food waste, there is also additional energy production from anaerobic digestion. Food waste disposers have high public acceptance and provide convenient food waste handling to residents right in their kitchens.

Food waste trucked to the WRF and fed directly to the digesters had many advantages over other management methods. This method had the lowest carbon dioxide equivalent emissions, maximizes biogas production, decreases solid waste at landfills, and can provide a tipping fee revenue stream. However, this method requires source separated collection of food waste for direct injection into a WRF anaerobic digester. Separating and diverting organic wastes, such as food waste, from general waste or trash may exhibit both costs and benefits based upon community specific variables.

The environmental impacts of the mixed MRF method typically were midway between the direct anaerobic digestion method and the landfill method. The present worth costs, however, were high. This method is challenged by the potential for contamination of digestate from constituents in the MSW.

For a comprehensive understanding of converting food waste into biogas, it is helpful to evaluate the methods for food waste management, investigate the actual operation at a facility that converts food waste into biogas, and review the results of research focused on the anaerobic digestion of food waste. This analysis was not tailored to a specific application or even a general region, thus every attempt was made to generalize and simplify the assumptions used in this report to the extent possible. As a result, a potentially large degree of uncertainty was inherent to the processes examined. This analysis was meant to serve as a comparative study and provide some general guidance regarding sustainable food waste management. Because of its broad nature, the content of this report should be seen as a stepping stone or template for site-specific studies versus a comprehensive characterization.

A community may actually use several or all of the methods evaluated here. The results of this evaluation quantify some of the economic and environmental benefits of codigestion and present how they compare to other food waste management methods. The convenience to the residents and the operating requirements of the different methods must also be considered. The preferred food waste management method is dependent on the goals of the community and site-specific conditions. If cost and convenience is a major driver, a food waste disposer method may be preferred. If energy efficiency and low carbon footprint are the drivers, then a direct anaerobic digestion method could be preferred. If cost and carbon footprint are priorities and space is available, composting should be encouraged. Alternatively, if space and consumer interest are limited, a food waste disposer or mixed MRF method would be preferred. Three of the five methods evaluated involved codigestion and had economic and environmental benefits. Knowing these benefits will help to overcome the barriers to codigestion and result in wider implementation.

## Proposed amendments to Intro that would require two years of pilot projects targeting food scraps and other organic waste from residences and schools

### Proposed amendments:

The required pilots to be conducted and reported on by October 2015 shall be expanded to include the following:

- **food scrap reduction programs**, akin to the UK's "Love Food/Hate Waste" campaign that has achieved significant reductions in the generation of household food scraps; for schools, consider resources such as LeanPath, a company focused on helping food service establishments reduce the generation of food waste through a wide range of best practices involving procurement, menu planning, etc.
- **Backyard composting** – revive and expand the City's longstanding efforts to promote the composting of yard waste and certain food scraps on –site, without requiring truck-based collection and off-site processing.
- **Community-based composting** – support and assess the efficacy of the rapidly expanding array of small-scale composting facilities for diverting/managing both household food scraps and food scraps generated by certain food service establishments in adjacent areas, including collection systems.
- **Food waste disposers** – assess the efficacy of in-sink food waste disposers, as permitted citywide via Local Law 71 of 1997, for diversion of food waste scraps as a liquid resource, with special focus on multi-family buildings, including but not limited to the NYC Housing Authority.
- **Other means** of encouraging the prevention, diversion and management of food scraps as a resource without requiring collection, beyond those specifically identified above.
- **Assess markets** for finished compost within the city, including use by city and other governmental agencies, and potential for retail sales.
- **In addition**, the requirements of **Local Law 42 of 2010** also shall be met in the report required under this Intro.
- **The analyses conducted pursuant** to this law shall include but not be limited to a) overall efficacy; b) participation and diversion rates; c) operational and processing costs; d) environmental impacts, including greenhouse gas emissions and odors; and, e) potential for replication on various scales.
- **Comparative review** of organic waste management initiatives – including food scraps – in other major cities in the U.S. and internationally.

The above initiatives are consistent with the food scraps management hierarchy developed by the U.S. EPA, which ranks prevention, feeding of humans and animals, and processing for biogas and biosolids via anaerobic digestion as higher environmental priorities than truck-based collection for centralized composting.

They also are consistent with previously established NYC policy, as contained in the Comprehensive Solid Waste Management Plan of 1992 and Local Law 42 of 2010.

Key excerpts from letters between  
**NYC Department of Sanitation and Department of Environmental Protection**  
regarding the utilization of food waste disposers to manage food scraps:

In 1993, soon after adoption of the City's first Comprehensive Solid Waste Management Plan in 1992, then-Sanitation Commissioner Emily Lloyd wrote to then-DEP Commissioner Al Appleton re the SWMP's aggressive organics recycling goal – and asked for DEP's help:

*"I am writing to urge you to approve and to promote the use of in-sink disposals in City residences. Disposals have the potential of making a valuable contribution to the City's solid waste management system by reducing the amount of refuse that the City must collect and dispose of, by increasing the amount of residential waste composted or otherwise put to beneficial re-use, by eliminating the adverse environmental impacts of landfilling organic material, and by allowing the Department of Sanitation to avoid significant costs associated with the collection of source-separated food waste."*

Commissioner Appleton's response – coming just one year after the ocean-dumping of the city's sewage sludge had finally ended – said in part:

*"I believe we have an important opportunity for environmental innovation and possibly major cost savings to the city if take a multi-media approach instead of looking at this problem from an individual Departmental perspective.*

*Our internal reviews of drain carry and water consumption issues plus DOS' arguments lead me to conclude that we should conditionally expand the permitted use of this technology to be able to review the issue on the basis of real world experience and determine how best to use a coordinated multi-media approach to this problem."*

In 1995, the City Council authorized a two-year pilot project (LL 74), leading to DEP's 1997 report recommending the citywide legalization of residential food waste disposers – which was enacted that year (LL71).

NYC DEPARTMENT OF ENVIRONMENTAL PROTECTION  
**The Impact of Food Waste Disposers in Combined Sewer Areas  
of New York City**

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EXECUTIVE SUMMARY

Domestic in-sink food waste disposers (FWDs) have been banned in New York City since the 1970s in areas served by combined sewer systems. The intent of the ban was to limit the direct discharge of raw organic wastes into water bodies surrounding the City during wet weather and to prevent possible deterioration of the City's sewer system. Since that time, a number of cities have allowed the introduction of FWDs and some have mandated their use. There have been no reported significant adverse effects attributed to the use of FWDs and the plumbing industry and others have repeatedly requested that the City discontinue the current ban. In response to the public's interest in FWDs, the Mayor requested that the City Council reconsider the ban. On September 22, 1995, Mayor Giuliani signed Local Law 74 authorizing the Department of Environmental Protection to conduct a 21-month pilot program to study the potential effects of permitting the use of FWDs in combined sewer areas.

The goals of the pilot study, as enumerated in Local Law 74, are to analyze and evaluate:

- the impact of grease and food solids on the operation of combined sewers;
- the impact on water consumption;
- the impact on the nutrient content of raw effluent;
- the impact of increased pollutant loadings to receiving waters, including increases in Biochemical Oxygen Demand (BOD) and suspended solids;
- the impact on wastewater treatment processes and sludge management;
- the impact on the City's ability to comply with applicable statutes, rules, permits, and orders;
- the impact on solid waste management; and
- any other impacts on the environment, public health and safety, and the cost of operating the water and sewer system.<sup>1</sup>

To accomplish the goals of Local Law 74, DEP, in conjunction with the plumbing industry, representatives of FWD manufacturers and their consultants, and the Department of Sanitation, conducted a comprehensive analysis of the issue categories listed in Local Law 74. The Department has considered the results of the analysis and recommends that the ban on the introduction of FWDs in combined sewer areas of the City be lifted. A discussion of the Department's recommendation and a summary of the analyses for each impact area follows:

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<sup>1</sup> Local Law 74, p. 3.

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## Language Matters, Or What Should I Do With My Banana Peel?

June 01, 2013

By Kendall Christiansen

Let's talk about paradigm shifts and disruptive technologies — when and where they're least expected, in places usually out of sight/out of mind.

Today, big changes are underway in the nation's utilities that manage what used to be called sewage, or wastewater; changes with the potential for answering the question of how best to deal with your banana peel while forging the future of energy self-sufficiency.

Under the banner of “the utility of the future,<sup>[1]</sup>” ‘water resource recovery centers’ is the new name for what used to be called wastewater treatment, or water pollution control plants, or publicly-owned treatment works. So says the Water Environment Federation, the leading professional association, officially changing its lexicon as of January, effectively banning “wastewater.”

Why this shift in paradigms and language? As with “zero waste” programs that move beyond recycling to focus on reducing what we bury in landfills and burn in incinerators, new technologies are able to manage our liquid waste (what we flush) as a resource — and make three important products from it: clean water, renewable energy (in the form of biogas, which is primarily methane), and fertilizer products (also known as biosolids<sup>[2]</sup>).

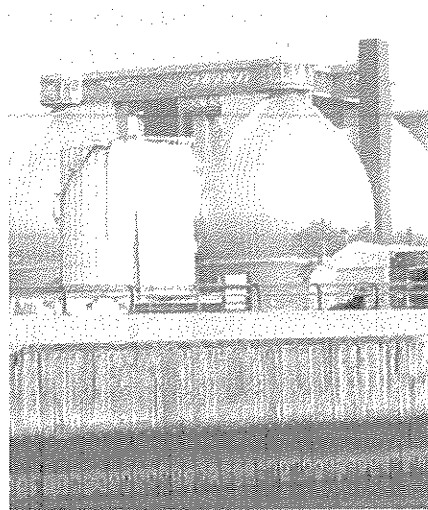
What is this disruptive technology? It's more than one thing, but the principal tool is effective use of anaerobic digestion (AD) — solid organic material is extracted from wastewater and sent to a sealed container where micro-organisms digest it, and generate methane in the process. Think of it like your stomach — you feed it food, and it produces energy for your body (along with some excess gas). In fact, AD technologies aren't “new” — just to the US; thousands of such facilities exist in Europe, and are now migrating to North America, where, to date, they've been limited to dairy farms and larger wastewater plants.

Typically, sewage treatment plants are among a city's leading users of electricity. In contrast, modern water resource recovery plants are capable of becoming energy self-sufficient, even returning energy to the electrical and natural gas distribution systems. Research by the Water Environment Research Foundation confirmed that wastewater contains ten times the amount of energy needed to process it, and could provide 12% of the U.S.'s energy needs.<sup>[3]</sup>

Pushing that envelope, in 2012 the East Bay Municipal Utility District in Oakland, California became the first North American wastewater agency to be a net producer of clean renewable energy — in part by digesting some of San Francisco's commercial food scraps.<sup>[4]</sup>



In New York, the newly upgraded and expanded Newtown Creek sewage treatment plant — with its eight architecturally distinctive digesters — will become a source of biogas for National



Grid to inject into its pipeline. No fracking required. A generation ago, New York City was a leader in utilizing anaerobic digestion at its treatment plants, with support from the New York Power Authority, but over time, loss of both focus and reinvestment undercut this leadership. A new generation of initiatives is underway — upgrading and reactivating aging digesters — to optimize the potential use of existing assets for converting locally-generated organic feedstocks into biogas.<sup>[5]</sup> What's left over can be converted, generally through composting, into products that fertilize soils. To complete the cycle, until two years ago, nearly all of New York City's biosolids were land-applied to replenish soils.

Referred to as “co-digestion” — combining sludge and high-energy organics — nearly twenty of the largest utilities in the U.S. are going beyond wastewater to take in other sources of organic material, including food scraps from food processing industries, as well as food markets and institutions. Utilities in Boston and Chicago are shopping for organic wastes that can take full advantage of available capacity in their digesters. While most utilities use that biogas for their own heat and power needs, some are converting it into biofuel for fueling their vehicle fleet.

Privately owned merchant digesters are popping up, too — nine of them in Ohio, and two more in western New York, developed and operated by Quasar Energy, which morphed from an accomplished composting company, which also partnered in the recent “Five Farms” project in Rutland, Massachusetts. Another sign of an emergent industry, the American Biogas Council, launched in 2011, helps advance this new industry as an equal partner to other forms of renewable energy, like wind, solar and geothermal.

Once headed down this path, other opportunities arise: four U.S. cities are assessing the efficacy of food waste disposers, a/k/a garbage disposers, to divert residential food scraps from

garbage trucks into the water resource recovery system. In this form the methane/biogas is cheaper to transport and is easily processed into clean water, biogas and biosolids. Philadelphia, Tacoma, Chicago and Milwaukee, and Boston later this year, are installing and measuring the waste-reduction benefits of disposers in target areas, with early indications that an advanced disposer with some education to optimize its use can make a huge difference — making clean kitchens and environmentally responsible systems.

Three Northeastern states — Vermont, Connecticut and Massachusetts — are adopting, either by statute or regulation, bans on the landfilling of all organic wastes, focused initially on food waste generated from larger institutions and food-related companies. Such bans will accelerate the expansion of biogas production systems, as well as complementary composting operations.

Why is this such a big deal, a veritable paradigm shift? With food waste estimated to be the fate of as much as 40% of the food produced each year<sup>[6]</sup>, and most of it getting buried in landfills, the opportunity to exploit food scraps as a renewable resource is an opportunity too good to waste. Even EPA has targeted food scraps as a primary area of focus<sup>[7]</sup>.

In short, now there's hope for your banana peel because it doesn't have to be trashed at the landfill or the incinerator. Instead, it can serve as a renewable resource that replenishes soils, renews water, and reduces greenhouse gas emissions.

[1] The Water Resources Utility of the Future: A Blueprint for Action (NACWA/WERF/WEF), From the foreword:

This project was advanced because a group of industry leaders arrived at a shared realization that the challenges (and opportunities) faced by wastewater agencies are unprecedented and that some of the paradigms that have been in place for decades are changing to meet these challenges. This Blueprint underscores the need for the clean water sector to work together to shape the landscape of clean water going forward. It also highlights the type of collaboration that is needed to ensure a sustainable future that minimizes waste, maximizes resources, protects the ratepayer, improves the community, and embraces innovation in an unprecedented manner.

[2] See National Biosolids Partnership for more information.

[3] Reinhardt, Glenn, WERF Executive Director. "Article: Energy Opportunities In Wastewater And Biosolids." Water Online (11 Aug. 2009) Water Online, 09 July 2009. Web. 31 May 2013. <http://www.wateronline.com/doc/Energy-Opportunities-In-Wastewater-And-Biosol-0001>.

[4] For more information, see biogasdata.org.

[5] See PlaNYC2030 — 2011 update: Biogas Approximately 7% of the City government's GHG emissions come from methane that is vented and flared at wastewater treatment plants. If captured, this gas could be injected into the natural gas distribution system or productively reused as fuel for on-site power and heat generation for our buildings. We are pursuing innovative cogeneration and waste-gas-to-grid projects at the [Newtown Creek](#) and [Wards Island](#) Wastewater Treatment Plants. These projects can reduce greenhouse gas emissions with minimal direct cost to the city and will establish a financial model that can be replicated at other urban sites. By 2017, we will reuse 60% of the anaerobic digester gas produced in our wastewater system.

[6] **Wasted: How America Is Losing Up to 40 Percent of Its Food from Farm to Fork to Landfill:** 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. Natural Resources Defense Council, D.Gunders, 2012 — [NRDC Issue Paper AUGUST 2012 | P:12-06-B](#).

[7] See [US EPA Reducing Food Waste for Business](#).

*Kendall Christiansen is the principal of Gaia Strategies, and senior consultant to InSinkEerator, leading its public affairs work across the US and Canada; he was founding Assistant Director of NYC's recycling system, chaired the Citywide Recycling Advisory Board, and worked in/around NYC's waste/recycling sector for many years.*

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I intend to appear and speak on Int. No. \_\_\_\_\_ Res. No. \_\_\_\_\_

in favor  in opposition

Date: \_\_\_\_\_

(PLEASE PRINT)

Name: Lisa Maller

Address: 710 West End Ave NY NY

I represent: D3 Green Schools Group

Address: \_\_\_\_\_

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in favor  in opposition

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(PLEASE PRINT)

Name: Oliver Lamb

Address: 655 41st Ave 2 Brooklyn, NY

I represent: WarSuff Wilks

Address: 98 WarSuff Brooklyn, NY 11206

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THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. 1107 Res. No. \_\_\_\_\_

in favor  in opposition

Date: 6-27-13

(PLEASE PRINT)

Name: ANN A. AUST

Address: 1 RIVER PLACE #920

I represent: PERMACULTURE MEET-UP

Address: \_\_\_\_\_

**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. 1107 Res. No. \_\_\_\_\_

in favor  in opposition

Date: 06/27/2013

(PLEASE PRINT)

Name: Janya Bley  
Address: 337 Kent Ave Brooklyn 11248

I represent: North Brooklyn Compost Project

Address: McCarren Park, Williamsburg

**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. \_\_\_\_\_ Res. No. \_\_\_\_\_

in favor  in opposition

Date: \_\_\_\_\_

(PLEASE PRINT)

Name: Christine Datz-Romero  
Address: 299 E 8th St # 22 NY 10009

I represent: LES Ecology Cncl  
Address: P.O. Box 20488 NY 10009

**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

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in favor  in opposition

Date: \_\_\_\_\_

(PLEASE PRINT)

Name: ERIC GOLDSTEIN  
Address: \_\_\_\_\_

I represent: NATURAL RESOURCES DEFENSE COUNCIL

Address: 40 WEST 20 ST NY NY

Please complete this card and return to the Sergeant-at-Arms

**THE COUNCIL  
THE CITY OF NEW YORK**

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in favor  in opposition

Date: 6/27

(PLEASE PRINT)

Name: Rebecca Lura

Address: 275 7<sup>th</sup> Ave

I represent: Consortium for Worker Education

Address: 275 7<sup>th</sup> Ave

**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

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in favor  in opposition

Date: \_\_\_\_\_

(PLEASE PRINT)

Name: Kady Ferguson

Address: 33 Flatbush Avenue, 5<sup>th</sup> Floor

I represent: Brooklyn Food Coalition

Address: \_\_\_\_\_

**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. \_\_\_\_\_ Res. No. \_\_\_\_\_

in favor  in opposition

Date: \_\_\_\_\_

(PLEASE PRINT)

Name: Helena Dorst

Address: 443 One Bryant Park, NYC 10036

I represent: The Dorst Organization

Address: 443 West 43<sup>rd</sup> Apt 1, NYC 10036

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**THE COUNCIL  
THE CITY OF NEW YORK**

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Date: 06/27/13

(PLEASE PRINT)

Name: Daniel B. Simon

Address: NY, NY

I represent: member Camp 5 Community Garden

Address: LES

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in favor  in opposition

Date: 6/27

(PLEASE PRINT)

Name: Harry Vespa

Address: 250 Cliff St

I represent: USA local 851, Pro.

Address: \_\_\_\_\_

**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

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in favor  in opposition

Date: 6.27.13

(PLEASE PRINT)

Name: Kendall Christensen

Address: 151 Mark St Brooklyn

I represent: Dr. S. K. Frater

Address: Racine WI

Please complete this card and return to the Sergeant-at-Arms

**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card



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in favor  in opposition

Date: \_\_\_\_\_

(PLEASE PRINT)

Name: ROBIN BARTON

Address: 16 WEST 16 ST

I represent: MANHATTAN SOLID WASTE ADVISORY BOARD

Address: NYC

**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card



I intend to appear and speak on Int. No. 1107 Res. No. \_\_\_\_\_

in favor  in opposition

Date: 4/27/2013

(PLEASE PRINT)

Name: Vandra Thorburn

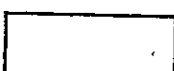
Address: 380 Classon Ave.

I represent: Vokashi, Inc.

Address: 380 Classon Ave.

**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card



I intend to appear and speak on Int. No. 1107 Res. No. \_\_\_\_\_

in favor  in opposition

Date: \_\_\_\_\_

(PLEASE PRINT)

Name: Wendy Scher

Address: 15 Thamez St #2

I represent: myself

Address: \_\_\_\_\_



**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

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in favor  in opposition

Date: 6/27/13

(PLEASE PRINT)

Name: Greg Todd

Address: 866 Park Place Brooklyn NY

I represent: Community Carving & Composting

Address: 866 Park Place

◆ Please complete this card and return to the Sergeant-at-Arms ◆

**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

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in favor  in opposition

Date: 6/27/13

(PLEASE PRINT)

Name: Commissioner Poherty

Address: Dept. of Sanitation

I represent: \_\_\_\_\_

Address: \_\_\_\_\_

◆ Please complete this card and return to the Sergeant-at-Arms ◆

RECORDED

**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

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in favor  in opposition

Date: 6/27/13

(PLEASE PRINT)

Name: ~~Thomas~~ Deputy Commissioner

Address: Mon Gonen

I represent: Dept. of Sanitation

Address: \_\_\_\_\_

Please complete this card and return to the Sergeant-at-Arms

**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

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in favor  in opposition

Date: 6/27/13

(PLEASE PRINT)

Name: First Deputy Commissioner

Address: Bernard Sullivan

I represent: Dept. of Sanitation

Address: \_\_\_\_\_

Please complete this card and return to the Sergeant-at-Arms