

Control of Floatable and Settleable Trash and Debris

Municipal Separate Storm
Sewer Systems of New York City

SPDES Number: NY-0287890
Revised September 30, 2020



NYC catch basin captures trash and debris



DEP skimmer boat collecting trash and debris from the boom

Pursuant to Part IV.I of the MS4 Permit, the City must develop a program to manage floatable and settleable trash and debris, also referred to as floatables. The MS4 Permit requires that the City:

- Develop and implement a work plan to determine the loading rate for floatables discharged from the MS4 to waterbodies listed as impaired for floatables;
- Assess and implement strategies to reduce floatables from the MS4 to waterbodies listed as impaired for floatables;
- Continue to implement existing controls (e.g., DEP catch basin hooding, inspection and maintenance program); and
- Implement an interim media campaign to further educate the public on trash and debris control issues.

Consistent with prior studies conducted by DEP, the City defines floatables as manmade materials, such as plastics, papers, or other products, which when improperly disposed of can ultimately find their way to local waterbodies. Floatables include materials that are settleable, floatable, or are neutrally buoyant; such materials may float or sink depending on the ambient conditions to which they are subject. Floatables can create nuisance conditions with regard to aesthetics, recreation, navigation, and waterbody ecology.

This chapter details the City's existing programs to reduce floatables and the proposed methodology for determining the floatable loading rate from the MS4. The loading rate work plan, in addition to past and ongoing evaluations of the City's programs, will inform the further development of floatables management, including methods for selecting technologies and controls. This chapter also describes the City's various media campaigns to raise awareness of trash and debris issues.

9.1 Existing Programs

The City has a variety of long-standing, effective programs that control floatables.

Rules and Regulations Enforcement

The City administers a variety of rules and regulations to keep the streets clean and free of litter. These statutory controls, which help prevent floatables from reaching local waterbodies through the MS4, include prohibitions of and fines for littering and illegal dumping. The rules and regulations also require property owners to clean the sidewalks, gutters, backyard areaways, and alleys surrounding their properties. DSNY enforces these rules and regulations through the DSNY Enforcement Routing Program.

Under the DSNY Enforcement Routing Program, enforcement agents patrol all areas including commercial, industrial, manufacturing, and residential blocks daily during the two specified one-hour time periods¹ focusing on violations for dirty sidewalks, dirty areas, and failure

to clean 18 inches into the street. During these specified enforcement routing times, enforcement agents will issue notices of violation (NOVs) for observed dirty sidewalks, dirty areas, or 18-inch violations in front of or adjacent to a residential or commercial premise. While these violations are only issued during enforcement routing times, enforcement agents may issue NOVs for other types of violations at any time.

Public Education, Outreach, and Stewardship

The City has multiple education and outreach programs that target the issue of litter and floatables. A summary of litter and floatable specific programs is included in Table 9.1. Other education and outreach programs such as DOE's School Sustainability Coordinator Program may also include information related to trash and debris. For a complete list of relevant education programs refer to Chapter 2: Public Education and Outreach.

¹ <http://www1.nyc.gov/nyc-resources/service/2455/sidewalk-cleaning-enforcement-or-sticker-request>

Summary of Litter and Floatables Education, Outreach, and Stewardship Programs

Table 9.1

Controls	Responsible Agencies	Description
Adopt-a-Bluebelt	DEP	DEP invites local community groups, companies, and individuals to enhance open spaces by acting as sponsors who adopt parts of the Bluebelt.
Adopt-a-Catch Basin	DEP	DEP invites local organizations to keep their catch basins clear of debris.
Shoreline and Bluebelt Cleanups	DEP	DEP organizes, supports, and sponsors various shoreline cleanup events throughout NYC.
NYC Park Stewardship	DPR	DPR coordinates volunteer opportunities that enable volunteers to help restore natural areas, care for street trees, clean and beautify parks, and monitor wildlife. These activities can include the care and restoration of natural areas through removal of invasive plants and floatable debris along coastlines.
Adopt-a-Highway/ Greenway	DOT	DOT invites sponsors to adopt highway or greenway segments to perform litter removal and beautification.
Adopt-a-Basket	DSNY	DSNY invites local businesses or community groups to monitor and maintain local litter baskets.
Community Clean-ups	DSNY	DSNY supports local community groups and block associations in their volunteer efforts to keep their neighborhoods clean through local block and street area clean-ups by offering free loans of clean-up tools and equipment.
311	Various Agencies	311 enables the public to report issues, such as heavily littered streets or clogged catch basins, which are referred to the appropriate agency for inspection and follow-up. Refer to Chapter 2: Public Education and Outreach for more information.
Agency Websites and social media	Various Agencies	Various agencies provide educational information on webpages and through outreach campaigns which aim to improve cleanliness and aesthetics of City streets, beaches, and the harbor.
Clean Streets = Clean Beaches	DEP, DSNY	The City distributes educational literature, places posters, and conducts events to raise awareness of litter and floatable issues.

DEP Catch Basin Hooding, Inspection, and Maintenance Program

DEP administers a catch basin inspection, hooding, and maintenance program, which helps prevent trash and debris from reaching waterbodies. Under this program, DEP is responsible for approximately 148,000 catch basins, which are regularly inspected, and if necessary, cleaned or repaired, in both the combined sewer and MS4 area.

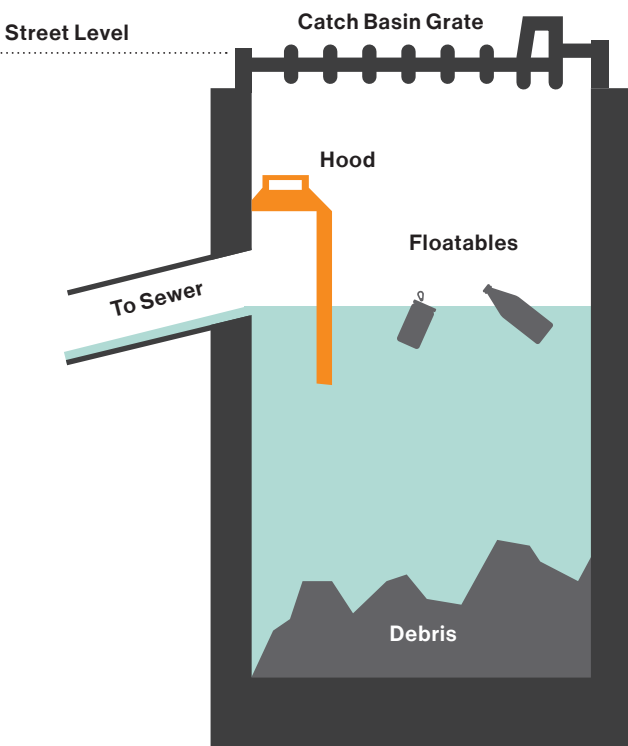
DEP has been inspecting catch basins every three years and in response to 311 complaints. However, pursuant to Local Law 48 of 2015, DEP is currently inspecting catch basins on an annual basis from July 1, 2016, through June 30, 2019. After July 1, 2019, DEP will reevaluate the program to optimize benefits.

As of 2010, DEP has installed hoods in all catch basins that DEP identified as requiring a hood. DEP replaces any missing or damaged hoods within 90 days of discovery. If a catch basin requires extensive repairs before a hood can be installed, DEP will make necessary repairs and install a hood within 24 months.

DEP reports annually on catch basins inspected, cleaned, and repaired or re-hooded in the Combined Sewer Overflow Best Management Practices (CSO BMP) Annual Report.² Additionally, DEP reports the number of catch basins inspected, identified as clogged or malfunctioning, unclogged or repaired, and the average response time to resolve catch

² <https://www1.nyc.gov/site/dep/water/combined-sewer-overflows.page>

Catch Basin Diagram



basin complaints to City Council on a semi-annual basis.

End-of-Pipe and In-Water Containment Systems

DEP operates and maintains a number of end-of-pipe/in-water controls that intercept floatables from combined and separate sewer systems. End-of-pipe/in-water controls located at the mouth of the waterbodies, such as the Bronx River boom, provide a watershed-wide benefit by capturing floatables from upstream CSO and MS4 sources. In 2017, these controls included a total of 23 nets/booms that drain approximately 60,000 acres via 33 CSO outfalls and 25 MS4 outfalls. DEP also operates four specialized skimmer vessels that collect floatables from these booms and/or from surface waters, as needed and as feasibility permits. DEP reports annually on materials collected from nets/booms and open water skimming in the CSO BMP Annual Report.



DEP skimmer boat

DEP Bluebelt Program

The Bluebelt program preserves natural drainage corridors such as streams and ponds, and optimizes them through the design and construction of stormwater controls to filter stormwater before it empties into the New York Harbor. DEP regularly inspects, maintains, and removes litter from both booms and natural areas in the Bluebelts. To assist in these efforts, DEP offers public stewardship opportunities through clean-up events and the Adopt-a-Bluebelt program. To raise public awareness, catch basins in Bluebelt drainage areas are marked with either a medallion or stamped iron curb piece to inform the public that the catch basins drain directly to local waterbodies and that nothing should be dumped into them.

Catch Basin Marking

Catch basin markers inform the public that the catch basins drain directly to local waterbodies and that nothing should be dumped into them. DEP's current sewer design standards require that the cast iron curb pieces of new catch basins citywide be stamped with a message that reads: "Dump No Waste! Drains to Waterways."

Public Litter Baskets

Litter baskets provide pedestrians with receptacles to encourage proper disposal of trash that could otherwise become street litter. DSNY services 23,500 litter baskets. Through the Adopt-A-Basket program, DSNY invites local businesses or community groups to monitor local litter baskets, and when baskets are three-quarters full, adopters tie up the bags, leave them next to the basket, and insert a new plastic bag liner, provided by DSNY. This helps prevent trash from spilling over or being blown by wind onto sidewalks and provides more space in the basket before the next DSNY collection.

Street Sweeping

DSNY street sweeping helps remove street litter before it can enter the sewer system. DSNY street sweeping operations include 435 mechanical broom trucks to address a weekly average of 9,732 routed miles. This is achieved with a daily average deployment of about 185 mechanical brooms. Street sweeping effectiveness is improved by the enforcement of alternate side parking regulations.

SAFE Disposal Events and Special Waste Drop-Off Sites

DSNY hosts SAFE (Solvents, Automotive, Flammables, and Electronics) Disposal Events throughout the year in all five boroughs to help residents safely dispose of harmful household products that cannot otherwise be thrown out with regular household waste. In addition, DSNY operates five Special Waste Drop-Off Sites that accept many harmful household products. By providing ways to properly dispose of waste, DSNY discourages illegal dumping.

Zero Waste

In 2015, Mayor De Blasio released OneNYC, the City's plan for a Strong and Just City. Vision 3 of OneNYC focuses on sustainability and commits the City to sending zero waste to landfills by 2030. This goal is being pursued through several initiatives including reducing the use of plastic bags and other non-compostable waste; increasing recycling by all New Yorkers; diverting organic waste (food scraps and yard waste) to be turned into compost or renewable energy; and increasing textile and e-waste reuse and recycling. Initiatives to reduce waste all serve to reduce sources of floatables.

Business Improvement Districts

Business Improvement Districts (BIDs) are geographical areas where local stakeholders oversee and fund the maintenance, improvement, and promotion of their commercial district; this often includes supplemental sanitation services such as litter removal and litter basket maintenance. In 2017, there were more than 70 BIDs in operation, providing sanitation services to over 4,000 block faces and servicing nearly 6,000 waste receptacles. Currently, at least six BIDs are located in the MS4 area. SBS provides oversight and support to existing BIDs and to communities interested in creating new BIDs.

Park Maintenance

DPR regularly cleans parks, playgrounds, and beaches to maintain these public spaces in clean and good condition. Additionally, DPR works closely with several groups to promote park stewardship, including removing litter from parks and other DPR properties. The Partnership for Parks, a joint program of DPR and the City Parks Foundation, works to boost community involvement in City parks. Each year it organizes numerous events including beach clean-ups, community garden maintenance, and regular litter removal activities.

DSNY mechanical broom truck



9.2 Evaluation of Existing Programs

As part of past initiatives to reduce floatables citywide, DEP has assessed many floatables control technologies and estimated the efficiency of those used in NYC. Additionally, the City continually evaluates litter and floatables conditions in NYC through several ongoing monitoring programs.

Past Evaluations

DEP conducted various field studies to estimate the removal efficiency of various floatables controls as part of its previous Citywide Comprehensive Floatables Facility Planning Project.³ Based on these studies, DEP developed estimates showing that current practices, including street sweeping, catch basin hooding, end-of-pipe netting/booming/skimming operations, and combined-sewage treatment at WWTPs capture or remove approximately 96 percent of citywide floatables originating from street litter.

Citywide, DEP estimated that existing street sweeping practices remove approximately 55 percent of litter from the streets. DEP also found that street sweeping removal efficiency is dependent on public adherence to alternate side parking regulations as well as on mechanical broom operations. DEP's studies indicated that, compared to no sweeping, sweeping once per week reduces floatables by approximately 50 percent, and sweeping twice per week reduces floatables by approximately 70 percent.

Citywide, DEP estimated that catch basins capture approximately 34 percent of floatables originating as street litter. This estimate reflects DEP's implementation of a citywide catch basin hooding program, which was enacted after DEP determined that the floatables-capture efficiency of each catch basin improves 70 to 90 percent when a missing hood is installed.

Citywide, DEP estimated that end-of-pipe and in-water containment systems (i.e., nets, booms, and skimming operations) capture or remove approximately three percent of floatables originating as street litter. The floatables-capture efficiency of end-of-pipe and in-water containment systems can be 75 to 95 percent, dependent upon weather conditions and operational considerations, such as properly operating tide slides (equipment that allows booms to rise and fall with the tides) and timely deployment of specialized skimmer vessels to collect floatables captured by the booms.

The remaining four percent of citywide floatables originating from street litter (in combined sewer areas) is captured at WWTPs.

Ongoing Evaluations

In addition to the past studies that evaluated the efficiency of various controls, the City has several ongoing monitoring programs to help assess trash and debris conditions. The Mayor's Office of Operations tracks street and sidewalk litter levels on a continuous basis, through the Street Cleanliness Rating program. This program visually monitors trends in street and sidewalk litter on a monthly basis throughout the City.⁴

Figure 9.1 presents the percent of acceptably clean streets under this program from 1975 to 2017. DSNY monitors the Street Cleanliness Ratings as a check on trends and the effectiveness of its street cleaning operations. The rating program indirectly reduces floatables by providing DSNY with feedback to help the agency allocate its resources more efficiently.

Similarly, DEP monitors floatables in waterbodies and on beaches citywide through its Floatables Monitoring Program. The Floatables Monitoring Program utilizes visual ratings to document floatables levels at monitoring sites throughout NYC (**Figure 9.2**). Visual ratings collected by DEP staff through the Harbor Survey Program are supplemented by citizen scientists who conduct similar inspections through the Volunteer Survey Program. DEP analyzes the datasets collected by both groups and conducts source investigations at sites with the poorest ratings. DEP summarizes the results of these inspections and source investigations in its annual Floatables Monitoring Program Progress Report. Findings from the program indicate that the floatables condition is typically worse along the shoreline and that floatables tend to accumulate in tributaries and flow-restricted waterbodies. **Figure 9.3** shows the variation of observed floatables conditions since 2010.

DEP also monitors the volume of floatable materials recovered through booms, nets, and open water skimming. This information is reported in the Annual CSO BMP Report⁵ and is summarized in **Figure 9.4**. The quantity of floatables reaching the in-water containment system has decreased over the last decade.

3 "Citywide Comprehensive Floatables Plan - Modified Facility Planning Report," prepared by HydroQual Engineers & Scientists, P.C. for the City of New York Department of Environmental Protection, Bureau of Environmental Engineering, July 29, 2005.

4 <http://www1.nyc.gov/site/operations/performance/scorecard-street-sidewalk-cleanliness-ratings.page>

5 <https://www1.nyc.gov/site/dep/water/combined-sewer-overflows.page>

Percent of Acceptably Clean Streets between Fiscal Years 1975-2017

Figure 9.1

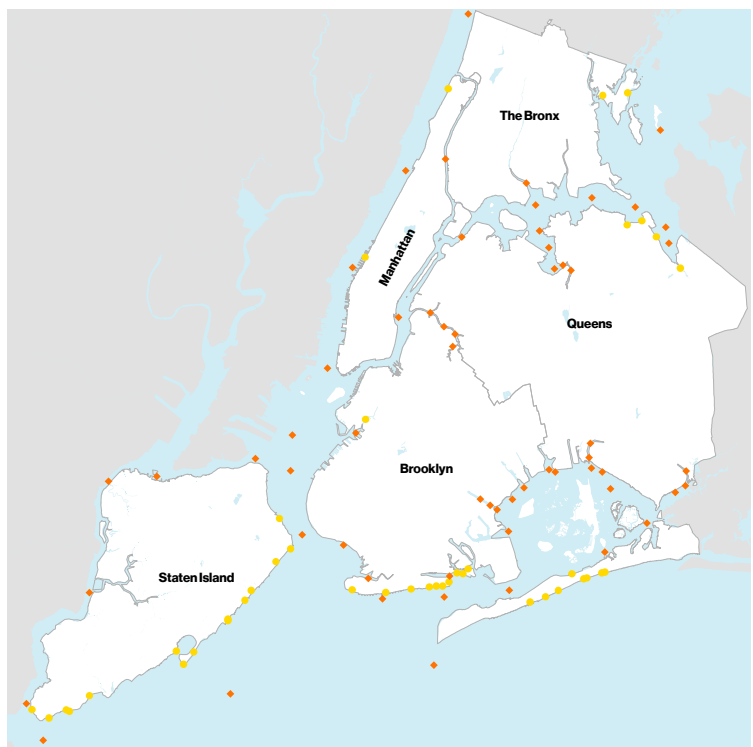
95.9%
in 2017



Location of Floatables Monitoring Program Sites

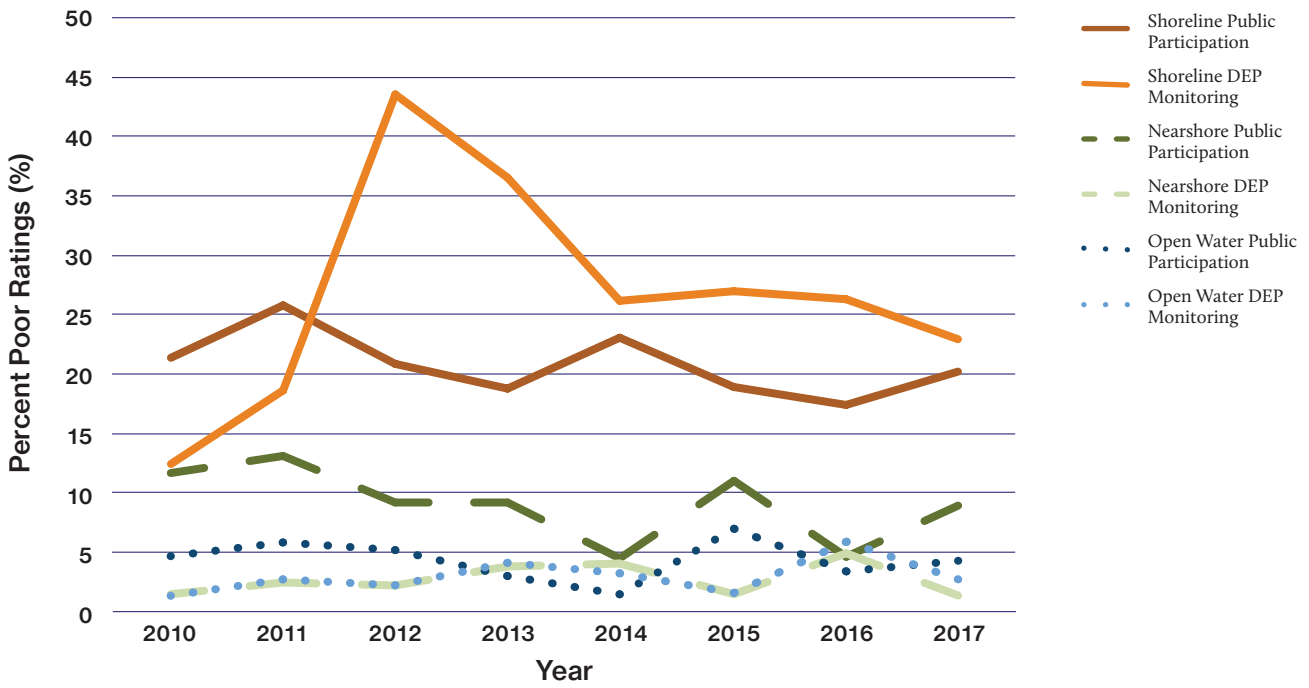
Figure 9.2

- ◆ Harbor Survey Program Sites
- Volunteer Survey Program Sites



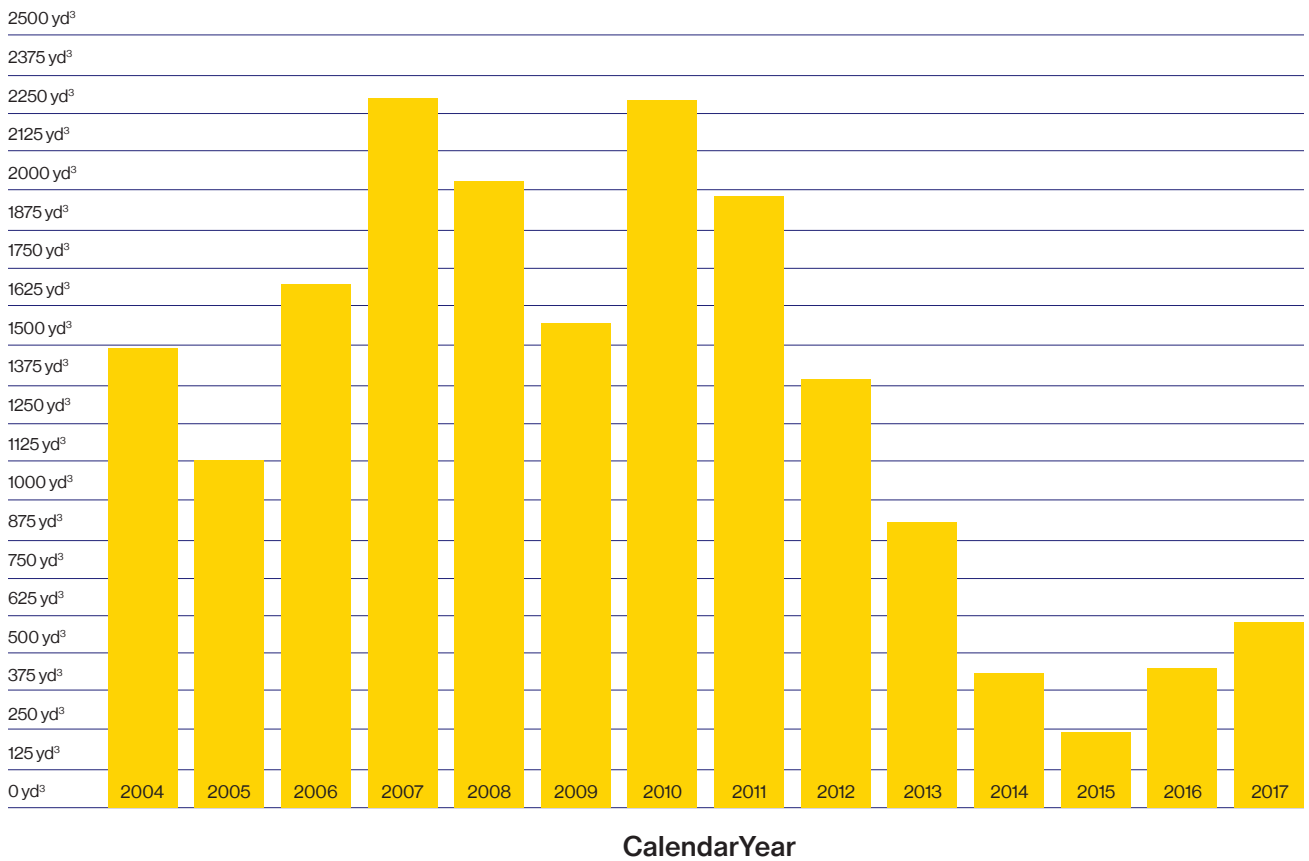
Percent of Floatables Monitoring Program Sites Rated Poor, 2010-2017.

Figure 9.3



Total Floatables Collected by Boom and Skim Program

Figure 9.4



9.3 Loading Rate Work Plan

The MS4 Permit requires the City to develop a work plan to determine the loading rate of floatable and settleable trash and debris discharged from the MS4 to waterbodies listed as impaired for floatables. This loading rate will quantify the amount of trash and debris leaving the MS4 over a period of time. The draft work plan was submitted to NYSDEC for review on August 1, 2017. DEP posted the draft work plan on its website on August 1, 2017 and presented it publicly at a Stormwater Advisory Group Meeting on October 4, 2017. The public was encouraged to review the draft work plan and submit comments through October 16, 2017. In response to comments from both the public and NYSDEC, the City has prepared the final work plan, which is described briefly below. As required by the MS4 Permit, the complete Work Plan to Determine the Loading Rate of Floatable and Settleable Trash and Debris Discharged from the MS4 is included with this Plan as Appendix 9.1.

As described in the final work plan, the City has reviewed loading rate methodologies employed by other municipalities, as well as those used in the City's existing floatables control program. Based on this review, the City has selected a hybrid approach that combines field measurements and model analysis. Using this approach, the City proposes to take field measurements of floatables discharged from catch basins representing various categories of sites that comprise the MS4 area. These data sets will then be used to extrapolate a floatables loading rate by MS4 outfall and for each waterbody designated as impaired due to floatables. In conjunction with field measurements, the City will use an updated version of DEP's existing floatables model to check the results of the field monitoring and to account for downstream in-water controls such as booms and weather conditions.

In summary, the methodology detailed in the final work plan involves the following steps:

- 1 Selection of catch basins representing various categories of sites that comprise the MS4 area;
- 2 Field monitoring to measure floatables discharge rates from the catch basin sites into the separate storm sewer;
- 3 Analysis of field measurements to determine unit loading rates by site category;
- 4 Establishment of rainfall patterns and other conditions suitable for calculation of floatables loadings from the MS4 area; and,
- 5 Application of unit loading rates (by site category) to individual catch basins, and summation of the results by MS4 outfall and by waterbody, for each waterbody designated as impaired due to floatables.

In order to represent the full range of factors affecting floatables generation, interception, and loading in the MS4 area, the City has developed 21 site categories to be included in the field monitoring program. Each site category represents a unique combination of several different representative classes of catchment characteristics and catch basin attributes, or a unique land use. The City will use mesh strainer baskets deployed in MS4 manholes to capture floatables discharged from catch basins to the MS4. Field crews will collect samples to characterize accumulated amounts in dry periods and in wet periods. Floatables collected from each site will be separately sorted to remove sediment and vegetation, quantified, and recorded. The City proposes to express floatables quantity in terms of volume and rates in terms of annual average periods.

Within three months of NYSDEC's approval of the final work plan, the City will submit a schedule for completing the floatables loading rate determination. Pursuant to the Program Development Compliance Schedule in Part IV.O of the MS4 Permit, the loading rate study will commence within two years of the work plan approval and will be completed within three years of the study's commencement. DEP will report on the status of the loading rate study implementation in the MS4 Annual Reports throughout the duration of the study.

9.4 Review of Available Technologies and Controls

In early 2017, DEP surveyed eight municipalities to identify available technologies used for floatables control and which ones may be successful and applicable in the MS4 area. The surveyed municipalities were Los Angeles, Baltimore City and County, Washington D.C., San Francisco, Philadelphia, London, and Melbourne.

The surveyed municipalities employ a number of different actions that serve to control floatables discharges. Controls reported by other municipalities included anti-litter laws and fines, item bans, item fees and deposits, public education and outreach activities, signage, litter basket programs, community cleanups, street sweeping, catch basin cleaning, beach and shoreline cleaning, monitoring efforts, catch basin inserts and screens, hydrodynamic separation, and end-of-pipe booms and nets. **Table 9.2** summarizes the controls implemented by each municipality, with New York City shown for comparison at the far right.

The City is implementing, or has previously evaluated, nearly all of the floatables controls that are in use in the surveyed municipalities. As part of its previous Citywide Comprehensive Floatables Facility Planning Project, DEP assessed more than 100 technologies to control floatables, settleable solids and/or oil and grease from combined and separate sewer areas to determine which technologies might meet the requirements of the CSO program. This assessment is a helpful resource to understand what floatables reduction tools the City may want to expand or implement in the City's MS4 area.

Floatables Controls Implemented by Other Municipalities in Separate Sewer Areas
Table 9.2

Floatables Control	Baltimore City, MD	Baltimore County, MD	Los Angeles, CA	Melbourne, AU	Philadelphia, PA	San Francisco, CA	Washington, D.C.	London, UK	New York City, NY
Item Ban			✓			✓	✓		✓*
Item Fee/ Deposit			✓			✓	✓	✓	✓*
Anti-Littering Laws/Fines	✓	✓	✓	✓	✓	✓	✓	✓	✓
Public Education/Outreach	✓	✓	✓	✓	✓	✓	✓	✓	✓
Litter Baskets	✓		✓	✓	✓	✓	✓	✓	✓
Street Sweeping	✓	✓	✓	✓	✓	✓	✓	✓	✓
Street Cleanups	✓		✓		✓	✓	✓		✓
Curb Inlet Screen Covers			✓						
Catch Basin Inserts	✓		✓		✓				
Catch Basin Hoods									✓
Catch Basin Cleaning	✓	✓	✓		✓	✓			✓
Hydrodynamic Separation			T			✓			T
End-Of-Pipe Nets/Booms	✓		✓				✓		✓
In-Water System	✓	✓	✓		✓		✓	✓	✓
Shoreline Cleaning	✓	✓		✓	✓		✓		✓
Monitoring	✓	✓	✓			✓	✓		✓

Notation: ✓ = implemented, T = tested/testing, ✓* = attempting to implement

The controls listed in Table 9.2 that the City is currently testing or attempting to implement are discussed below:

Item bans, fees, and deposits help eliminate or reduce the use of certain types of items, such as single-use plastic bags and non-recyclable food service products (containers and utensils). These controls can apply broadly to a whole municipality or more narrowly to targeted areas such as bans on certain items on city-owned property. The City has, or has attempted, to use these controls to reduce waste, litter, and floatables.

New York State currently has a five-cent deposit on individual, separate, sealed glass, metal, aluminum, steel, or plastic bottles, cans, or jars less than one gallon for a variety of beverages (i.e., carbonated soft drinks, soda water, beer and other malt beverages, mineral water, wine products, and water), which is in effect in NYC.

In accordance with Local Law 142 of 2013, DSNY has determined that single-use food service items, such as cups and clamshells, made of expanded polystyrene cannot be recycled in a manner that is economically feasible or environmentally effective. As such, restaurants, mobile food vendors, and stores in New York City are banned from selling, using or possessing single-use food service items, including cups, trays, plates, and take-out containers and loose-fill packing “peanuts” made of expanded polystyrene foam. DSNY first made its determination that such items could not be recycled on January 1, 2015. This determination was challenged by the foam industry. However, after a revised determination was issued, the City ultimately prevailed in the litigation. Mayor de Blasio has announced that the City’s ban on single-use foam food service products and local sale of foam packing peanuts will go into effect on January 1, 2019.

The City Council also passed Local Law 63 of 2016 (NYC Carryout Bag Law), which imposed a fee of at least five cents on all carryout merchandise bags. However, in February 2017, the New York State legislature suspended the law and established a one-year moratorium on establishing new carryout bag fees in NYC.

Hydrodynamic separation technologies use the flow of water to separate, capture, and retain trash and debris as well as other pollutants present in stormwater runoff. Hydrodynamic separators are commonly used to treat stormwater from smaller, single-parcel catchment areas, and are employed at several City facilities and operations. The City is considering this technology for stormwater applications and plans to pilot hydrodynamic vortex separators in connection with high-level sewer separation.

The controls listed in Table 9.2 that the City is not currently implementing are discussed below:

Catch basin inserts are designed to detain floatables until the catch basin is cleaned. Although these devices can be effective, past DEP studies did not recommend them for widespread application in NYC streets. The inserts typically require substantial maintenance and increase the potential for clogging and associated street flooding, especially during the autumn season when leaf litter is at its maximum levels.

Curb inlet screen covers are designed to prevent trash and debris from entering catch basins through the curb opening. This trash and debris would remain in the street for removal by adjacent property owners or street sweeping. Curb inlet screen covers can consist of vertical or diagonal bars or perforated or mesh screens, which are installed outside or immediately within the curb opening. DEP’s current Sewer Design Standards do not contain a catch basin curb inlet screen cover; however, older basins installed according to previous design standards may still feature a screen cover.

9.5 Methodology for Selecting Technologies and Controls

Following the floatables loading rate study, as described above in Section 9.3, the City will develop a methodology to site, select, and size best management practices (BMPs) and controls to reduce floatable and settleable trash and debris.

This methodology will utilize the results of the loading rate study to identify and prioritize areas for additional controls and may consider the following factors:

- Waterbody characteristics such as listed impairments, designated uses, and physical attributes that may influence floatables accumulation;
- Neighborhood characteristics such as concentration of litter, population density, and proportion of land uses associated with high litter levels; and,
- Existing controls such as BIDs, street sweeping, and booms and nets.

This methodology will also rely on the review of existing technologies, described in Section 9.4, to identify practicable additional controls and may consider the following factors:

- Effectiveness of controls and any ancillary benefits such as waste reduction or cleaner communities;
- Physical constraints of the site such as limited access for maintenance or space available for control; and,
- Cost of controls including construction, operation, and maintenance.

9.6 Media Campaigns

The MS4 Permit requires implementation of an interim public education media campaign on floatable and settleable trash and debris reduction, between the effective date of the MS4 Permit (August 1, 2015) and submittal of this Plan (August 1, 2018). On October 30, 2015, the City submitted the Trash Free NYC Waters Media Campaign Plan to NYSDEC. This document established the City's strategy to raise awareness and educate the public, first through an existing campaign and later through additional messaging. Between August 1, 2015 and August 1, 2018, the City implemented the three campaigns described below to meet this permit requirement.

B.Y.O. Campaign

Launched in 2015, the B.Y.O. (Bring Your Own) Campaign encourages New Yorkers to live a less disposable lifestyle by using reusable bags, mugs, and bottles. Based on research on the barriers and motivators related to using reusable items, the campaign paired the easily understood call-to-action "bring your own" with a message designed to inspire the desired behavior. By encouraging New Yorkers to use reusable items, the campaign helps reduce the initial generation of waste that may end up as floatable debris in the City's waterbodies.

This campaign was designed and implemented by GreeNYC, a public education program based in the Mayor's Office of Sustainability. This multi-media campaign was designed to strategically reach New Yorkers while they are both at home and out in NYC. The campaign included bus and subway ads, digital ads, radio public service announcements, billboards, and posters on DSNY trucks. GreeNYC also promoted the campaign at events throughout the City to spread the word and encourage New Yorkers to take the B.Y.O. pledge.

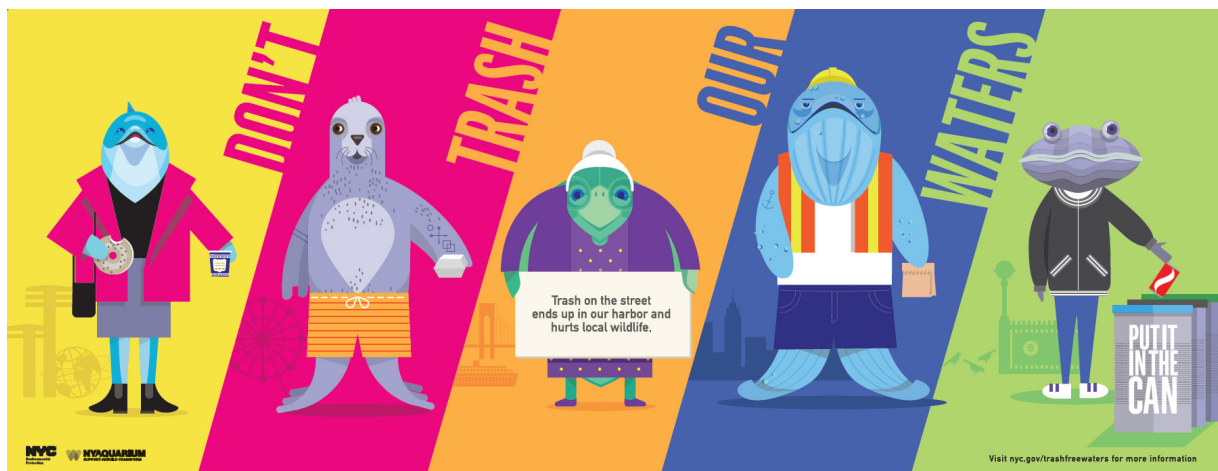


Don't Trash Our Waters

Seeking to raise public awareness of the connection between trash, litter, and water quality, the City developed the campaign message “Don't Trash Our Waters.” This campaign featured a series of charismatic underwater characters, designed to remind New Yorkers that trash on the street ends up in our harbor and hurts local wildlife like dolphins, seals, whales, turtles, and oysters. In addition to raising awareness, the campaign also aimed to change littering behavior by imploring New Yorkers to “put it in the can.”

The “Don't Trash Our Waters” Campaign launched in May 2017 by DEP in coordination with Wildlife Conservation Society (WCS), DSNY, DPR, and the Mayor's Office of Sustainability. Implemented in neighborhoods near waterbodies where floatables are of particular concern, this multi-media campaign used bus shelter, subway station, and digital ads to spread the message. Posters were also displayed on DSNY trucks and nearby park comfort stations. For this campaign, the City worked closely with the WCS to organize an event at the New York Aquarium in Coney Island that would provide New Yorkers with an opportunity to learn more about the New York seascape and the impact of plastics in the ocean.

To assess the reach of the campaign, the City counted the number and reach of ads placed. To assess public engagement with the campaign, the City tracked visits to the DEP Trash Free Waters webpage and engagement with social media posts. To understand better how the campaign was perceived by the public, the City conducted an opinion survey to assess public awareness of the campaign, public sentiment regarding the campaign, and any self-reported behavior changes.



#TalkTrashNewYork

The City developed a basketball-themed message that reminds New Yorkers that keeping NYC clean is a team effort. DSNY partnered with DPR and the New York Knicks for #TalkTrashNewYork, an anti-litter campaign promoting clean streets, sidewalks, beaches, and parks across NYC. A public service announcement (PSA) aired locally and was promoted electronically, in print, and through social media. DSNY made the PSA material available at no cost for media outlets wishing to broadcast the message.

#TalkTrashNewYork launched at The Cage Basketball Courts in Manhattan in May 2017 and featured a free multi-station basketball clinic. Local children were invited to participate in the basketball clinic and learn the fine art of dribbling, shooting, lateral moves, strength, and flexibility, all while learning to keep their city clean. To draw attention to the anti-litter cause, DSNY worked with fashion designer Heron Preston to create a limited-edition, retro-style #TalkTrashNewYork basketball jersey for the first 200 children to play in the clinic. The campaign also announced that 500 hoop-themed litter baskets would be installed in City parks, to be distributed as the additional Talk Trash events are held. To date, DSNY has provided a total of 100 baskets to Parks and will distribute the rest during the next Talk Trash events in Calendar Year 2018.



The City engaged targeted stakeholders on the control of floatable and settleable trash and debris related to the SWMP. These stakeholders included:

- General Public
- Trash Free NYC Waters Working Group
- Educators
- Environmental Stakeholders

The public was very engaged on this issue. In response to comments received on this program, the City:

- Modified the artwork of the “Don’t Trash Our Waters” Media Campaign to include recycling cans alongside litter baskets and include an Oyster character
- Modified the Loading Rate Study in response to public comments
- Will launch a new program to encourage stakeholders to conduct catch basin stenciling



9.7 Measurable Goals and Program Assessment

Table 9.3 lists measurable goals and measures for identified Control Of Floatable And Settleable Trash And Debris best management practices (BMPs). Annual Reports will use these measures to detail the status of each measurable goal and BMP. Part IV.M.4.j.i of the MS4 Permit requires an Annual Effectiveness Assessment in each Annual Report, which is described in Chapter 12: Recordkeeping and Reporting. The City will base the Annual Effectiveness Assessment on its achievement of the stated measurable goals for each chapter of this Plan, including this program. The City will also refine these measurable goals with information gained from program planning and implementation, interagency working groups, and public input. Continuing to refine and update the measurable goals will allow the City to better quantify and accurately represent the effectiveness of each one.

Summary of BMPs, Measurable Goals and Measures for the Control of Floatable and Settleable Trash and Debris Program

Table 9.3

BMP	Measurable Goals	Measure
<p align="center">Provide a Floatable and Settleable Trash and Debris Management Program</p>	<p>Determine Loading Rate of Floatable Trash and Debris discharged from MS4 to waterbodies impaired for floatables</p>	<p>Status of Loading Rate Study</p>
	<p>Continue DEP's Catch Basin Inspection, Cleaning, and Hood Replacement Program</p>	<p>Number of catch basins inspected, cleaned, and retrofitted</p>
		<p>Number of catch basin hoods repaired, installed or replaced</p>
	<p>Continue DEP's boom and netting program</p>	<p>Status and location of Combined Sewer Overflows Best Management Practices Annual Report with Floatables Control Program results</p>
	<p>Implement a public education program on floatables</p>	<p>List of education & outreach programs/ events and relevant metric(s) for each (e.g., number of participants, events, or materials distributed)</p>