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Chapter 11: Solid Waste and Sanitation Services

A. INTRODUCTION

This chapter assesses the potential effects of the Proposed Actions on solid waste and sanitation services in accordance with the 2021 *City Environmental Quality Review* (CEQR) *Technical Manual*. As described in **Chapter 1, "Project Description,"** approval of the Proposed Actions would facilitate the development of five new buildings and potentially, a small retail kiosk on the projected development sites in the Project Area. The new mixed-use development on the projected development sites would either contain a combined total of approximately 1,589,202 gross square feet (gsf) under the Proposed Development, or a combined total of approximately 1,620,348 gsf under the Alternate Community Facility Scenario. A Reasonable Worst Case Development Scenario (RWCDS) has been established for the Proposed Actions for an analysis year of 2036. Compared to the Proposed Development, the Alternate Community Facility Scenario would generate a greater amount of solid waste. Therefore, the solid waste generation of the Alternate Community Facility Scenario is assessed herein.

B. PRINCIPAL CONCLUSIONS

The Proposed Actions would not result in any significant adverse impacts on solid waste and sanitation services. The Proposed Actions would not directly affect a solid waste management facility. Compared to the No-Action condition, the Alternate Community Facility Scenario developed in the future with the Proposed Actions (the With-Action condition) would generate an increment of approximately 56.10 tons per week of solid waste. Approximately 37 percent of the additional solid waste generated by the Proposed Actions (20.66 tons) would be handled by the New York City Department of Sanitation (DSNY), and approximately 63 percent (35.45 tons) would be handled by private carters. Overall, the land uses facilitated under the Alternate Community Facility Scenario would be expected to generate solid waste equivalent to up to approximately 1.7 DSNY truck loads per week and up to approximately 2.9 commercial carter truck loads per week. Although this would represent an increase compared to the No-Action condition, the additional solid waste resulting from the Alternate Community Facility Scenario would be a negligible increase relative to the more than 10,000 tons of garbage and 2,000 tons of recycling handled by DSNY every day. It would also represent approximately 0.01 percent of the City's anticipated future weekly waste generation handled by DSNY by 2026, and approximately 0.05 percent of the City's anticipated future weekly commercial waste generation handled by private carters by 2026 as projected in the Solid Waste Management Plan (SWMP). Therefore, the Proposed Actions would not result in an increase in solid waste that would overburden available waste management capacity. The Proposed Actions would also not conflict with, or require any amendments to, the City's solid waste management objectives as stated in the SWMP. Therefore, the Proposed Actions would not result in any significant adverse impacts on solid waste and sanitation services.

C. METHODOLOGY

According to the 2021 *CEQR Technical Manual*, projects with a generation rate of less than 50 tons (100,000 pounds) of solid waste per week would not result in a significant adverse impact to the City's waste management capacity, and do not warrant detailed analysis. Because it is estimated that the

Proposed Actions would result in a net increase of more than 50 tons of solid waste per week, an assessment of solid waste and sanitation services is warranted.

Technical analysis of solid waste/sanitation services is density-based, and as a result, only the anticipated development on the projected development sites forms the basis of this assessment. The analysis describes existing and future New York City solid waste disposal practices (including the collection system and disposal methods) and estimates the solid waste generated by activities on the projected development sites under existing conditions, and the No-Action and With-Action conditions for the 2036 Analysis Year. Forecasts of solid waste generation by these projected developments are based on the solid waste generation rates for typical land uses and activities provided in Table 14-1 of the *CEQR Technical Manual*. The chapter also assesses the effects of the Proposed Actions' incremental solid waste generation on municipal and private sanitation services in the With-Action condition, and considers the Proposed Actions' consistency with the City's SWMP.

D. EXISTING CONDITIONS

Solid Waste Sanitation Services

DSNY is responsible for the collection and disposal of residential and institutional solid waste (including waste from schools, some non-profit institutions, and many City and governmental agencies), while private carters collect solid waste from commercial and manufacturing uses. In addition to collecting solid waste, DSNY also collects waste from City litter baskets, street sweeping operations, and lot cleaning activities. DSNY has over 2,000 waste collection trucks in its fleet. The typical collection truck for residential refuse carries approximately 12.5 tons of waste material (eight tons for containerized collections) and the typical recycling truck carries approximately 11.5 tons of paper or approximately 10.0 tons of metal, glass, and plastic containers, according to the 2021 *CEQR Technical Manual*. In total, DSNY collects over 10,000 tons of garbage and some 2,000 tons of recycling per day.[1]

Commercial establishments (e.g., restaurants, retail facilities, offices, and industries) in the City contract with private carters for the collection, processing, and disposal of commercial and manufacturing solid waste. This includes municipal solid waste (MSW), construction and demolition debris, non-hazardous industrial waste, and recyclables. Certain commercial establishments – such as some food service establishments, retail food stores, and other facilities meeting certain size and capacity requirements – are required under Local Law 146 of 2013 to separate their organic waste. This includes food scraps, plant trimmings, food-soiled paper, and certified compostable products. Businesses are given the option to arrange for collection by a private carter, transport organic waste themselves, or process the material on-site through in-vessel composting. The City's Business Integrity Commission licenses over 2,200 private carting trucks to collect the City's commercial municipal solid waste, recyclables, and other wastes, and registers over 5,200 more trucks to haul private sector construction and demolition debris in the City (2019 figures sourced from the 2021 *CEQR Technical Manual*). Commercial carters typically carry between 12 and 15 tons of waste material per truck. New York City commercial businesses whose waste is collected by private carting companies generate approximately 9,000 tons of MSW and recyclables daily.[2]

[1] DSNY, https://data.cityofnewyork.us/City-Government/DSNY-Monthly-Tonnage-Data/ebb7-mvp5/about_data
[2] DSNY, Final Generic Environmental Impact Statement for the NYC Commercial Waste Zone Program, 2019.

Under NYC's Mandatory Recycling Law (Title 16 of the NYC Administrative Code, Chapter 3), DSNY has established and enforces rules requiring that certain designated recyclable materials be separated from household waste for separate collection, including aluminum foil, glass and metal containers, plastic bottles and jugs, other rigid plastics, beverage cartons, newspapers and magazines, cardboard and other paper wastes, and other metal items (including bulk metal such as stoves, refrigerators, file cabinets, etc.). Commercial establishments are also subject to mandatory recycling requirements. Businesses must source-separate metal, glass, and plastic containers; certain types of recycling materials, including paper waste, cardboard, metal components in bulk waste, bulk metal, aluminum foil products; and construction waste (for businesses exclusively engaged in an activity that generates construction waste). Significant generators of yard waste or textile waste (at least 10 percent of the business' waste in a month) must recycle such material. Private carters may also separate other types of recyclables from the waste after collection.

DSNY's now mandatory residential organics collection and composting program provides curbside collection and convenient neighborhood drop-off locations. The program decreases the City's reliance on landfills, which release methane — a powerful greenhouse gas (GHG) — from the decomposition of organic waste, reduces air emissions from City refuse sent to waste-to-energy plants and from long-distance waste transport, and reduces related fossil fuel use. DSNY's curbside composting service is mandatory for all New York City residents.

DSNY delivers most of the refuse it collects to certain public or private solid waste management facilities known as transfer stations, in the City or in adjoining communities, for processing and transportation to out-of-City disposal facilities. At waste transfer stations DSNY-delivered refuse is compacted and loaded onto railroad cars or barges for transport to landfills or waste-to-energy facilities. Similarly, commercial municipal solid waste and other solid waste that is not carted directly to disposal facilities is delivered to transfer stations for transport to disposal facilities; most of this commercial waste leaves the City by truck. Non-putrescible waste, such as construction and demolition debris, is typically sorted at transfer stations specialized for this waste. The transfer stations remove clean fill materials, metal, and wood for recycling, and then send the residue to landfills for disposal.

As New York City has no public or private local disposal facilities, solid wastes that are not recycled, reused, or converted to a useful product locally must be exported from the City for disposal. Designated recyclable materials are delivered to privately-operated materials recovery facilities (MRFs) in the City and surrounding communities for processing and transportation to end product manufacturers. Paper recyclables collected by DSNY in Manhattan, Staten Island, and parts of Brooklyn are transported to the Pratt Industries/Visy Paper Recycling Plant in Staten Island, which processes them for use in the production of liner board and similar products. Paper recyclables collected by DSNY in the Bronx are transported to the Sims Municipal Recycling processing facility at the South Brooklyn Marine Terminal (SBMT).

A private vendor operates DSNY's yard waste composting facility in western Staten Island (which also accepts food waste). This facility accepts leaf and yard waste collected from the community districts that are served by DSNY's leaf and yard waste collection program, and from commercial landscapers. Compost from this facility is sold, provided to City agencies such as NYC Parks, and given to community gardens. Other small composting facilities operate locally in partnership with DSNY and local organizations and botanical gardens. The City also runs a small food waste composting facility on Riker's Island that processes food waste from the correctional facility on the island.

"Special Waste" items are certain designated household waste items that require special handling to avoid mixing with regular refuse and recycling collections. Special Waste includes latex paint, motor oil, automotive batteries, household batteries, motor oil filters, fluorescent light tubes, compact fluorescent bulbs, mercury thermostats, and electronic waste (E-waste). DSNY accepts Special Waste from New York City households at drop-off collection facilities located in each borough. Special Waste is transported and disposed of or recycled pursuant to a contract with a private vendor.

Comprehensive Solid Waste Management Plan

New York City has adopted a comprehensive SWMP, as required by New York State law, for the long-term management of solid waste generated by the City. The current SWMP was adopted in 2006 and covers the period until October 2026. The SWMP estimates public- and private-sector waste quantities that must be managed over the planning period and identifies processing, transfer and disposal capacity that will be necessary for such waste. According to the SWMP, the City's commercial solid waste generation is projected to increase to approximately 74,000 tons per week by the year 2026.[3] The amount of DSNY-managed waste is projected to increase to approximately 139,600 tons per week by the year 2026.[4]

The SWMP considers the objectives of New York State's solid waste management policy with respect to the preferred hierarchy of waste management methods, in order of preference: waste reduction, recycling, composting, resource conservation and energy production, and landfill disposal. The SWMP includes programs designed to prevent, reduce, reuse, recycle, and compost solid waste, and includes initiatives intended to reduce truck traffic and air emissions associated with the export of DSNY and commercial waste and recyclables to processors and disposal facilities such as landfills and resource recovery facilities.

With respect to commercial waste, the SWMP provides for the capacity to barge export certain amounts of commercial refuse from the four DSNY marine transfer stations (MTS), plans for barge export of construction and demolition waste from the existing DSNY MTS at West 59th Street in Manhattan, and requires railroad export of commercial refuse from the three private transfer stations in the City that also contract to handle DSNY refuse. The SWMP also includes more stringent restrictions on the siting and operation of commercial solid waste transfer stations, a reduction in the concentration of transfer station capacity, and additional measures to reduce the impacts of commercial waste truck traffic on communities. These efforts were bolstered in 2019 through the passage of Local Law 199, which established twenty commercial waste zones and authorizes up to three carters per zone, further reducing truck traffic and streamlining collection activities across the City.[5] Commercial waste zones were first piloted in September 2024 in Central Queens and are planned for expansion throughout the City during 2025.

In addition, pursuant to Local Law 146 of 2013 and subsequent rules, food waste from many types of commercial establishments must be collected separately from refuse and converted to compost or other beneficial use such as biogas. This applies to hotels serving food with at least 100 sleeping rooms, buildings

[3] DSNY, *Comprehensive Solid Waste Management Plan*, Sept. 2006; Attachment IV, Table IV 2-2. Table IV 2-2 shows the generation of commercial putrescible waste by borough, through the period until 2026.
[4] DSNY, *Comprehensive Solid Waste Management Plan*, Sept. 2006; Attachment II, Table II 2-6. Tables in Attachment II of the SWMP show the projections for DSNY-managed Waste quantities and Recyclables for FY 2007, 2010, 2015, 2020, and 2026.
[5] https://legistar.council.nyc.gov/LegislationDetail.aspx?ID=3963901&GUID=6D5F166D-1834-4EDD-BF64-DA5D1DD88C61&Options=ID%7CText%7C&Search=1574

where food service establishments combined total at least 8,000 square feet, individual commercial food service establishments having at least 7,000 square feet of floor area, food preparation establishments with at least 6,000 square feet of floor area, and retail food stores with at least 10,000 square feet of floor area.

Furthermore, pursuant to Local Law 152 of 2019, four community districts – Bronx CD 1, Bronx CD 2, Brooklyn CD 1, and Queens CD 12 – were designated as "overconcentrated" because they contained 10 percent or more of the total citywide permitted capacity for transfer stations. Therefore, pursuant to Local Law 152, DSNY reduced permitted solid waste capacity in Bronx CD 1, Bronx CD 2, Brooklyn CD 1, and Queens CD 12 through various mechanisms.[6] As a result, increases in solid waste capacity in these four community districts are not permitted, except through special exemption or waiver by the Sanitation Commissioner. The Project Area is not located in an overconcentrated community district (i.e., Bronx CD 1, Bronx CD 2, Brooklyn CD 1, and Queens CD 12), as defined in Local Law 152.

Three DSNY Sanitation District garages, Brooklyn (BK) North 5, BK North 8, and BK North 16, are located nearby at 606 Milford Street, 922 Georgia Avenue, and 1755 Pacific Street, respectively, but are outside of the Project Area. These three of 59 Citywide Sanitation District garages are essential to DSNY's sanitation operations, as they store and maintain DSNY vehicles that provide refuse collection, recycling, and winter emergency services. The DSNY Sanitation District garages allow DSNY to perform its regular duties and execute emergency responses, as needed, to the surrounding neighborhoods. DSNY operations at the DSNY Sanitation District garages for Sanitation Districts BK North5, BK North 8, and BK North 16 would not be affected by the Proposed Actions.

Solid Waste Generation at the Project Area

The projected development sites in the Project Area are currently occupied by approximately 9,000 gsf of commercial uses (office space), 12,904 gsf of community facility uses (house of worship space), and 50,422 gsf of industrial uses. Based on the Citywide average rates for solid waste generation (sourced from Table 14-1 of the 2021 *CEQR Technical Manual*), the existing land uses on the projected development sites in the Project Area are currently estimated to generate a total of approximately 6.49 tons of solid waste per week, as shown in **Table 11-1**. Approximately 96 percent (about 6.23 tons per week) of existing solid waste is handled by private carters and approximately four percent (about 0.25 tons per week) is handled by DSNY.

[6] https://legistar.council.nyc.gov/LegislationDetail.aspx?ID=3331918&GUID=B730F207-D5EF-45B3-9F9E-9F356EFC58C0

TABLE 11-1
Existing Solid Waste Generation — Project Area

Use	Type	Floor Area/Dwelling Units		Occupants		Generation Rate (pounds per week)[1]		Solid Waste Generation		
								lbs/wk	lbs/wk	tons/wk
Residential	-	0	DUs	0	Households	41	Per Household	0	0	0.00
Commercial	Local Retail	0	Square Feet	0	Employees	79	Per Employee	0	468	0.23
	Office	9,000	Square Feet	36	Employees	13	Per Employee	468		
Community Facility	House of Worship	12,904	Square Feet	39	Employees	13	Per Employee	507	507	0.25
Industrial	Light Industrial	50,422	Square Feet	50	Employees	240	Per Employee	12,000	12,000	6.00
Total Solid Waste Generation								***12,975***	***12,975***	***6.49***
Amount Handled by DSNY								***507***	***507***	***0.25***
Amount Handled by Private Carters								***12,468***	***12,468***	***6.23***

Notes:
[1] Solid waste generation is based on Citywide average waste generation rates presented in Table 14-1 of the 2021 *CEQR Technical Manual*.
Residential – 41 lbs/wk/household (dwelling unit);
Retail – 79 lbs/wk/employee, 3 employees per 1,000 sf;
Office – 13 lbs/wk/employee, 1 employee per 250 sf;
Community Facility – 13 lbs/wk/employee, 3 employees per 1,000 sf;
Light Industrial – 240 lbs/wk/employee, 1 employee per 1,000 sf.

E. THE FUTURE WITHOUT THE PROPOSED ACTIONS (NO-ACTION CONDITION)

In the 2036 future without the Proposed Actions (the No-Action condition), the Proposed Actions would not be approved, and the projected development sites in the Project Area would remain as under existing conditions. As shown in **Table 11-2**, the No-Action condition land uses on the projected development sites in the Project Area would generate a total of approximately 6.49 tons of solid waste per week. Approximately 96 percent (about 6.23 tons per week) of the No-Action condition solid waste would be handled by private carters and approximately four percent (about 0.25 tons per week) would be handled by DSNY.

TABLE 11-2
No-Action Solid Waste Generation — Project Area

Use	Type	Floor Area/Dwelling Units		Occupants		Generation Rate (pounds per week)[1]		Solid Waste Generation		
								lbs/wk	lbs/wk	tons/wk
Residential	-	0	DUs	0	Households	41	Per Household	0	0	0.00
Commercial	Local Retail	0	Square Feet	0	Employees	79	Per Employee	0	468	0.23
	Office	9,000	Square Feet	36	Employees	13	Per Employee	468		
Community Facility	House of Worship	12,904	Square Feet	39	Employees	13	Per Employee	507	507	0.25
Industrial	Light Industrial	50,422	Square Feet	50	Employees	240	Per Employee	12,000	12,000	6.00
Total Solid Waste Generation								***12,975***	***12,975***	***6.49***
Amount Handled by DSNY								***507***	***507***	***0.25***
Amount Handled by Private Carters								***12,468***	***12,468***	***6.23***

Notes:
[1] Solid waste generation is based on Citywide average waste generation rates presented in Table 14-1 of the 2021 *CEQR Technical Manual*.
Residential – 41 lbs/wk/household (dwelling unit);
Retail – 79 lbs/wk/employee, 3 employees per 1,000 sf;
Office – 13 lbs/wk/employee, 1 employee per 250 sf;
Community Facility – 13 lbs/wk/employee, 3 employees per 1,000 sf;
Light Industrial – 240 lbs/wk/employee, 1 employee per 1,000 sf.

As required by New York State law, the City has adopted a comprehensive SWMP for the long-term management of solid waste generated within its borders. The current SWMP was adopted in 2006 and covers the period until 2026. The SWMP estimates public- and private-sector waste quantities that must be managed over the planning period and identifies processing, transfer, and disposal capacity that will be necessary for such waste. According to the SWMP, the City's commercial solid waste generation is projected to increase to approximately 74,000 tons per week by the year 2026.[7] The amount of DSNY managed waste is projected to increase to approximately 139,600 tons per week.[8]

F. THE FUTURE WITH THE PROPOSED ACTIONS (WITH-ACTION CONDITION)

In the 2036 future with the Proposed Actions (the With-Action condition), the Proposed Actions would be approved, and the projected development sites in the Project Area would be redeveloped. In the With-Action condition, the Alternate Community Facility Scenario would result in the development of approximately 688,065 gsf of residential space (911 DUs), 598,775 gsf of commercial space, 111,933 gsf of light industrial space, and 114,691 gsf of community facility space at the projected development sites in the Project Area. As shown in **Table 11-3**, under the Alternate Community Facility Scenario, the total solid waste generation would be approximately 62.59 tons per week.

[7] DSNY, *Comprehensive Solid Waste Management Plan*, Sept. 2006; Attachment IV, Table IV 2-2.
[8] DSNY, *Comprehensive Solid Waste Management Plan*, Sept. 2006; Attachment II, Table II 2-6.

TABLE 11-3
With-Action Solid Waste Generation — Project Area (Alternate Community Facility Scenario)

Use	Type	Floor Area/Dwelling Units		Occupants		Generation Rate (pounds per week)[1]		Solid Waste Generation		
								lbs/wk	lbs/wk	tons/wk
Residential	-	911	DUs	911	Households	41	Per Household	37,351	37,351	18.68
Commercial	Local Retail	137,026	Square Feet	411	Employees	79	Per Employee	32,469	56,480	28.24
	Office	461,749	Square Feet	1,847	Employees	13	Per Employee	24,011		
Community Facility	House of Worship and Higher Education	114,691	Square Feet	344	Employees	13	Per Employee	4,472	4,472	2.24
Industrial	Light Industrial	111,933	Square Feet	112	Employees	240	Per Employee	26,880	26,880	13.44
							Total Solid Waste Generation	***125,183***	***125,183***	***62.59***
							Amount Handled by DSNY	***41,823***	***41,823***	***20.91***
							Amount Handled by Private Carters	***83,360***	***83,360***	***41.68***

Notes:
[1] Solid waste generation is based on Citywide average waste generation rates presented in Table 14-1 of the 2021 *CEQR Technical Manual*.
Residential – 41 lbs/wk/household (dwelling unit);
Retail – 79 lbs/wk/employee, 3 employees per 1,000 sf;
Office – 13 lbs/wk/employee, 1 employee per 250 sf;
Community Facility – 13 lbs/wk/employee, 3 employees per 1,000 sf;
Light Industrial – 240 lbs/wk/employee, 1 employee per 1,000 sf.

As shown in **Table 11-3**, commercial and industrial uses under the Alternate Community Facility Scenario would generate approximately 41.68 tons of solid waste per week. Solid waste generated by commercial and industrial uses would be collected by private commercial carters. Commercial and industrial uses developed under the Alternate Community Facility Scenario would be subject to mandatory recycling requirements for paper, metals, construction waste, and aluminum foil as well as metal, glass, plastic containers, and organics. Residential and community facility uses under the Alternate Community Facility Scenario would generate approximately 20.91 tons of solid waste per week. Solid waste generated by residential and community facility uses would be collected by DSNY trucks and would be served by existing DSNY collection routes. As a general practice, DSNY adjusts its operations to service the community. Residents will be required to participate in the City's recycling program for paper, organics, metals, glass, and certain types of plastics.

As shown in **Table 11-4**, compared to the No-Action condition, the Proposed Actions would result in an approximately 20.66-ton increase in weekly solid waste handled by DSNY. This would represent approximately 0.01 percent of the City's anticipated future waste generation handled by DSNY (it is estimated that DSNY will manage 139,600 tons of solid waste for export, recycling compost, and refuse per week by 2026), as projected in the SWMP. Based on the typical DSNY collection truck capacity of approximately 12.5 tons, the new residential and community facility uses introduced under the Alternate Community Facility Scenario would be expected to generate solid waste equivalent to approximately 1.7 truckloads per week. This increase is not expected to overburden DSNY's solid waste handling services.

TABLE 11-4
Comparison of Weekly Solid Waste Generation in Project Area – Existing, No-Action, and With-Action Conditions (Alternate Community Facility Scenario)

	Existing Condition	No-Action Condition	With-Action Condition	Increment (No-Action to With-Action)
Total Solid Waste Generation (tons/wk)	6.49	6.49	62.59	56.10
Solid Waste Handled by DSNY (tons/wk)	0.25	0.25	20.91	20.66
Solid Waste Handled by Private Carters (tons/wk)	6.23	6.23	41.68	35.45

As shown in **Table 11-4**, compared to the No-Action condition, the Proposed Actions would result in an approximately 35.45-ton increase in weekly solid waste handled by private carters. This would represent approximately 0.05 percent of the City's anticipated future commercial waste generation, as it is estimated that private carters will carry 74,000 tons of solid waste per week by 2026, as projected in the SWMP. Based on the typical commercial carter capacity of between 12 and 15 tons of waste material per truck, the Proposed Actions would require between 2.4 and 2.9 additional collection trucks per week compared to the No-Action condition. Under Local Law 199, codified in Title 16-B of the New York City Administrative Code, the Sanitation Commissioner divided the City into 20 zones, including Brooklyn East, where the Project Area is located. Local Law 199 authorizes up to three carters per zone. As the projected commercial waste generation totals less than 0.1 percent of the anticipated weekly total of waste collection in 2026, the additional solid waste generated is negligible. Therefore, the net increment in commercial solid waste handled by private carters would not overburden the City's waste management system.

Overall, the Proposed Actions would not conflict with the SWMP, or have a direct effect on a solid waste management facility. The Proposed Actions would generate a net increase of approximately 1.7 DSNY truckloads and up to 2.9 commercial carter truckloads of refuse per week. The incremental solid waste generated by the Proposed Actions under the Alternate Community Facility Scenario would not overburden the City's solid waste handling systems, and therefore the Proposed Actions would not result in any significant adverse impacts on the City's solid waste and sanitation services.