

# 2016 STRATEGIC PLAN

*2019 PROGRESS REPORT*



**sanitation**

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# MESSAGE FROM THE COMMISSIONER



July 2019

Dear Colleagues,

Three years ago we published our 2016 Strategic Plan, the first in the Department's history. Since then we have remained focused and disciplined in our commitment to achieving our goals. I'm pleased to share that we continue to make progress, with 27 of the 50 initiatives now marked as achieved.

Over the last year we have reached milestones that have been many years in the making. In some cases work on these projects predated the 2016 Strategic Plan. We are proud to honor our colleagues who laid the foundation and build upon their work.

The City's ban on foam products and the statewide effort to ban plastic bags will finally eradicate two harmful and unnecessary products from our waste stream. The implementation of the Waste Equity Law and the opening of the City's final two marine transfer stations represent significant progress on completion of the Solid Waste Management Plan. The newest initiative we have committed to in this year's progress update—to implement a commercial waste zone system—will complement these successes. Through these efforts we will create a more equitable, just and sustainable waste management system.

Behind the scenes the Department continues to invest in training our staff and modernizing our operations for the needs of the 21st century. We have achieved full implementation of turn-by-turn routing technology in our snow equipment and more than doubled the number of fully paperless locations with aggressive deployment of the SMART 3.0 system. We have recruited a Chief Learning Officer that will revitalize our training for civilian and uniform staff, and launched new programming to expand our work with M/WBE vendors.

The pursuit of ambitious goals inevitably poses challenges. This progress update is the first in which we have had to mark an initiative as delayed, but we remain committed to achieving our long-term goals. Thanks to the hard work of our staff in every district, unit and role, we will continue to innovate, make our operations more efficient and expand our services to better serve New Yorkers in every neighborhood of our great City.

Sincerely,

A handwritten signature in black ink that reads "Kathryn Garcia". The signature is fluid and cursive, with a large initial 'K' and 'G'.

Kathryn Garcia



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# INTRODUCTION

In June 2016, the Department of Sanitation published our first Strategic Plan, an ambitious set of goals to ensure we continue to meet the needs of an evolving City. We committed to 12 goals and 46 corresponding initiatives to guide our next four years of work. In June 2018, we added four additional initiatives to build on our success to date, and redoubled efforts to achieve our long-term goals. In this progress report, we have introduced one additional initiative. This report captures the progress we have made in the 12 months since the publication of the 2018 Progress Report.

		2017 Progress Report	2018 Progress Report	2019 Progress Report
	<b>Achieved and Ongoing</b> - met the milestones articulated in the 2016 Strategic Plan and incorporated into ongoing operations	11	17	22
	<b>Achieved</b> - met the milestones articulated in the 2016 Strategic Plan	4	4	5
	<b>Partially Achieved</b> - made progress toward significant milestones, and on track to be fully achieved	20	24	17
	<b>Initiated</b> - still in the early stages of development	11	2	4
	<b>Deferred</b> - significantly delayed by choice or mandate, or will be achieved through a different strategy	-	-	1
	<b>New</b> - newly introduced initiative	-	4	1

# LAUNCH NEW SERVICES TO REACH ZERO WASTE TO LANDFILLS

INITIATIVES	STATUS
Implement a commercial waste zone system	
Increase recycling rates for traditional curbside recycling	
Expand curbside organics collection	
Develop processing capacity for new recycling streams	
Support partnerships that increase recycling participation by all New Yorkers	
Enact policies to encourage waste reduction and diversion among residents and commercial establishments	
Expand opportunities for electronics and textiles collections	

The Department continues to broaden the reach of services designed to help New Yorkers reduce, reuse and recycle. In order to reach our ambitious goals of sending zero waste to landfills and reducing greenhouse gas emissions associated with waste management, we know we need to work closely with the city’s commercial sector to ensure that we are on parallel paths. We are introducing a new initiative to help us achieve this goal: Implement a commercial waste zone system. The implementation of a zoned system will lead to safer and more efficient collection that provides high-quality, low-cost service, while furthering the City’s zero waste goals.

## IMPLEMENT A COMMERCIAL WASTE ZONE SYSTEM

In November 2018, DSNY released Commercial Waste Zones: A Plan to Reform, Reroute, and Revitalize Private Carting in New York City, a detailed roadmap for overhauling the city’s private waste hauling industry. The plan divides the city into 20 non-exclusive collection zones, with between 3 and 5 carters selected through a competitive solicitation process to operate within each one. Today, up to 50 different private carters service a neighborhood, and a typical route may cover 100 miles across multiple boroughs. In the future, routes will be confined to zone boundaries, dramatically reducing truck traffic. The reform will remove 18 million miles of truck traffic from NYC streets every year, giving every neighborhood in the city safer streets, cleaner air, and quieter nights, while still allowing customers to choose the carter that best meets their specific needs. DSNY released the Draft Generic Environmental Impact Statement in February 2019, which confirmed that the zoned approach will produce substantial benefits. The Final Generic Environmental Impact Statement will be released later in 2019. DSNY is currently working with the City Council on legislation to establish commercial waste zones. The competitive selection process for the zones will begin in early 2020 and contracted carters will begin servicing their zones by the end of 2021.

## INCREASE PARTICIPATION RATES FOR TRADITIONAL CURBSIDE RECYCLING PROGRAMS

In spring 2019, the Department launched unique outreach campaigns focused on facilitating behavior change at the neighborhood and community level to help increase participation in our curbside collection programs, specifically focusing on paper as well as food and yard waste. The Department collaborated with

the Manhattan Borough President's Office, the Manhattan Solid Waste Advisory Board, and Pratt Industries to launch the Manhattan Paper Challenge in June 2019. All 12 community boards in Manhattan will be participating, and the three that achieve the highest rate increase in paper recycling will receive quarterly awards and grand prizes.

In April 2019, the Department launched the Make Compost, Not Trash campaign. As part of this effort, Sanitation employees are concentrating education efforts and outreach in one neighborhood at a time to evaluate an "intervention zone" strategy to help increase participation rates in our programs. Our goal is to build deeper and more lasting connections, grow a volunteer network to support participation over time, and to apply these lessons to efforts to increase paper, metal, glass, and plastic recycling. Make Compost, Not Trash launched in Queens District 13 and Brooklyn District 10 with community feedback meetings, compost giveaways, neighborhood street tree care days using DSNY compost, and door-to-door canvassing. In just two months, the program has recruited 50 volunteers that have canvassed more than 1,200 households, hosted six community meetings and five special events including film screenings, comedy nights and compost tours, enrolled an additional 38 buildings for organics service and engaged thousands of residents. The Department will be monitoring program participation as a result of these efforts to inform our future outreach.

Finally, the Department launched the Zero Waste Building Maintenance Training program to help building maintenance staff run outstanding recycling programs. Through a combination of classroom instruction, field trips and practical activities, participants learn proper recycling procedures, develop skills to troubleshoot common recycling issues, and leave the course ready to make use of DSNY apartment programs and teach others about recycling. We will continue to deploy creative tactics to reach our goal of increasing the citywide recycling capture rate to 60% by June 2023.

### **EXPAND CURBSIDE ORGANICS COLLECTION**

In April 2019, Mayor Bill de Blasio announced the City's commitment to implement a mandatory organic waste collection program across all five boroughs, as part of the OneNYC commitments to fight climate change. DSNY will collaborate with the City Council on legislation that will require all New York City residents to separate their food scraps and yard waste for beneficial reuse. Meanwhile, the City's curbside organics collection program, the largest program of its kind in the United States, serves 3.5 million New Yorkers in all five boroughs. In the last year, DSNY held 532

education events and distributed nearly 2,000 tons of compost to thank New Yorkers for their participation in the program. We grew our enrollment program, with 3,012 enrolled buildings now participating, up from 2,392 last June. Finally, the food scrap drop-off program has expanded to 165 sites, up from 113 last June.

### **DEVELOP PROCESSING CAPACITY FOR NEW RECYCLING STREAMS**

The Department continues to support efforts to increase local and regional processing capacity for food and yard waste. At our Staten Island Compost Facility, we completed Phase 1 of construction in September 2018. Phase 2, which includes installation of an aerated static pile compost system, is currently in contract procurement. Finally, we are wrapping up a three-year study to produce energy from food waste with the Department of Environmental Protection, Waste Management and National Grid—and moving into a ramp-up phase that will support up to 250 tons per day of food waste co-digestion at the Newtown Creek Wastewater Treatment Plant. In addition, our newest community composting facility in Gowanus, operated by the NYC Compost Project hosted by Big Reuse in partnership with the Gowanus Canal Conservancy, is now accepting approximately three tons of material per week and serves as an important community education and engagement center.

### **SUPPORT PARTNERSHIPS THAT INCREASE RECYCLING PARTICIPATION FROM ALL NEW YORKERS**

DSNY has been working closely with schools and the New York City Housing Authority (NYCHA) to increase recycling rates across the city. Our Zero Waste Schools program, which aims to divert all recyclable and compostable waste in participating schools, has reached more than 60,000 students. In the last 12 months, DSNY partnered with DOE on the launch of a voluntary expansion of the program through a new initiative called Zero Waste Pledge Schools. As of June 2019, 20 schools successfully met four rigorous recycling and sustainability benchmarks, setting a foundation for a full Zero Waste approach. Now in its third year, DSNY's Zero Waste Schools online portal, which features zero waste curricula and other resources for teachers, has grown to include over 740 schools, or 40% of all DOE schools. DSNY has also partnered with Citizens Committee for New York City to create a new Green Team Mini Grant Program awarding up to \$1,000 to school green teams. During the 2018-2019 school year, 103 schools received Green Team Grant funding to help advance their recycling programs.

DSNY also continues to work closely with NYCHA to increase the use of newly available recycling infrastructure. DSNY funded the Environmental Ambassador



Program to grow recycling advocacy within the community, with over 65 residents completing the training to become neighborhood recycling and waste management experts. The Department also provided valuable input on NYCHA's Waste Management Plan, published in April 2019, and has established a working group with NYCHA and GrowNYC to coordinate recycling, waste management, and operational issues at NYCHA, as well as to inform GrowNYC's outreach work in NYCHA facilities.

### **ENACT POLICIES TO ENCOURAGE WASTE REDUCTION AND DIVERSION AMONG RESIDENTS AND COMMERCIAL ESTABLISHMENTS**

In August 2018, the Department expanded the number of businesses that are required to comply with the City's commercial organics law to include large restaurants, food retailers and chain restaurants. To comply, businesses can hire a private carter, self-transport, or process their food scraps on site, as long as the material goes for beneficial use, such as for use as compost or to generate renewable energy. If appropriate, businesses may also donate food to a third-party charity or food bank, or sell or donate it to farmers for feedstock. Since 2015, DSNY has conducted more than 15,000 educational site visits to businesses and participated in 225 outreach events—reaching another 6,500 people—to support compliance with the City's commercial recycling and organics laws.

In January 2019, following a protracted legal process, the City's ban on foam food service products and packing peanuts went into effect, and enforcement began on July 1, 2019. Businesses can no longer sell, distribute, or use single-use foam items, such as foam takeout containers, cups, packing peanuts, plates, bowls, and trays. This monumental achievement positions New York City on the leading edge of eliminating non-recyclable, single-use items from the waste stream. DSNY will continue to conduct comprehensive outreach regarding the foam ban to affected businesses for the remainder of the calendar year, and will educate businesses on alternative options as part of our commercial recycling training programs.

Finally, in April 2019, the New York State legislature passed legislation to ban the sale of single-use plastic bags in the State beginning March 2020. Shortly thereafter, the City Council enacted a five-cent fee on paper bags. A portion of the revenue from the paper bag fee will go to the City for the distribution of reusable bags, and the rest will be deposited into the State Environmental Protection Fund. Since 2016, DSNY has distributed more than 600,000 reusable bags to New Yorkers



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NYC sanitation  
ORGANICS COLLECTION

LAWN &  
LEAF BAG

Rebuilding  
neighborhoods  
one neighborhood at a time

across the City to discourage reliance on single-use items, and we look forward to supporting the implementation of the plastic bag ban and paper bag fee over the next nine months.

### **EXPAND OPPORTUNITIES FOR ELECTRONICS AND TEXTILES COLLECTIONS**

With each year, more New Yorkers make use of our electronics recycling programs, including SAFE disposal events, convenient curbside collection and recycleNYC, to keep electronics out of landfills. In the last year, we grew participation in the recycleNYC program by nearly 1,000 buildings; the program now serves 35 percent of the City's 10+ unit buildings. The Department also expanded curbside electronics collection service to include all of Brooklyn and western Queens. In 2019, we will continue the expansion of the program to eastern Queens and the Bronx. As a result of robust participation in electronics recycling, we are increasing our commitment from our last progress update (20 million pounds, or 10,000 tons, collected by June 2020) to 30 million pounds (15,000 tons) of electronics collected by June 2020.

Similarly, we are seeing growing interest in our textile collection service: refashionNYC. In the last 12 months, we have collected nearly 5 million pounds (2,500 tons) of textiles, for a total of over 9,500 tons of textiles diverted from landfills since the start of the program. We are on track to meet and exceed our commitment to expand the refashionNYC service to 2,000 buildings by June 2020, with 1,900 buildings currently enrolled in the program, up from 1,700 in June 2018.

Electronics and textiles are both a significant part of the City's vibrant reuse and donation sector. In February 2019, the Department hosted the inaugural ReFashion Week NYC, a first-of-its-kind series of events that brought together residents, reuse nonprofits, the fashion world, and sustainability experts to find shared solutions to textile waste. The week-long celebration included a pop-up thrift market, clothing swaps, a mending and upcycling workshop, and a ReFashion show to engage the public and demonstrate that thrift stores can produce runway-caliber looks. Six stylists collaborated with donateNYC partners to create inspiring fashion looks that were critiqued by the City's leading creative minds. In May 2019, we launched a new food donation portal as part of the DonateNYC reuse and donation platform. The food portal facilitates connections for hyper-local donations, enabling any business or institution with surplus food or a food need—no matter the amount—to be a donor or a recipient in their community.

## CLEANING

# MAKE NEW YORK THE CLEANEST LARGE CITY IN THE U.S.

INITIATIVES	STATUS
Redesign the City's green wire litter baskets to reduce street litter	
Expand litter basket collection and cleaning services to underserved areas	
Increase the number of Adopt-a-Basket Program participants and community cleanups	
Expand the highway ramp cleaning pilot	
Proactively clean vacant lots	
Evaluate the effectiveness of solar-powered garbage compactors in improving cleanliness	
Use technology to more efficiently keep the city clean	

### REDESIGN THE CITY'S GREEN WIRE LITTER BASKETS TO REDUCE STREET LITTER

In 2018, DSNY launched an international design competition to develop a new standard litter basket design. The competition received more than 200 submissions from around the world, and two finalists were chosen to move on to Stage II. In the last six months, the finalist design teams collaborated closely with Sanitation staff to refine the designs. In June 2019, DSNY began prototype testing in three New York City neighborhoods. The testing period will also incorporate a public opinion survey. After the testing period, the winner will be selected by a judging panel that takes into account prototype performance, public response, and feedback from Sanitation Workers. The Department intends to continue close collaboration with the winning design team to complete additional design refinements, as needed, and prepare for a potential replacement of the current baskets.

### EXPAND LITTER BASKET COLLECTION AND CLEANING SERVICES TO UNDERSERVED AREAS

In Fiscal Year 2019, the City allocated \$3.5 million in funding to expand DSNY's litter basket collection services. In FY20, this program will be expanded to \$8.6 million in supplementary funding. The Department continues to achieve high scores on the Scorecard street cleanliness rating, an independent inspection program conducted by the Mayor's Office of Operations. At 95.6% for FY19, the Scorecard is on track for the 3rd highest citywide final score since the beginning of the program, and has increased from the FY18 average of 94.8%. Only three districts are currently receiving scores under 90%, compared to 8 during the same period last year.

### INCREASE THE NUMBER OF ADOPT-A-BASKET PROGRAM PARTICIPANTS AND COMMUNITY CLEANUPS

The Adopt-a-Basket Program continues to engage retail stores and other businesses that take pride and ownership of sidewalk cleanliness, in partnership with our staff. In the last 12 months, we have re-engaged with the program participants to ensure they are actively participating, and selectively recruited new partners. Currently, we have 3,500 adopted litter baskets, a slight decrease



Smart Design

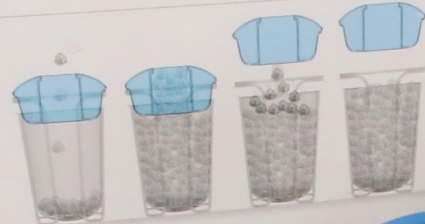
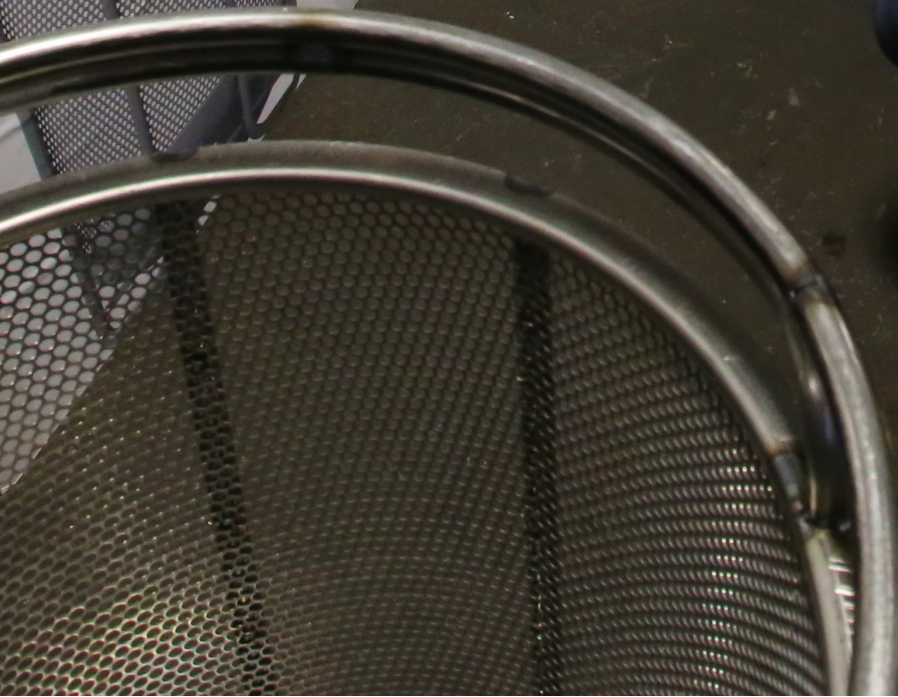


Illustration by SB magazine for IDEO



from the number reported in June 2018. The Department has also partnered with neighborhood associations and elected officials to support more than 300 volunteer clean-up events since July 2016.

### **EXPAND THE HIGHWAY RAMP CLEANING PILOT**

DSNY's highway ramp cleaning pilot program has now been expanded to 20 roadways across the city, covering nearly 800 ramps in every borough. Thanks to collaboration with the City Council, the Department will continue to provide this service and grow the program to cover additional roadways.

### **PROACTIVELY CLEAN VACANT LOTS**

We continue to proactively monitor and address conditions, with more than 2,800 vacant lots cleaned in FY19. In the last 12 months, we have diverted some lot cleaning resources to areas not traditionally cleaned by the Department, including uncut streets and areas with no Borough-Block-Lot parcel numbers. We completed more than 250 diversion cleanings in FY19, more than double the number completed in FY18.

### **EVALUATE THE EFFECTIVENESS OF SOLAR-POWERED GARBAGE COMPACTORS IN IMPROVING CLEANLINESS**

Since DSNY completed a one-year pilot program of solar-powered garbage compactors in Brooklyn in 2016, we continue to collaborate with Business Improvement Districts to support existing solar-powered compactors. Based upon our research, at this time we are not planning to recommend installation of any additional solar-powered compactors.

### **USE TECHNOLOGY TO INCREASE TRANSPARENCY OF HOW WE KEEP THE CITY CLEAN**

DSNY is committed to pilot program that would install automatic vehicle locator technology in all cleaning equipment and digitizing all cleaning routes. We have completed digitizing nearly 20% of all cleaning routes, and are on track to complete all remaining zones by 2021.



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in the system with  
brake or frost protection

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# IMPROVE SNOW REMOVAL

**INITIATIVES**

**STATUS**

Test pre-treatment methods to reduce the impact of snow storms	
Expand sector routes to all boroughs	
Lead pilot program for turn-by-turn routing technology	

**TEST PRE-TREATMENT METHODS TO REDUCE THE IMPACT OF SNOW STORMS**

Historically, DSNY has used salt in combination with calcium chloride to treat roadways ahead of snow storms. We tested the use of salt brine in liquid form to pre-treat roadways with three brine trucks during the 2018-2019 snow season. The sodium brine solution will be used as an anti-icing measure to further help prevent dangerous road conditions in conjunction with rock salt. The Department is currently working to procure 24 additional brine trucks and seven brine storage tanks to expand this program to all five boroughs.

**EXPAND SECTOR ROUTES TO ALL BOROUGHS**

DSNY fully implemented sector routing during the 2016-2017 season. Over the last 12 months, we continued to refine our snow routes for maximum efficiency and created new highway escort routes with NYPD to ensure access to critical roadways in inclement weather.

**PILOT TURN-BY-TURN ROUTING TECHNOLOGY**

DSNY fully implemented turn-by-turn routing technology in every single piece of snow equipment during the 2018-2019 season. We are pleased to report that the technology has been received very well by vehicle operators and that the pilot program has been transitioned to regular protocol within our training and operations.





# MAXIMIZE FIELD OPERATIONS EFFICIENCY

INITIATIVES	STATUS
Expand the use of tablets and handheld mobile devices for field work	
Complete the development and implementation of SMART	
Leverage geospatial information to improve collection operations	

## EXPAND THE USE OF TABLETS AND HANDHELD MOBILE DEVICES FOR FIELD WORK

DSNY remains on track to standardize the type of mobile device for field personnel by summer 2020. In preparation, the Department upgraded the NOVAS application and replaced all old mobile units in the Enforcement Division with new devices in May 2019. We have selected a vendor to convert all violations from paper to digital format and are on track to complete roll-out by summer 2020.

## COMPLETE THE DEVELOPMENT AND IMPLEMENTATION OF SMART

In the last 12 months, we have aggressively deployed SMART 3.0 and more than doubled the number of fully paperless locations. We now have a total of 47 paperless locations, including 41 district garages (up from 17 last June), four cleaning garages and two marine transfer stations. We are supporting the paperless operations rollout with technology infrastructure upgrades, including network bandwidth improvements, cellular repeater installations and integration with human resources software. We have also made upgrades to be able to extract data from the SMART system. Historically, work completion data was extracted daily; now, we can extract data on an hourly basis—giving our users unprecedented access to operational data in nearly real time. Our analytics team deployed and administered new database and ETL servers, ensuring that we maintain compatibility with the older data model to be able to do historical trend analysis for staffing optimization.




## LEVERAGE GEOSPATIAL INFORMATION TO IMPROVE COLLECTION OPERATIONS

DSNY continues to leverage technology to enhance operational efficiency. The Department has developed a web-based route editing tool using open source technology. The tool, currently in testing, will be able to manage all route types, including snow, collection, and cleaning routes. It integrates functionalities to support mapping and turn-by-turn directions, and it is anticipated to reduce the amount of time spent producing and updating new routes. In the last 12 months, we have continued to digitize and integrate our routes into ArcGIS for easier visualization for field personnel. We now have six districts fully integrated into the system for all routes, and snow routes will be completed for all 59 districts this year. ArcGIS has been updated with features to pull in data regarding 311 missed

collection complaints, produce ad-hoc routes to address these issues, overlay route mapping with real-time results, and integrate street-view images. Our data science team has completed the development of a geospatial blockface model to predict residential refuse tonnage for every tax lot in the city. The team is moving forward with plans to vet the model against real-world data, keeping in mind seasonal fluctuations in disposal patterns. Finally, the Department is in the last stage of completion for BladeRunner, a centralized reporting system for operational progress and situational awareness. The app provides users access to real-time tracking as well as historical data via a mobile device while employees are performing their field supervisory tasks.



# COMPLETE IMPLEMENTATION OF SOLID WASTE MANAGEMENT PLAN

INITIATIVES	STATUS
Open the Hamilton Avenue, 91st Street and Southwest Brooklyn Marine Transfer Stations	
Limit the impact of waste management infrastructure on historically overburdened neighborhoods	
Transform Fresh Kills Landfill into Freshkills Park	

## OPEN THE HAMILTON AVENUE, 91ST STREET AND SOUTHWEST BROOKLYN MARINE TRANSFER STATIONS

In the last 12 months, DSNY completed the final two of the City’s marine transfer stations—a critical implementation milestone of the Solid Waste Management Plan (SWMP), a 20-year strategy for managing New Yorkers’ waste and recyclables. The Department began operations at Southwest Brooklyn Marine Transfer Station in October 2018 and at the East 91st Street Marine Transfer Station in March 2019. The opening of these two facilities, alongside the implementation of long-term contracts, signifies the completion of the majority of the SWMP. By moving away from long-haul truck transport to a system of marine and rail transfer stations throughout the five boroughs, the SWMP has reduced truck traffic associated with waste export by more than 60 million miles per year (including more than 5 million miles in and around New York City) and slashed greenhouse gas emissions by 34,000 tons annually. In the next 12 months, the Department will take initial steps in planning for a new long-term strategy to replace the SWMP as it expires in 2026.

## LIMIT THE IMPACT OF WASTE MANAGEMENT INFRASTRUCTURE ON HISTORICALLY OVERBURDENED NEIGHBORHOODS

In July 2018, City Council passed and Mayor de Blasio signed Local Law 152, also known as the Waste Equity Law, historic legislation that provides much-needed relief to communities that have borne a disproportionate share of the city’s waste management infrastructure. The law reduces permitted capacity at private transfer stations in four historically-overburdened districts in the South Bronx, Northern Brooklyn, and Jamaica by between 33 percent and 50 percent, and it prohibits the creation of new waste transfer stations in neighborhoods that handle at least 10 percent of the city’s waste. Implementation of the law will dramatically reduce truck traffic associated with garbage collection and decrease pollution-related health effects while forging a more equitable infrastructure. The Department has started the permit reduction process. New permit capacities will begin taking effect in October 2019 and will continue on a rolling basis through October 2020.

## TRANSFORM FRESH KILLS LANDFILL INTO FRESHKILLS PARK


DSNY is on track to complete closure of the last section of Fresh Kills Landfill by 2021.

Landfill gas emissions are maintaining levels safely below regulated thresholds. The transition from active gas collection to passive venting has been postponed to 2021, due to the revenues generated from the sale of processed landfill gas. In the final remaining areas of the landfill to be closed, Sections 1/9, we have progressed to the fifth of seven construction closure phases. Collaboration is ongoing with the NYC Department of Parks and Recreation on transition, planning and development for custodial care of the future park.





# ENHANCE EMERGENCY PREPARATION

INITIATIVES	STATUS
Train superintendents and high-level staff in emergency management	
Strengthen our fleet and facilities for emergency operations	

## TRAIN SUPERINTENDENTS AND HIGHER-LEVEL STAFF IN EMERGENCY MANAGEMENT

In 2017, DSNY conducted a comprehensive inventory of staff training needs and evaluated emergency management plans with our vendors and partner organizations. Within the Department, we identified 40 managers to participate in intensive training. Of these, 30 have been selected to complete 12 modules of the NYC Emergency Management Certificate Program, which consists of six computer-based exercises, five comprehensive classroom sessions, and a final culminating table-top exercise—all designed to cover a wide variety of scenarios and national best practices in emergency response. We anticipate all managers will complete the required course by the end of 2019. The Department has also collaborated with the Red Cross to begin CPR training for all newly hired Sanitation Workers starting in 2018. In addition, our Public Affairs team conducted a desktop drill to ensure we are prepared to communicate effectively with the public when needed.

## STRENGTHEN OUR FLEET AND FACILITIES FOR EMERGENCY OPERATIONS

The Department continues to invest in emergency preparation at our facilities. Emergency work on the structural rehabilitation at Pier 36 was completed in fall 2018 in order to enable progress on fuel tank replacement. In addition, the Department has begun to move IT systems into the cloud for improved reliability. In the last 12 months, we moved our RASTRAC GPS system and our medical system to cloud-based solution providers. We are evaluating the use of these services as a disaster recovery vehicle or a primary site for other systems.







# OPTIMIZE OUR FLEET

**INITIATIVES**

**STATUS**

<p>Pilot new technologies to drive toward zero emissions</p>	
<p>Modernize our fleet maintenance program</p>	

**PILOT NEW TECHNOLOGIES TO DRIVE TOWARD ZERO EMISSIONS**

In the last few years, there has been growing interest in the development of heavy-duty Battery Electric Vehicles. DSNY has been collaborating closely with the truck manufacturers to co-develop and test the possibility of a fully electric mechanical broom and collection vehicle. Our work will result in one of the first available prototypes of both of these models. Delivery of the prototypes is projected for the second quarter of FY20. In parallel, DSNY continues to develop an EV charging infrastructure to accommodate a growing number of plug-in vehicles in the DSNY fleet. Meanwhile, all of the Department’s heavy-duty diesel vehicles are equipped with the most advanced computer-controlled and regulated clean-diesel engines for their respective model years. In addition, we have expanded our use of renewable diesel—a low-emissions, 99% petroleum-free fuel—from a eight-district pilot program in May 2018 to 17 district garages across New York City. DSNY’s entire diesel-powered fleet currently utilizes biodiesel (B20 from April to November and B5 from December to March). To date, DSNY has replaced over 10 million gallons of petroleum made from fossil fuel.

**MODERNIZE OUR FLEET MAINTENANCE PROGRAM**

The DSNY fleet maintenance program continues to support our diverse fleet needs. During the summer months, all snow equipment undergoes a comprehensive bumper-to-bumper maintenance and inspection program. Throughout the year, we complete safety inspections regularly and our strict PM Audit Program continues to ensure all work is performed to the highest standard.



# INVEST TO MODERNIZE FACILITIES

INITIATIVES	STATUS
Construct new garages for the 21st century	
Institutionalize reliability-centered maintenance to ensure we do the right maintenance at the right time	
Implement best practices at our facilities to protect the city's waterways	
Expand opportunities for minority- and women-owned businesses in our construction projects	
Reduce our energy use by investing in renewable and efficiency technologies	
Develop in-house construction management to deliver our capital program on time and on budget	
Streamline capital budget processes	

## CONSTRUCT NEW GARAGES FOR THE 21ST CENTURY

DSNY continues make progress on garage siting and construction on the Brooklyn 3, Manhattan 11, Bronx 9/10/11, Queens 1, and Staten Island 1/3 garages. Construction of the Brooklyn 3 garage will commence in July 2019. The Staten Island 1/3 garage project is in final design. The project received a 2019 Public Design Commission Award for Excellence in Design. The facility will serve two Sanitation districts with vehicle storage and repair, office and personnel spaces, a household recycling center, and salt storage. The design features a small green roof and integrates three native ecological systems—grasslands, woodlands, and wetlands—to support native habitats. Capitalizing on the 120,000-square-foot roof, the design also includes a large array of rooftop solar panels to support the City’s goals of reducing greenhouse gas emissions by at least 80 percent by 2050.

## INSTITUTIONALIZE RELIABILITY-CENTERED MAINTENANCE TO ENSURE WE DO THE RIGHT MAINTENANCE AT THE RIGHT TIME

The Department continues to rely on our Avantis Work Order system to meet our targets for completed preventative maintenance. Over the last 12 months, we have completed significant upgrades to the system to better support our field operations, including digitizing fuel tank management, integrating all equipment at our new Marine Transfer Station facilities, and rolling out a web version of Avantis. In 2018, we completed 6,400 preventative maintenance tasks, and received 14,000 work requests, of which 81% were completed. By the end of 2019, we plan to roll out a mobile version and complete additional needed upgrades to the desktop and web-based app.

## IMPLEMENT BEST PRACTICES AT OUR FACILITIES TO PROTECT THE CITY’S WATERWAYS

Following close collaboration with the New York City Department of Environmental Protection (NYC DEP) to comply with the City’s MS4 (Municipal Separate Storm Sewer System) permit, the Department is expecting to successfully pass the first round of facility inspections this year. The total number of DSNY locations that will require MS4 facility oversight is 31, and of these, 25 will be inspected this year. We have completed rigorous training with the personnel that will be responsible for the inspections, and all Sanitation Workers received basic MS4 compliance training in fall 2018. Online training for additional staff will begin in summer 2019. The Agency is in compliance with the use of NYC DEP’s Consolidated Information Tracking System for 2018 data.

## **EXPAND OPPORTUNITIES FOR MINORITY- AND WOMEN-OWNED BUSINESSES IN OUR CONSTRUCTION PROJECTS**

In October 2018, the Department welcomed its first Chief Supplier Diversity Officer. This newly created role centralizes Department efforts to increase opportunities for Minority- and Women-Owned Business Enterprises (M/WBE) in agency contracts. Since the appointment, we have made progress on standardizing and streamlining the process of identifying and utilizing M/WBEs. The Department launched the Sustainable Operations and Readiness/Resources (S.O.A.R.) program in February 2019. This initiative will enable M/WBEs to easily identify procurement opportunities and includes multiple capacity-building components, such as: a Business Capacity Statement and Database that clearly identifies what goods and services a vendor is able to offer; link-up events during which Prime, or non-M/WBE, vendors will interview pre-identified M/WBEs for future projects as potential partners; workshops about upcoming solicitations; and a micro-hauling/composting committee dedicated to building a foundation for vendor inclusion in organic waste disposal contracts.

## **REDUCE OUR ENERGY USE BY INVESTING IN RENEWABLE AND EFFICIENCY TECHNOLOGIES**

DSNY is paving the way to a more sustainable facility network through our renewable energy initiatives, energy efficiency upgrades, electric demand management, and other sustainability projects. Following the completion of our solar feasibility studies, we have received approval to incorporate solar installations in the construction of our new garages for Brooklyn 3 and Staten Island 1/3, and to retrofit several additional districts with rooftop installations: Manhattan 4/4A/7, Brooklyn 1/4, Queens 11/13, and Brooklyn 17/18.

As we continue to face more extreme weather events and peak/low temperatures, DSNY has committed to more comprehensive power demand management. In high-energy demand buildings such as our repair shops and Roosevelt Island facility, DSNY will monitor electricity use in real time and shut down non-critical equipment on “design days”—when the electric grid is operating at (and sometimes beyond) its capacity due to demand. This will improve grid reliability for all of New York City and reduce the need for the supplemental generations promoting a more sustainable city. In 2018, DSNY stationary engineers reduced electrical demand by 2,640 kW during these events.

We remain committed to reducing water waste and improving water heating efficiency at our facilities, with installation of low-flow fixtures planned for the Central Repair Shop and several district garages in Queens, and rainwater harvesting for truck cleaning. In FY19, we completed construction at the Betts Ave boiler plant that serves our largest facility. The upgraded plant includes the best available high-efficiency technologies. We have also installed hot water reset controllers as part of boiler control upgrades at Queens 5/5A, Brooklyn 17/18, Cioffe Borough Repair Shop, and Brooklyn 7/10. These controls reduce the hot water setpoint in buildings on mild days, improving thermal comfort and cutting greenhouse gas emissions by as much as 10 percent. In the next year, we will continue to build on our progress with the implementation of steam trap upgrades at three facilities, upgrading heating controls at Queens 2/3/4, and updating pipe insulation at the Queens Central Repair Shop.

### **DEVELOP IN-HOUSE CONSTRUCTION MANAGEMENT TO DELIVER OUR CAPITAL PROGRAM ON TIME AND ON BUDGET**




After the Department expanded in-house capacity for construction project management, the unit quickly transitioned to a major infrastructure project to migrate all project information to a new web-based project management software: E-builder. The unit collaborated closely with the vendor to configure the software to conform to DSNY standards, and complete trainings for all internal and external participants. We are currently piloting the system for construction management of the BK3 garage and the BX12 slab and roof replacement project. In early FY20, the Department will complete the roll-out of the e-Builder system, with access for all Department Bureaus and project collaborators—providing much needed transparency, including: detailed monthly status reports for all construction projects and a platform for more effective collaboration within the Department.

### **STREAMLINE CAPITAL BUDGET PROCESSES**

We continue to make use of the Job Order Contracting (JOCS) program, which was implemented in 2016, for small and medium-sized projects, such as plumbing, mechanical, electrical, and general contracting work. We have completed 30 projects to date under this program, with 25 projects planned. Our Agency Chief Contracting Officer and Capital Budget Office have also been collaborating with the Mayor's Office of Contract Services to help streamline construction change order processes.



# IMPROVE SAFETY OF OUR OPERATIONS FOR EMPLOYEES AND THE PUBLIC

INITIATIVES	STATUS
Improve accountability for safe performance	
Strengthen the culture of safety	
Modify our fleet to increase public safety	

## IMPROVE ACCOUNTABILITY FOR SAFE PERFORMANCE

In FY19, the Department has implemented several new efforts to improve transparency regarding safe performance and to make our safety training program more engaging. Following the 2017 comprehensive analysis of collision data, we have been more proactive with sharing safety data with zones and rewarding safe performance. We have completed “Safety Matters” presentations regularly and introduced a two-day course for re-training that includes a day of education and a day of supervised driving for more personalized intervention. The Safety and Training Division also modified our training obstacle course to make it more challenging and incorporated more tight turns to better simulate current NYC road conditions. Finally, we have completed development of a virtual reality training simulator. The technology has been purchased by the Department of Citywide Administrative Services (DCAS), and we look forward to future implementation in our training regimen. We are also planning to implement a mandatory refresher course for employees about to reach their ninth year of employment—as our data analysis showed that drivers experience a peak rate of collisions in their ninth, tenth and eleventh years of employment.

## STRENGTHEN THE CULTURE OF SAFETY

As New Yorkers continue to make use of technology that increases distracted driving, DSNY is more cognizant than ever before of our responsibility to set a good example while operating our heavy-duty equipment. We have dramatically changed our training and development for supervisory personnel, with a more dynamic and collaborative approach that encourages sharing of best practices to strengthen our management techniques. We bring our superintendents in to share their expectations, and our experienced supervisors participate by sharing their real-world experiences.

## MODIFY OUR FLEET TO INCREASE PUBLIC SAFETY

The Department continues to work with our truck manufacturers to implement improvements to collection vehicle cabs, to improve public and operator safety.



# SUPPORT EMPLOYEES' PROFESSIONAL DEVELOPMENT

INITIATIVES	STATUS
Offer training and professional development opportunities to all employees—civilian and uniformed	
Institutionalize the DSNY suggestion box program and reward employees for safety and cost-saving ideas	
Expand our employee recognition programs agency-wide	
Improve succession planning and documentation of institutional knowledge	

## OFFER TRAINING AND PROFESSIONAL DEVELOPMENT OPPORTUNITIES TO ALL EMPLOYEES—CIVILIAN AND UNIFORMED

In October 2018, the Department appointed a Chief Learning Officer. With the creation of this position, we now have a dedicated office for the design and implementation of professional development programs for all our employees. In the last 12 months, we have identified skill gaps and areas where we can improve performance through focus groups and discussions with supervisors, and we have created new programs to address the professional development needs of our employees. Training for new uniform supervisors now includes small group mentoring discussions with experienced field supervisors and general superintendents to provide support for their transition from sanitation worker to supervisor. A cohort of deputy chiefs are working to enhance the leadership skills of our mid-level field managers. Field personnel are receiving Excel training to be able to make the best use of our SMART 3.0 system. Other workshops include “Presenting with Confidence” for employees who are routinely called on to represent the Department in public and for staff members who are responsible for internal presentations during staff meetings. With a focus on maintaining our excellent customer service, the Bureau of Recycling and Sustainability ran public speaking workshops for all its public-facing staff in the fall. For managers, the Department has begun hosting “Lean Six Sigma” workshops to help streamline processes and “Understanding Your Emotional Intelligence” sessions to provide insight into more effective management techniques. With classrooms in Brooklyn, Queens, and Manhattan, we are expanding our programs to reach more employees where they work. As we continue to listen to our workforce we will identify more opportunities for professional growth while delivering quality training programs.

## INSTITUTIONALIZE THE DSNY SUGGESTION BOX PROGRAM AND REWARD EMPLOYEES FOR SAFETY AND COST-SAVING IDEAS

Over the last year, we have continued to promote our suggestion box program through our monthly employee newsletter.

## **EXPAND OUR EMPLOYEE RECOGNITION PROGRAMS AGENCY-WIDE**

Following the expansion of our employee recognition program in December 2017, the Department is pleased to share that participation in the program continues to surpass expectations. Since the introduction of the Commissioner's Awards for Excellence, any uniformed or civilian employee (permanent or provisional), is now eligible to nominate or be nominated for any award. In the first three quarters of FY19, we received nearly 200 nominations, and we recognized 37 employees from every Bureau of the Department—with a special breakfast with the Commissioner for each group of quarterly winners.

## **IMPROVE SUCCESSION PLANNING AND DOCUMENTATION OF INSTITUTIONAL KNOWLEDGE**

In the last 12 months, the Department has moved to upgrade our Enterprise Content Management system with records management capabilities, allowing greater control in the classification, disposal or preservation of both paper and electronic documents. This step will allow us to build on the progress we have made with inventorying and cataloguing our most valuable documented materials, so that employees have easy access to needed information.



A woman with glasses and a patterned vest is speaking into a microphone.

A woman in a black quilted jacket is listening attentively.

A woman in a dark jacket is listening attentively.

NYC Sanitation  
NEW YORK'S STRONG

# BUILD A DIVERSE AND INCLUSIVE DSNY COMMUNITY

INITIATIVES	STATUS
Increase the diversity of our workforce by recruiting underrepresented groups to apply for civilian and uniform positions of all ranks	
Improve employee engagement and communications	
Improve personnel spaces	

## **INCREASE THE DIVERSITY OF OUR WORKFORCE BY RECRUITING UNDERREPRESENTED GROUPS TO APPLY FOR CIVILIAN AND UNIFORM POSITIONS OF ALL RANKS**

DSNY has integrated into our standard practice targeted recruiting at colleges, vocational schools and workforce development programs to increase diversity at all staff levels. Currently, minority and female employees make up 52 percent of our total workforce. The Office of Equity, Diversity and Inclusion continues to offer programming to support new hires from underrepresented categories as well as existing personnel, including a Women’s Empowerment Program for women employed at the Central Repair Shop. These events are aimed at not only building professional rapport and morale among current employees, but also generating an ongoing conversation encouraging future interest in Sanitation employment.

## **IMPROVE EMPLOYEE ENGAGEMENT AND COMMUNICATIONS**

In the last 12 months, the Office of Equity, Diversity and Inclusion has partnered with the Chief Learning Officer to connect women in the field with opportunities to discuss challenges and suggest ideas for development. At one of these events, the Department hosted Denise Patrick, CUNY Baruch Leadership and Communications Coach, for a discussion of Stacey Abrams’ TED Talk “3 Questions to Ask Yourself About Everything You Do”—an engaging and inspiring call to action for more ownership of your work. More events, such as financial planning seminars, are planned throughout the city so all employees can participate. In addition, we continue to make use of our SMART digital operations boards to better communicate with field employees, promote the use of our employee resource wiki, and plan engaging events including DSNY days and professional sporting games to facilitate opportunities to gather as a community.

## **IMPROVE PERSONNEL SPACES**

In the last 12 months, DSNY has completed locker room and restroom renovations at Brooklyn 7 and Brooklyn 10. All new garages in construction will feature improved facilities to ensure that all our buildings have adequate restrooms and locker rooms for all employees in the future.

**"LIVELY  
LOUIE"**  
*the TALKING*  
**LITTER BASKET**



**D.S.  
N.Y.**

**A CLEANER N.Y.  
IS UP TO YOU!**



# ENGAGE NEW YORKERS AS PARTNERS TO KEEP OUR CITY HEALTHY, SAFE AND CLEAN

**INITIATIVES**

**STATUS**

Develop a roadmap for a DSNY Museum	
Better notify customers about weather-related disruptions in collection service	
Increase public awareness about our operations	
Better integrate outreach and enforcement efforts to improve compliance	
Leverage operations staff to improve outreach and customer service	
Establish a Sanitation Foundation to facilitate private support for the work we do	
Create new forums to share our story with the public	

**DEVELOP A ROADMAP FOR A DSNY MUSEUM**

A core goal of the Foundation for New York’s Strongest is to establish an educational museum dedicated to DSNY’s rich history, current operations and vibrant future. As we build the roadmap for a larger, permanent DSNY museum, the Foundation is forging partnerships with a “museum without walls” approach, to engage with the public, conduct market research and explore potential locations. Over the last year, the Foundation has partnered with cultural heritage and educational institutions to host pop-up exhibits, including an interactive DSNY equipment exhibit at the Transit Museum’s annual Bus Festival, Treasures in the Trash collection pop-ups at ReFashion Week and NYCxReuse, and a first-ever collaboration with an art gallery integrating contemporary artists’ works with Treasures in the Trash items.

We have also begun the process of collecting and digitizing valuable documents that will anchor the collection of the future museum. In the last 12 months, we have collected more than 800 historic photographs of DSNY operations and equipment. We have begun to share these photos with the public via social media, and we will be collaborating with UrbanArchive to make them available through their mapping interface. We also have collected approximately 500 photos and more than 500 TB of digitized video of clean-up operations following the 9/11 attacks, both at the World Trade Center Site and Fresh Kills, which was temporarily re-opened to intake the debris. The Department also recently completed indexing the papers of the Department’s Artist in Residence, Mierle Ukeles. Mierle has generously donated to the Department digital copies of her projects (realized and unrealized) while in residence and also her independent work. The donation follows the successful transfer of all her documents to the Smithsonian Archives of American Art.

**BETTER NOTIFY CUSTOMERS ABOUT WEATHER-RELATED DISRUPTIONS IN COLLECTION SERVICE**

The DSNY communications team continues to push ahead with more comprehensive messaging during weather and holiday-related disruptions in service. The DSNY Info App, which provides real-time notifications, has now

been downloaded by more than 43,000 New Yorkers—more than double the download count at the same time last year. Our dedicated social media coordinator began to manage the nycsanitation and nyczerowaste accounts in late 2018, and the follower count has grown to a total of 130,000 across all of our channels.

## **INCREASE PUBLIC AWARENESS ABOUT OUR OPERATIONS**

As part of our commitment to civic engagement and increasing transparency with the public on our operations, we continue to leverage the Open Data platform to share datasets that illustrate our progress on delivering the highest quality service. New Yorkers can access our monthly tonnage data, look up which vendors are used for different material streams by district, track the locations of our public litter baskets, and do a deep dive into the backup data for the 2017 NYC Residential, School, and NYCHA Waste Characterization Study at [nyc.gov/opendata](http://nyc.gov/opendata). When it comes to operations—New Yorkers value opportunities to go behind the scenes and get up-close and personal with our fleet and facilities. In September 2018, DSNY hosted a Touch a Truck event at our Spring Street Salt Shed, opening up an opportunity for New Yorkers young and old to interact with our fleet. The Department will continue to host “touch a truck” events throughout the city.

## **BETTER INTEGRATE OUTREACH AND ENFORCEMENT EFFORTS TO IMPROVE COMPLIANCE**

In 2016, DSNY developed protocols to closely coordinate the outreach and enforcement rollout of the commercial organics rules. In August 2018, we applied this approach for the second designation of commercial organics sites, with great success. Our outreach team visited all of the newly covered sites prior to enforcement in February 2019. This outreach not only educated and prepared businesses for the new rules, but also collected valuable data that informed our enforcement efforts. In FY19, our commercial outreach team conducted nearly 1,800 site visits to businesses and held over 70 trainings on the new recycling and organics rules.

## **LEVERAGE OPERATIONS STAFF TO IMPROVE OUTREACH AND CUSTOMER SERVICE**

Following the successful inter-bureau collaboration in support of the Department's curbside organics rollout effort, we continue to make use of opportunities to engage our uniformed DSNY staff alongside civilian staff to improve our outreach efforts. Over the last year, front line staff including Sanitation Workers, mechanics and other trades personnel have participated in Touch a Truck events, the Make Compost, Not Trash campaign, the Department's presentation at the NYC Auto Show and more. DSNY remains committed to facilitating opportunities for operations staff to engage with the public, and have begun to incorporate more training focused on interacting with the public for all new sanitation workers joining the agency.

## **ESTABLISH A SANITATION FOUNDATION TO FACILITATE PRIVATE SUPPORT FOR THE WORK WE DO**

Since its launch in fall 2016, the Foundation for New York's Strongest has continued to build creative partnerships with the private sector to support the Department's sustainability goals. In May 2019, the Foundation hosted its second Food Waste Fair. More than 1,300 New Yorkers participated in a week of programming including an expo, eight workshops and an evening event featuring a dozen top chefs competing to make the ultimate zero waste dish. The event galvanized the hospitality sector and connected businesses with the resources to prevent, recover and recycle food waste. The Foundation is also in the second cycle of its microgrant program to support small businesses with direct assistance for food waste prevention. Finally, the Foundation has begun a strategic planning process to produce a long term plan to build on the initial success of the food waste and textile-focused programming.

## **CREATE NEW FORUMS TO SHARE OUR STORY WITH THE PUBLIC**

DSNY continues to explore new opportunities to share how our staff keeps the City healthy, safe and clean. In March 2019, the Department released the first-ever DSNY coloring book featuring a cut-out recycling truck designed to engage New Yorkers young and old. In February 2019, the Department announced "Trucks of Art"—an opportunity for artists to use our collection trucks as a canvas for work focused on promoting our sustainability goals or celebrating our workforce. The call for entries was open to all artists, professional and amateur, and is the first opportunity of its kind with a municipal fleet in New York City. In support of our goal of sending zero waste to landfills, artists will use paints that would otherwise be discarded or recycled. The painted trucks will be unveiled in summer 2019. The Department continues to participate in Open House New York, and in 2019 for the second time displayed DSNY equipment at the New York Auto Show.



E = WASTELESS

♻️ ♻️ ♻️ CYCLING ♻️ ♻️ ♻️



0x30  
zero waste to landfills by 2030  
The bag is reusable — and made with 90% recycled material!

0x30  
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nyc.gov/zerowaste | NYCzerowaste



**Bill de Blasio** Mayor  
**Kathryn Garcia** Commissioner

