

# 2016 STRATEGIC PLAN

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*2018 PROGRESS REPORT*



**sanitation**







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# MESSAGE FROM THE COMMISSIONER



June 2018

Dear Colleagues,

We are now two years in to our ambitious four-year strategic plan, and I'm pleased to share that we have achieved 20 of our 46 initiatives. Our 2016 Strategic Plan remains a guiding blueprint for the agency as we deliver more new services to New Yorkers than ever before.

Over the last year, we have made significant progress on a number of fronts, including zero waste, cleaning, snow operations, public engagement and professional development. We have grown our curbside organics collection program to be the largest in the country, increased litter basket service in every borough, opened the new Hamilton Avenue Marine Transfer Station, and dramatically expanded our use of technology in the field.

At this half-way point, it is important to recognize all that we have achieved, but also to reflect on challenges ahead and to set new milestones where we have delivered success ahead of schedule. For that reason, this year's update contains four new initiatives that build on those already marked as achieved. These include:

- Zero Waste: Increase participation rates for curbside recycling programs.
- Cleaning: Redesign the City's green wire mesh litter baskets to reduce street litter.
- Snow: Test pre-treatment methods to reduce the impact of snow storms.
- Public Engagement: Develop a roadmap for a DSNY Museum.

In the next year, we will redouble efforts to achieving our long term goals. We will continue to expand our zero waste programs, prioritize efforts to upgrade our aging facilities, and better integrate technology to become a safer, more sustainable and efficient agency.

I would also like to thank all of our dedicated employees for your commitment to this Department and your hard work. Your dedication makes it possible for us to set our sights higher this year, and challenges our agency to achieve more.

Sincerely yours,

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



NEW YORK  
CITY E-PRIX  
JULY 14/15 2018  
RED HOOK, BROOKLYN

sanitation

ELECTRIC  
HYBRID

Bk.6A


AUTO SHOW  
- APRIL 8 2018

# 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.

This report serves as a mid-point review, outlining the progress we have made in the 12 months since the publication of the 2017 Progress Report, and highlighting opportunities to set new goals to replace those that were marked “achieved” within the first year of the plan.

The status of the initiatives is categorized as follows:

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

## LAUNCH NEW SERVICES TO REACH ZERO WASTE TO LANDFILLS

INITIATIVES	STATUS
Increase recycling rates for traditional curbside recycling	+
Expand curbside organics collection	
Develop processing capacity for new recycling streams	
Support partnerships that increase recycling participation from 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 advance toward sending zero waste to landfills by 2030, with a set of new programs that cover almost every slice of the waste pie, from textiles and e-waste to food scraps and traditional recycling. We have taken great steps to implement these initiatives, many at a scale and scope unparalleled in the United States and in some cases the world. Today, we are collecting more recyclable metal, glass, plastic and paper than at any point in the last decade, and yet we know that in order to hit our ambitious goal, we need to do more. For that reason, we are committing to a new initiative: **Increase participation rates for curbside recycling programs.**

The Citywide capture rate for recyclables has been relatively stable at approximately 50% for the last two decades. In order to achieve our goal of sending zero waste to landfills by 2030, we see a need and an opportunity to elevate the importance of traditional curbside recycling and work aggressively to increase participation in the newly launched organics collection program. We are committing to increase the Citywide capture rate to 60% over the next five years. Over the next 12 months, we will focus on the new organics curbside collection program, low diversion districts and in-building infrastructure. In the long term, we will evaluate non-policy options and other opportunities to increase New Yorkers' participation in our critical recycling programs.

### EXPAND CURBSIDE ORGANICS COLLECTION

We are proud to have hit a new milestone with our curbside organics collection program, which now serves 3.5 million New Yorkers, up from 1.6 million in June 2017. This program is the largest and most expansive program of its kind in the United States. In the last year, we have completed a massive outreach effort, with 1,447 organics education events and nearly 4 million pounds of compost distributed to thank New Yorkers for their participation in the program. We continued to grow our enrollment program, with 2,344 enrolled buildings now participating, up from 1,210 last June. We also expanded our food scrap drop-off program for residents who do not yet have access to curbside collection or enrollment, with 113 sites now serving communities across the City, up from 104 sites last June. By the end of 2018, we will have 150 food scrap drop off sites. Over the next few months, the Department will be conducting intensive outreach to grow participation in the



curbside collection program, as we evaluate opportunities to increase efficiencies and streamline the program.

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

Our growing organics program continues to build demand for local and regional processing capacity, and drive innovation in mechanical pre-processing equipment to remove inorganic contamination. In January 2018, we launched composting operations at a former salt lot in Gowanus operated by BIG Reuse in partnership with the Gowanus Canal Conservancy. The site has been processing 5,000 lbs of food waste weekly in the first six months of operations. At our Staten Island compost facility, we are on schedule to complete Phase 1 of construction to expand capacity by July 2018, which includes scale upgrades, adding a retention basin, installing a perimeter road to improve safety, and electrical work. Phase 2 of construction will involve installation of the aerated static pile compost system, and is scheduled to be completed by June 2020. We are also in the second year of a three year study with the Department of Environmental Protection, Waste Management and National Grid, to produce energy from food waste at the Newtown Creek Wastewater Treatment Plant.

Recycling programs across the country are facing financial pressure due to new import restrictions on certain recyclable products implemented by China at the beginning of 2018. DSNY is working with its recycling vendors to ensure that materials collected in New York City have reliable and consistent markets to ensure that these products can have another life as new products. As a result of decades of investment in recycling processing infrastructure, including the state-of-the-art materials recovery facility at South Brooklyn Marine Terminal and the Pratt paper mill on Staten Island, the City is better prepared to respond to market pressures affecting other recycling programs in the United States.

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

DSNY continues to work closely with schools, the New York City Housing Authority and the commercial sector 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. We are launching a voluntary expansion of the program through a new initiative called Zero Waste Pledge Schools. Participating schools will have to meet certain criteria



and achieve benchmarks that lay a foundation for a full Zero Waste approach. With the NYC Housing Authority, we have focused in the last year on outreach and education to increase the use of newly available recycling infrastructure. DSNY provided on-site trainings for maintenance staff at all NYCHA management units and funded the Environmental Ambassador Program to grow recycling advocacy within the community. We also collaborated with the Mayor's Office of the Chief Technology Officer and NYCHA to launch a Zero Waste Challenge in Brownsville Houses, which will test convenient door-to-door recycling pickup and on-site organics processing, offering the first opportunity for NYCHA residents to participate in food scrap recycling.

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

Over the last 12 months, DSNY has made significant progress on the implementation plan for establishing commercial waste collection zones, which are expected to reduce truck traffic by more than 60%. Commercial waste zones represent a dramatic overhaul of the City's private waste hauling industry: zones are safer, fairer and more sustainable for those working in the industry and the millions of people that live in or visit our City. DSNY has approached this multi-year initiative with an emphasis on stakeholder engagement and rigorous analysis. Over the past year, our team has held 150 meetings with more than 100 different stakeholders, including private carters, industry associations, business groups, labor organizations, environmental justice advocates, and elected officials. Based on feedback from the advisory board, we are working to finalize a plan that will include a non-exclusive system. This plan will make the industry safer and still allow for much improved efficiency in truck route mileage, while raising standards, allowing customer choice and competitive bidding. DSNY is on track to release the implementation plan in summer 2018 and to begin implementation with a request for proposal (RFP) release by January 2020.

In addition to our policy work, in 2017, DSNY collaborated with leading experts in sustainable design to produce Zero Waste Design Guidelines, to inform architects, planners and developers on best practices for effective waste management. The guidelines encompass design strategies and best practices for reducing waste generation, increasing capture rates, and diverting more waste across a variety of building types common in New York City.

Earlier this year, DSNY finalized rules designating additional covered establishments required to comply with the City's commercial organics law. Restaurants (greater than 15,000 square feet), retail food stores (greater than 25,000 square feet), and chain restaurants (more than 100 locations in NYC) must separate their organic waste for composting or anaerobic digestion. The Department will conduct extensive outreach to these covered establishments to prepare for enforcement beginning next year. Since 2015, DSNY has conducted more than 12,500 outreach site visits and 145 training and tabling events to support compliance with the City's commercial recycling and organics laws.

In 2017, DSNY released its updated determination on the recyclability of foam food service products, again finding that these products are not recyclable and should be banned. In June 2018, a New York State judge dismissed a lawsuit challenging the Commissioner's determination, clearing the way for the implementation of the ban. DSNY will conduct outreach to affected businesses for the remainder of the calendar year, and the ban will take effect on January 1, 2019. While the New York State legislature passed a law repealing the City's five-cent fee on carryout bags last year, the City continues to seek policies that would reduce the approximately 10 billion single-use carryout bags used in New York City every year. Since 2016, DSNY has distributed more than 350,000 reusable bags to New Yorkers across the City to encourage them to "bring your own bag" wherever you go.

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

Since the New York State electronic waste disposal ban was implemented in 2015, we have seen a significant shift in the disposal of e-waste. Our 2017 Waste Characterization Study, released this year, showed a 60% decline in improperly disposed electronics since 2013. New Yorkers are taking advantage of the various e-waste recycling options offered by DSNY, including ecycleNYC, convenient curbside collection and SAFE events. EcycleNYC now serves 1.8 million New Yorkers in more than 13,000 residential buildings, which accounts for more than 25% of the City's 10+ unit buildings. In the last year, the Department expanded our curbside e-waste collection from a successful pilot in Staten Island to northern Brooklyn. We will be expanding to southern Brooklyn and western Queens this fall, and are making a new commitment to reach 20 million lbs of electronic waste collected by June 2020.



In FY2017, we hosted 10 SAFE Disposal Events across the city, where residents could drop off electronics and other harmful products (paint, pharmaceuticals, automotive products), in addition to our five permanent sites. We collected more than 1.4 million lbs of hazardous materials and e-waste at these events. Finally, we are on track to meet our commitment to expand the refashionNYC service to 2,000 buildings by June 2020. Just over 1,700 buildings are currently enrolled in the program, up from 1,500 in June 2017, and nearly 15 million lbs of textiles have been collected since the start of the program. This year, we will continue efforts to grow both programs, and we have recently expanded capacity to process textile donations through a new partnership with the Salvation Army. We are also evaluating opportunities to offer additional textile collection services, including at the home.

DSNY continues to support reuse through web and mobile platforms that make it easy for residents, businesses, and nonprofits to donate and find gently-used and surplus goods. Registrants on donateNYC, DSNY's reuse and donation hub, have more than doubled every year since the program's inception. In 2018, the program prepared to overhaul its suite of donation tools, expanding to include a robust food donation portal and a platform for disaster donations. To prepare for development of donateFOOD, DSNY supported research into food donation protocols and technologies. The resulting food portal, launching in early 2019, will enable any business with surplus food to quickly find organizations that can pick it up and distribute it. DonateNYC's new disaster response exchange will enable the program to divert more unsolicited donations from the waste stream than it ever has before. In 2018, the program prevented almost 3 million pounds of unsolicited disaster donations from going to waste; a cutting-edge messaging suite will enable faster placement of donations in a disaster.







## CLEANING

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

INITIATIVES	STATUS
Redesign the City's green wire mesh 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	○

In the last two years, the Department has set new records for street cleanliness ratings, and increased litter basket service in every borough. With five initiatives in this section fully achieved and one in progress, we are taking the opportunity to introduce a new challenge: **Redesign the City's green wire mesh litter baskets to reduce street litter.**

The City of New York is home to more than 23,250 DSNY-serviced litter baskets that offer pedestrians a convenient way to dispose of refuse and recycling on the go. The most common design is the traditional open-top, green steel wire-mesh basket—which has remained largely unchanged since the 1930s. The design poses several challenges: litter and trash are unsightly and can be easily seen through the wire mesh; contents can spill onto streets and sidewalks; and open sides allow easy access for rats and other rodents. To develop a new standard litter basket design, DSNY is launching a design competition in 2018, and will be selecting three finalists to develop prototype baskets that will be tested in New York City neighborhoods in 2019.

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

In the last year, DSNY has added more than 60 litter basket trucks per week in districts in every borough, concentrating efforts in areas that are consistently problematic as well as the three neighborhoods with the City's largest rodent infestations. The citywide average Scorecard Rating, an independent inspection program conducted by the Mayor's Office, hit a 10-year monthly record high of 96.3% in May 2018, and is at an average of 94.8% for FY2018—a slight decrease from the record high FY17 average of 95.9%.

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

The Adopt-a-Basket program now has more than 2,700 retail stores, community groups and businesses that have adopted more than 3,600 litter baskets. In addition, we partnered with neighborhood associations and elected officials to support 150 volunteer clean-up events since July 2016. We will continue to pursue these partnerships on an ongoing basis.

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

DSNY's highway ramp sweeping pilot started with 10 highways, expanded to 17 roadways in the first year, and is now at a total of 20 roadways across the City with regular on and off-ramp cleaning. Since June 2017, we have added ramps on the Grand Central Parkway, New England Thruway and Throggs Neck Expressway. The pilot has now been embedded in our operations as a full ongoing program, and continues to benefit residents and motorists across the City.

## **PROACTIVELY CLEAN VACANT LOTS**

We continue to proactively monitor and address conditions in vacant lots, with more than 3,200 lots cleaned in FY2018 to date.

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

In 2016, DSNY completed a one-year pilot of solar-powered garbage compactors in Williamsburg, Brooklyn. We continue to collaborate with Business Improvement Districts to support existing solar-powered compactors in their service areas, and are presently not planning to recommend or install any additional solar-powered compactors.

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

DSNY is committed to piloting the installation of automatic vehicle locator technology in all cleaning equipment and digitizing all cleaning routes. We have begun digitizing cleaning routes in the Bronx, and all remaining cleaning routes are slated to be complete by June 2020.



# IMPROVE SNOW REMOVAL

## INITIATIVES

## STATUS

Test pre-treatment methods to reduce the impact of snow storms.	+
Expand sector routes to all boroughs	●
Pilot turn-by-turn routing technology	●+

DSNY is proud of our commitment to excellence in snow operations. We have achieved and surpassed our goals for improving snow removal less than halfway through our strategic plan, with full implementation of snow sectoring complete and rapid expansion of turn-by-turn technology across our snow fleet. For this reason, we are setting a new challenge for the agency: **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. Salt is an effective ice melter at temperatures above 24°F, and calcium chloride is added to lower the temperature at which salt can be effective. Municipalities across the country are testing other innovative additives that reduce corrosiveness and increase adhesion to the road surface. We are committed to evaluating these newly available pre-treatment methods for use on New York City roadways.

## EXPAND SECTOR ROUTES TO ALL BOROUGHS

DSNY fully implemented sector routing during the 2016-2017 season. This year we made additional adjustments to snow routes citywide to improve routing efficiency and quality of life snow removal focusing on bus stops and crosswalks. In addition, during the 2017-2018 season we successfully tested new equipment to clear bike lanes. PlowNYC data continues to be freely available to the public, enabling all residents to track the nearly real-time status of every piece of DSNY snow operations equipment.

## PILOT TURN-BY-TURN ROUTING TECHNOLOGY

Our turn-by-turn navigation technology has been received very well by vehicle operators, and the Department has moved quickly to expand the use of this valuable technology. For 2017-2018 season, we implemented turn-by-turn in all 693 pieces of spreading equipment. In February 2018, we expanded the technology to collection trucks in Queens East and Staten Island. We are committed to making turn-by-turn available in every collection truck for the 2018-2019 snow season.

Small Lab Support

S. Lopez #5

Small Field support

S. Duggan #14

M. Melcone #8

J. Freeman #1

E. Turner #10

A. Eisenberg

S. Farkas




N. Fox

R. Gong

H. Grund

B. Haverly

## 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 has made significant progress in the last year on identifying a universal tablet device for field supervisors and enforcement personnel that can support our suite of software requirements. We have commenced a pilot with various mobile devices and are expecting to provide mobile access and capabilities to all supervisors by June 2020. Over the last 12 months, we also deployed 450 new devices to replace outdated hardware. We have upgraded our NOVAS application and we plan to replace all our old enforcement units with new Panasonic devices by the end of the year, with pilot testing starting in June 2018. We are in the process of putting out an RFP for converting all tickets generated by DSNY from paper to digital and expect completion and rollout by June 2020. We are actively upgrading our building maintenance system of record, including digitizing fuel tank management for the first time.

### COMPLETE THE DEVELOPMENT AND IMPLEMENTATION OF SMART

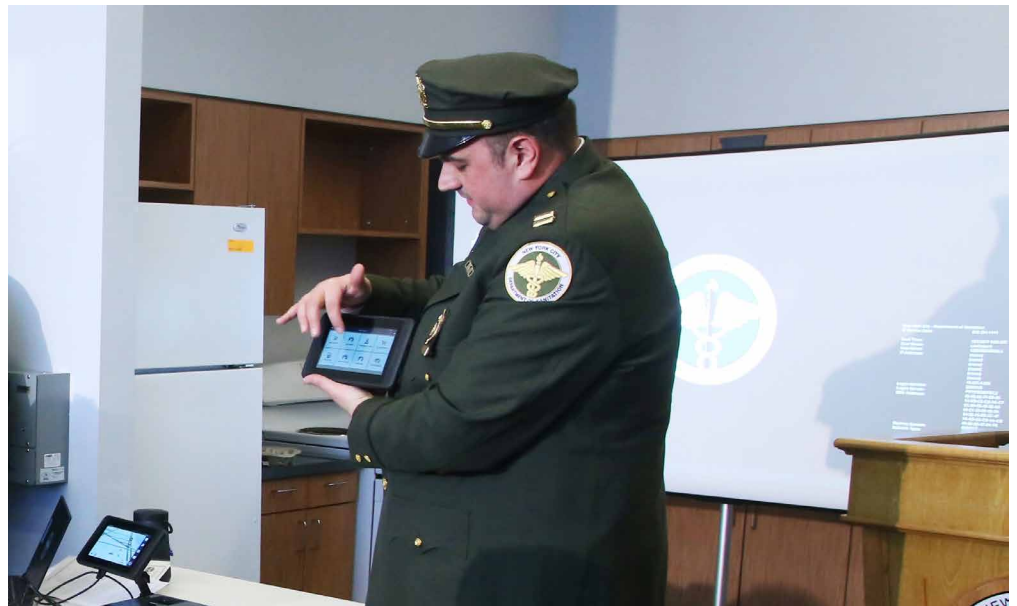
With the deployment of SMART 3.0, we have aggressively expanded the use of technology in the field. We now have a total of 17 fully paperless districts, up from five last June and plan to be paperless throughout the city by the end of 2018, and phased out the predecessor system, SCAN, in February 2018. As we continue to deploy paperless operations boards throughout the City, we are making desperately needed technology upgrades to support the system, such as network bandwidth improvements and cellular repeater installations, providing better access to cellular signal within our facilities. We also continue to make SMART enhancements to reduce managerial paperwork, such as integration with CityTime.

### LEVERAGE GEOSPATIAL INFORMATION TO IMPROVE COLLECTION OPERATIONS

Our data science team is nearing completion on a geospatial “block” face model to predict residential refuse and recycling tonnage for every tax lot in the city. The model incorporates variables such as water usage, price-per-square-footage,



and building age, and has an accuracy rate of 88% on predicting household refuse on any given day. We have also digitized all collection routes, including refuse, organics, and recycling collection, in the 17 districts that currently receive curbside organics collection. We are working on integrating these digitized routes into ArcGIS for easier visualization for field personnel. Finally, additional functionality has been added to the BladeRunner system to enable users to search for vehicles by proximity. This new functionality will allow for greater reporting, investigation, and situational awareness, and provide users access to real time tracking via a mobile device while 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

The City's Solid Waste Management Plan includes the conversion of four marine transfer stations. North Shore MTS is fully operational, and DSNY began operations at Hamilton Avenue MTS in September 2017. This new facility serves 10 districts in Brooklyn, redirecting approximately 200 DSNY trucks per day from private land-based transfer stations in environmental justice areas in Brooklyn. Construction progress is on track at the remaining two facilities, with the Southwest Brooklyn MTS scheduled for completion in the fourth quarter of 2018, and the East 91st Street MTS scheduled for completion in the first quarter of 2019.

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

DSNY continues to work with City Council and industry officials to reduce permitted capacity in overburdened neighborhoods as described in the Solid Waste Management Plan. Last August, Mayor de Blasio announced the Administration's support for a Council bill that would reduce permitted capacity at private transfer stations in four historically overburdened districts by 33 to 50 percent. This year, City Council re-introduced legislation to support this effort and Commissioner Garcia testified in favor of this legislation in June.

### TRANSFORM FRESH KILLS LANDFILL INTO FRESHKILLS PARK

DSNY is on track to complete closure of the last section of Fresh Kills landfill by 2021, with continued improvements in leachate and gas control in the last 12 months. We have terminated active leachate control in Sections 2/8 and 3/4 and moved to passive leachate control. Landfill gas emissions continue to be safely below regulated thresholds, and we will transition from active gas collection to passive venting in 2019. In the final remaining areas of the landfill to be closed, Sections 1/9, we are now in the fourth of seven construction closure phases. Collaboration is ongoing with NYC Parks on transition, planning and development for custodial care of the future park, with the North Park Phase 1 project under construction, and designs for the South Park, Anchor Park underway.







Following Hurricane Maria, DSNY deployed a team of 31 Sanitation Workers and Chiefs to Puerto Rico to support the Puerto Rico Emergency Management Agency (PREMA), the US Federal Emergency Management Agency (FEMA) and sister agencies from New York City as part of a large-scale damage assessment. Although they were initially scheduled to support recovery efforts for two weeks, their work proved so critical, the deployment was extended to more than three weeks. Our team's detailed analysis allowed local and federal response to better strategize the personnel and heavy- and light-duty equipment needed to deliver supplies, remove debris and rebuild. DSNY's employees wearing safety-compliant fluorescent shirts quickly became nicknamed "The Yellow Shirts" by residents, who observed that supplies and services arrived shortly after Sanitation Workers determined how to overcome obstacles preventing support from arriving. The team performed crucial damage assessment in all 78 respective municipalities of Puerto Rico, including islands Vieques and Culebra. The deployment provided ancillary benefits. The team's efforts laid the foundation for what will be a long-term Debris Removal System while setting an important precedent for DSNY support after future storms of this magnitude.



## 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 at our vendors and partner organizations. Internally, we identified 48 managers across the agency that are slated to complete the full NYC Emergency Management training program by the end of 2018. This training consists of computer-based exercises, comprehensive classroom training and a culminating table top exercise—all designed to cover a wide variety of scenarios and national best practices in emergency response. We are collaborating with the Red Cross to begin CPR training for all sanitation workers 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.

Working with our partners and vendors, we revamped our emergency protocols for our Marine Transfer Stations to ensure joint protocols were in place and well-practiced. Our vendors have completed their Emergency Response Plans and possible drill scenarios. We are holding an inaugural Emergency Response table top exercise at the North Shore Marine Transfer Station in June 2018, and will implement this practice at the remaining MTS facilities once operational.

Finally, we developed a continued operations plan to support donations management during emergencies. To further bolster City resilience and preparedness, we worked with the NYC Department of Emergency Management to develop an Emergency Stockpile Supply donation protocol in 2018. This interagency partnership diverted almost 1.2 million pounds of emergency supplies from the waste stream, enabling NYCEM to keep its emergency stock fresh without sending items to landfill.

### STRENGTHEN OUR FLEET AND FACILITIES FOR EMERGENCY OPERATIONS

As an agency with critical facilities on waterfronts across the City, emergency preparation at our facilities is critical. This year, progress on our fuel tank replacement at Pier 36 was delayed due to the condition of the piles supporting the platform



for the aboveground tanks. We are presently looking for an alternate location until the project is resumed once necessary structural repairs are complete. For the 2018-2019 snow season, the Department is collaborating with original equipment manufacturers to source chainless snow tires for our salt spreaders. These tires will maximize the capability of our emergency snow fighting fleet, while reducing the cost and road noise associated with the use of chains.



# OPTIMIZE OUR FLEET

## INITIATIVES

## STATUS

Pilot new technologies to drive toward zero emissions	
Modernize our fleet maintenance program	

## PILOT NEW TECHNOLOGIES TO DRIVE TOWARDS ZERO EMISSIONS

DSNY continues to be on the vanguard of testing new technologies to reduce emissions from our heavy duty and light duty fleet. In the last 12 months, we deployed our newest generation electric hybrid street sweeper. The HySweep provides up to 50% fuel reduction and up to 58% reduction in greenhouse gas emissions—with a significantly lower noise level than standard street sweepers. In 2019, DSNY will test a fully electric demonstration refuse collection truck, equipped with an integrated electric drivetrain system. This vehicle will be the first of its kind manufactured by Mack Trucks and one of the first in its class nationwide, and represents a significant opportunity to test a truly zero emissions waste management vehicle. 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. Our 446 newest collection trucks are in full compliance with EPA Phase-1 greenhouse gas standards. In May 2018, DSNY became the first New York City agency to pilot the use of renewable diesel – a low-emissions, 99% petroleum-free fuel – in eight districts. Presently DSNY uses B20 biodiesel six months of the year, and B5 biodiesel during winter months. Since 2007, DSNY has consumed over eight-million gallons of biodiesel (mostly soy-based) fuel, which equates to a reduction of over 81,000 metric tons of petroleum-based CO<sub>2</sub> GHG emissions. We are also testing the use of B20 biodiesel year-round, with promising results to date.

## MODERNIZE OUR FLEET MAINTENANCE PROGRAM








We continue to update and improve our replacement cycles to maximize the use of our current equipment and present a well-documented case for new vehicles when the needs arise. Our Fleet Maintenance Program includes a broad focus on vehicle safety inspections. We use enhanced fuel/oil analysis to aid in predictive/preventive maintenance. During the summer months, all snow equipment undergoes a comprehensive bumper-to-bumper maintenance/inspection program. A strict "PM Audit" Program insures all work is performed to the highest standard. Our Automotive Technician Training Program plays a big role to insure all technicians get the required training to properly service DSNY's fleet.







# 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	
Streamline capital budget processes	
Develop In-House Construction Management to deliver our capital program on time and on budget	

## CONSTRUCT NEW GARAGES FOR THE 21ST CENTURY

DSNY is currently in process of building new garages for 7 of our Sanitation Districts. The Brooklyn 3 garage is in construction procurement phase, with construction projected to start in early 2019. The Staten Island 1/3 and Bronx 9/10/11 garages are nearing completion of schematic design, with Public Design Commission reviews scheduled this summer. In addition, we received City Council approval in September 2017 to relocate the Manhattan 11 garage to a new site on 127th Street, enabling us to vacate an overcrowded and outdated facility on E. 99th Street in East Harlem. Construction on the new garage is scheduled to begin in late 2018. Finally, the Department continues to search for a new site for the Queens 1 garage, and in the interim has secured a site near Luyster Creek for additional equipment storage.

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

We continue to expand the use of our Avantis Work Order system for scheduled preventative maintenance on individualized equipment. In 2017, we completed 6,800 preventative maintenance tasks, and received 13,000 work requests, of which 82% were completed. We are currently digitizing fuel tank management and importing all equipment at our new Marine Transfer Stations.

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

In the last 12 months, we continued to make progress to comply with the City's MS4 permit. We worked with the Department of Environmental Protection (DEP) to identify 56 out of a total of 101 DSNY locations that will require MS4 facility oversight. We have completed our review of DEP's Stormwater Management Plan pertaining to our Agency, and are planning mandated MS4 training for all personnel in the upcoming months, including: preparing for on-site assessments, general MS4 online & roll call training, and use of DEP's Consolidated Information Tracking System. Finally, we purchased items for our facilities to improve signage around managing potential pollution sources and preventing spills.

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

DSNY has begun the hiring process for a Chief Minority and Women Owned Business Enterprise (MWBE) Officer to identify and further expand opportunities. In FY2018, we anticipate further improvements from the previous MWBE utilization periods, particularly with small and micro purchases. DSNY has continued to expand its outreach to the MWBE community to build and enhance relationships with vendors, including hosting quarterly workshops about contracting opportunities, attending citywide MWBE networking events, advertising MWBE contracting opportunities, and keeping a MWBE list-serv.

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

DSNY continues to make efforts to reduce energy use and carbon emissions from our facilities. We have now completed LED lighting upgrades in three district garages, and are partnering with the Department of Citywide Administrative Services (DCAS) and New York Power Authority to do complete LED upgrades at additional locations including: Betts Avenue Boiler Plant, Cioffe Borough Repair Shop, Manhattan Borough Repair Shop, Brooklyn 7/10, 8, 9, 16, and Queens 9 district garages. With the help of DCAS ExCEL funding, we also have planned lighting upgrades at the Queens Borough Repair Shop, North Shore Marine Transfer Station, and Hamilton Avenue Marine Transfer Station. We estimate current existing and completed lighting projects will save 844 metric tons of CO2 and approximately 3.3 million kWh of energy from lighting improvements, compared to the baseline. We also recently completed solar feasibility studies at 11 of our facilities in order to expand our solar initiative to more rooftops, and identified three facilities that are good candidates for solar installations: Brooklyn 1/4, Queens 11/13, and Manhattan 4/4A/7 garages. Finally, we continue to install rapid-roll up doors on our active bay doors, with 56 doors now installed, and four more in the pipeline for July 2018.

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

To expand our in-house capacity for construction project management, we hired four additional experts to supplement construction unit staff. The Construction unit is currently fully staffed, and our newly hired personnel will help make sure the City will complete projects faster and within budget.






## STREAMLINE CAPITAL BUDGET PROCESSES

Our newly instituted Job Order Contracting (JOCS) program has made a significant impact on our ability to move forward with small and medium-sized projects, such as plumbing, mechanical, electrical, and general contracting work. We have completed 16 projects to date since the program was implemented in 2016, and we have another 30 projects in the pipeline. The JOCS program is saving on average six months in the construction procurement phase of capital and expense projects. Efforts to formalize a comprehensive set of design guidelines for our facilities will resume with the recent addition of dedicated staff to our design unit.





## 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 2017, the Department worked with the Mayor's Office of Operations to conduct a comprehensive analysis of collision data from FY14 to present, to help produce a data-driven approach to improved accountability for safe performance. The analysis showed that new employees have the highest rate of collisions in the second month of employment and during their ninth, tenth and eleventh year of employment. The safety division is making targeted changes during new employee training to address these challenges, and has launched "Safety Matters" presentations in each zone to improve transparency and accountability for safety metrics in each district. Based on the analysis, we are also moving forward with intervention protocols to address and prevent collisions by our more experienced vehicle operators.

### STRENGTHEN THE CULTURE OF SAFETY

As we continue to expand use of technology in the field, DSNY has deployed new safety messages on SMART screens city-wide. We are still in development on driving simulator technologies at Floyd Bennett Field training center to expand our capacity for vehicle operator instruction.





### MODIFY OUR FLEET TO INCREASE PUBLIC SAFETY

This year, the Department will be receiving 446 new collection trucks, which come equipped with sideguards and full LED lighting from the manufacturer. This will bring our total number of collection vehicles outfitted with sideguards to 1,055. We are pilot testing back up cameras on our 25 cubic yard refuse collection vehicles. These back up cameras will help improve safety for the public and our operators. In addition to having more windowed surfaces than ever before for better operator visibility, our street sweepers also have new class 2 strobes on the front and rear of the vehicle to further increasing safety for pedestrians. Finally, our night-vision collision avoidance technology pilot in Manhattan and white noise reverse alarm system pilot are still ongoing.





# 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

To keep our employees engaged and motivated, we have renewed our investment in robust professional development over the last 12 months. We expanded our uniformed Supervisor training program to include an additional 3 days of training exclusively dedicated to leadership and public speaking, to better prepare our next generation of managers and help ease the challenging transition from Sanitation Worker to Supervisor. All senior uniform personnel are also participating in Microsoft Excel training to ensure we support the technical skills needed as the Department continues to rely more heavily on technology on a day to day basis. In June 2018, we are also expanding professional development for the first time to the Bureau of Support Services, which employs over 800 civilian personnel. Finally, in the last 12 months our Office of Equity, Diversity and Inclusion trained 2500 employees – uniformed and civilian alike – to be more proactive in preventing conflict in the workplace. In addition to these skill-based sessions, we continued to expand our lunch-and-learn program, with more than 30 sessions to date featuring diverse topics from “Food Policy in NYC”, to “Waste to Energy and the Future of Waste Disposal”, to “24 Hours in the Life of an Environmental Police Officer at DSNY.” These sessions offer a valuable opportunity for employees to engage in public speaking, and for colleagues to learn about one another. The sessions are also now recorded and transcribed to support documentation of institutional knowledge.

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

Over the last year, we have been promoting our suggestion box program through our monthly employee newsletter. In November 2017, we produced and placed decals on all Sanitation trucks warning the public that assaulting a Sanitation Worker is a felony, punishable by up to seven years in prison. This idea was submitted by an employee via the suggestion program. In the next 12 months, we intend to implement a reward for safety and cost saving ideas.

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




In December 2017, we announced the Commissioner's Awards for Excellence, a new and expanded agency recognition program intended to recognize outstanding service by Department employees from every part of the agency. We expanded the categories to include awards for innovation, sustainability, service during snow or emergency events, public engagement, and managerial excellence. Any uniformed or civilian employee, permanent or provisional, is now eligible to nominate or be nominated for any award. Since the introduction of this new program, participation has soared—with more than 160 nominations received to date. This year, we will have an opportunity to celebrate our accomplishments and inspire pride in our work at a new annual recognition ceremony that better embodies this equitable and transparent approach to recognition.

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

The Department is implementing an inventory and catalog system for our most valuable documented materials. In the last 12 months, we have barcoded over 3,000 boxes of inactive records, so that employees have easy access to needed information. In January 2018, we released a new records retention schedule, outlining clear guidelines for the retention, disposal, and archiving of our government records. This enables us to responsibly dispose of obsolete documents, while identifying and maintaining records of enduring legal and administrative value as efficiently as possible.



## 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 continues to do targeted recruiting at colleges, vocational schools and alongside workforce development programs to increase diversity at all staff levels. Currently, minority and female employees make up 51% of DSNY's employees. In September 2017, newly appointed First Deputy Commissioner Steven Costas became the first Hispanic in the Department's 88 year history to rise through the ranks to the highest ranking uniform position. In October 2017, we reached a new notable first, with the promotion of Chief Shari Pardini, Director of the Operations Management Division, to become the highest ranking uniformed woman in DSNY's history. The Office of Equity, Diversity and Inclusion also continues to facilitate gatherings to improve employee morale, including a Women's Wednesday event in April 2018, where we brought together more than 100 women working at the Department to build community and share professional experiences.

### IMPROVE EMPLOYEE ENGAGEMENT AND COMMUNICATIONS

With 10,000 employees working three shifts across the City, opportunities for us to gather as a community are critical for engagement and morale. We continue to make use of our electronic monthly newsletter to promote social event invitations, charitable fundraising campaigns, professional development opportunities, promotion and award recognition and other news. As more field districts are outfitted with screens for the SMART digital operations boards, we are making use of these screens to show video messages to engage our field personnel. In June 2018, we expanded our internal intranet with an employee Wiki, dedicated to making our HR resources and information about each unit within the Department more available to everyone. We also have a full line-up planned for this year of the ever-popular employee days at professional sporting games, including the NY Yankees, NY Mets, Brooklyn Cycles, NY Jets and Staten Island Yankees.








## IMPROVE PERSONNEL SPACES

In addition to major locker room and restroom renovations already complete at Bronx 8, Manhattan 8, 9 and 12, and Queens West 6, DSNY has active, ongoing construction at nine additional districts this year. Of these, seven will be complete by the end of 2018: Bronx 3A and 7, Brooklyn South 6, Queens West 2 and 4, and Queens East 8 and 10. Two additional facilities are in the pipeline with expected completion in May 2020. All new garages in construction will feature improved facilities, to ensure that all our buildings have adequate restrooms and locker rooms for all employees.



## PUBLIC ENGAGEMENT

# 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	

In the last two years, the Department has made great strides in our work to better engage the public, with four initiatives in this section fully achieved and two with significant progress. We have successfully launched DSNY Info and a new, more streamlined public-facing website. We have broken barriers between outreach, enforcement, and operations staff to improve compliance with our rules and regulations. The Foundation for New York's Strongest has made a splash with the City's first ever event focused on food waste reduction, and a micro-grant program to support small businesses. With the Foundation established, the Department is now committing to **develop a roadmap for a DSNY Museum**.

A core goal of the Foundation for New York's Strongest is to establish the historical significance of solid waste management in New York City, through collecting sanitation-related items and creating informational displays, programs and events. Ultimately, the Foundation aims to set up an independent DSNY Museum, akin to that of the Fire Department of the City of New York. By June 2019, the Foundation's board members will create two plans: a concept for a short-term public information center, easily accessible to New Yorkers and visitors; and a roadmap to create a significantly larger, permanent DSNY Museum.

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

Weather and holiday-related disruptions in service were particularly critical during the 2017-2018 season, as holidays and snow storms delayed Monday services for New Yorkers across the City for several weeks. The DSNY Info app, which provides real-time service reminders, updates and special event schedules, has now been downloaded by more than 18,000 New Yorkers—up from 2,000 in May 2017. The DSNY communications team has increased our presence on Twitter, Instagram and Facebook, with more engaging video content. Starting this year, we will, for the first time, have a dedicated social media coordinator who will manage both the nycsanitation and nyczerowaste



accounts, and bring stories to light from our many garages and field offices. In September 2017, DSNY partnered with NYC 311 to launch a new appointment system for the collection of large and bulky items, like furniture and mattresses. This new application allows New Yorkers to schedule an appointment for collection of large items and has improved the efficiency and effectiveness of bulk waste collection.

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

In January 2018, DSNY launched a new, streamlined public-facing website to make it easier for New Yorkers to find the information they need about our rapidly expanding programs. The new site features a handy “How to get rid of...” feature that identifies the appropriate way to recycle any item, and a “When is collection at...” feature that makes it easy to check your recycling and refuse collection days. Our team also continues to leverage opportunities to educate New Yorkers. We worked with the Metropolitan Transportation Authority to showcase public service announcements about our services on City buses. To support the rollout of our curbside organics program, DSNY distributed nearly 4 million lbs of free compost over the last year, and our street outreach teams have accompanied every new bin delivery to residences across the city, interacting with and educating thousands of New Yorkers. In 2017, the Department created and launched its well-received, anti-litter Talk Trash New York public service announcement. In the next 12 months, the Department will continue to hold basketball-themed, anti-litter events in Queens, Staten Island and the Bronx to encourage New Yorkers of all ages to do their share to keep New York City’s streets clean. Our Department currently has a robust program to engage schools and students in our sustainability programs. To complement Zero Waste Schools, we will create a new educational coloring book to engage both children and adults with a more thorough understanding of the Department, its history of waste management and its current priorities in sustainability.

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

In 2017, DSNY developed protocols to closely coordinate the outreach and enforcement rollout of the commercial organics rules. In August 2017, we applied this approach for the launch of commercial recycling rules enforcement, with great success. Our outreach team visited all of the newly

covered commercial organics sites at least twice prior to enforcement. This on-the-ground outreach not only educated and prepared businesses for the new rules, but also collected valuable data that informed our enforcement efforts. In FY18, our commercial outreach team conducted over 2,000 site visits to businesses and held over 50 trainings on the new recycling and organics rules. In summer 2018, we will be moving forward with a more dynamic education and outreach effort with high rise buildings that are not in compliance with recycling regulation, including a requirement to set out all refuse in clear plastic bags.

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

The Department's commitment to ambitious goals in the 2016 Strategic Plan has facilitated more inter-bureau collaboration than ever before. In support of the massive curbside organics rollout effort, uniformed supervisors worked closely with the Bureau of Recycling and Sustainability's outreach associates to make sure bin delivery went smoothly. In addition, in 2017 our Operations Management Division deployed uniformed DSNY employees to make door-to-door visits in neighborhoods with organics service, leaving a thank you note with a complimentary reusable bag for those residents actively participating in the program. For residents not yet participating, the team left a note explaining the importance of separating organics. This approach was inspired by the behavioral science methods used by energy companies to reduce household energy consumption by telling homeowners where they rank in energy usage amongst their neighbors, and is already yielding results. We found an average 12% increase in participation, with one district jumping 34% after the encouraging notes were delivered. DSNY remains committed to facilitating opportunities for operations staff to work more closely with the public, and in the next 12 months will integrate basic customer service training for all new sanitation workers joining the agency.

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

The Foundation for New York's Strongest launched in fall 2016, and over the last year catalyzed the first ever NYC-based gathering of businesses, non-profits and government officials around food waste reduction. More than 1,200 attendees and nearly 80 exhibitors gathered together at the Brooklyn Expo Center for the Foundation's NYC Food Waste Fair in July 2017. The event featured more

40 expert speakers and 30-plus educational workshops to share innovative and effective food waste reduction solutions. It also raised funds to launch the Foundation's micro-grant program, to support small businesses in solving their food waste challenges. In May 2018, the Foundation awarded four micro-grant winners with a cash prize and technical assistance in partnership with The New York State Pollution Prevention Institute. By June 2020, the Foundation will continue to build commitment to food waste reduction among all New York residents and businesses, and expand programming to support this goal. The Foundation will also develop programming to support textile waste reduction, building on our partnership with fashion designer Heron Preston.

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

DSNY is committed to telling the stories of our hard-working staff to the public. In March 2018, for the first time in the agency's history, we participated in the New York Auto Show, with a hybrid electric sweeper, also known as a mechanical broom, on display for auto enthusiasts. The show was an opportunity to engage a new audience, and demonstrate the Department's commitment to testing new fleet technology. We have also continued our collaboration with Open House New York, and partnered with the City Reliquary for the much-praised exhibit "NYC Trash: Past, Present & Future." The exhibit featured a collection of archival photographs and selected objects from Nelson Molina's "Treasures in the Trash" collection. We also recently partnered with the NY Adventure Club to offer monthly tours of "Treasures in the Trash", to make Nelson Molina's work more accessible to the public.







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

