Chapter 12: Solid Waste and Sanitation Services

A. INTRODUCTION

This chapter considers the effects of the Proposed Actions on solid waste and sanitation services. According to the 2021 *City Environmental Quality Review (CEQR) Technical Manual,* a solid waste and sanitation services assessment determines whether a project has the potential to cause a substantial increase in solid waste production. Such an increase may overburden available waste management capacity or otherwise be inconsistent with the City's Solid Waste Management Plan (SWMP), or with state policy related to the City's integrated solid waste management system.

As detailed in Chapter 1, "Project Description," the New York City Department of City Planning (DCP) is proposing zoning map and text amendments and City Map amendments (the Proposed Actions) to support and facilitate implementation of the Long Island City Neighborhood Plan (the Neighborhood Plan). The area subject to the Proposed Actions (the Project Area) is an approximately 54-block area of the Long Island City neighborhood of Queens, Community Districts 1 and 2.

In order to assess the effects of the Proposed Actions on solid waste and sanitation services, the analysis estimates the amount of existing solid waste generated and provides a comparison of solid waste generation estimates under conditions without the Proposed Actions (No Action condition) and with the Proposed Actions (With Action condition) for the 2035 analysis year.

PRINCIPAL CONCLUSIONS

This analysis finds that the Proposed Actions would not result in a significant adverse impact on solid waste and sanitation services. In addition, the Proposed Actions would not directly affect a solid waste management facility. Based on estimated truck capacities, development resulting from the Proposed Actions in the With Action condition would require up to 12 incremental private carter collection trucks and 56 incremental New York City Department of Sanitation (DSNY) trucks per week compared to the No Action condition.

In the 2035 analysis year, the Proposed Project would result in a net increase in solid waste of approximately 841 tons per week, comprised of an increase of approximately 697 tons of waste handled by DSNY, and an increase of approximately 144 tons of waste handled by private carters when compared to the No Action condition.

Although this would be a net increase compared with the No Action condition, the additional solid waste resulting from the Proposed Actions would be a negligible increase relative to the approximately 12,260 tons of solid waste handled by DSNY or the 9,000

tons handled by private carters per day.[1] Therefore, the Proposed Actions would not result in an increase in solid waste that would overburden available waste management capacity and there would be no significant adverse impact to solid waste. The Proposed Actions would also not conflict with, or require any amendment to, the City's solid waste management objectives as stated in the SWMP.

B. METHODOLOGY

According to the *CEQR Technical Manual*, if a project may lead to substantial new development resulting in at least 50 tons (100,000 pounds) of solid waste generated per week, a detailed solid waste and sanitation services analysis is warranted in order to assess the impacts of the project on the City's waste management capacity. Because the Proposed Actions would result in development and activities generating more than 50 tons of solid waste per week, an analysis was conducted.

An assessment of solid waste and sanitation services is a density-based technical analysis. The analysis describes existing and future solid waste disposal practices, including the collection system and disposal methods; estimates the solid waste generated by activities within the affected area under existing conditions and in the No Action condition for the 2035 analysis year; forecasts solid waste generation based on rates for typical land uses and activities as provided in the *CEQR Technical Manual*; and assesses the effects of the Proposed Actions' incremental solid waste generation on municipal and private sanitation services and on the community in the With Action condition.

C. EXISTING CONDITIONS

DSNY is the agency responsible for the collection and disposal of residential and institutional solid waste in the City, while private carters collect solid waste from commercial and manufacturing uses. In addition to collecting municipal solid waste (MSW), refuse, and designated recyclable materials generated by residential and institutional uses (including schools, some nonprofit institutions, and many city and state agencies), DSNY also collects waste from City-owned litter baskets, street-sweeping operations, and lot-cleaning activities. In total, the DSNY collection fleet is comprised of over 2,000 waste collection trucks, with the typical waste truck carrying approximately 12.5 tons of waste material and the typical recycling truck carrying approximately 11.5 tons of paper or 10.0 tons of metal, glass, and plastic containers. In total, DSNY collects approximately 10,500 tons of residential and institutional refuse and 1,760 tons of recyclables per day. Under its mandatory organics program, DSNY collects food scraps and yard waste in special organics collection bins, which are set out at the curb.

Commercial establishments (e.g., restaurants, retail facilities, offices, and industries) in New York City contract with private carters for collection and processing and/or disposal of various kinds of solid waste, including MSW, construction and demolition debris, non-hazardous industrial wastes, and recyclables. According to the *CEQR Technical Manual*, commercial carters typically carry between 12 and 15 tons of waste material per truck. The City's commercial establishments generate approximately 9,000 tons of MSW and recyclables daily. Under Local Law 199 of 2019 (Title 16-B of the New York City

[1] About DSNY: https://www1.nyc.gov/assets/dsny/site/about, accessed March 2024.

Administrative Code), Commercial Waste Zones were established throughout New York City. The program divided New York City into 20 zones, with a limited number of carters authorized to operate in each zone. This approach is expected to reduce inefficiencies in waste collection routes and substantially reduce carter truck miles. The program will be implemented over multiple years; a transition process started in 2024 and will be complete by 2026.

Under New York City's mandatory Recycling Law (Title 16 of the New York City Administrative Code, Chapter 3), DSNY has established and enforces rules requiring that certain designated recyclable materials be separated from household waste for separate collection. New York City residents are required to separate aluminum foil, glass, plastic, and metal containers, and newspapers and other paper waste from household waste for separate collection. Commercial establishments are also subject to mandatory recycling requirements. Businesses must source-separate certain types of paper waste, cardboard, metal items, and construction wastes. Food and beverage establishments must recycle metal (including aluminum foil), glass, and plastic containers, in addition to meeting the commercial recycling requirements.

As required by New York state law (Section § 27-0107 of the Environmental Conservation 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 through 2025. 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 2025.[2] The amount of DSNY-managed waste is projected to increase to approximately 115,830 tons per week by the year 2026.[3] DSNY is currently working on the updated 2026 SWMP.

The City's solid waste management services are undertaken by DSNY in accordance with the SWMP. The SWMP takes into account the objectives of New York State's solid waste management policy with respect to the preferred hierarchy of waste management methods: first waste reduction, then recycling, composting, resource conservation and energy production, and, lastly, landfill disposal. The SWMP includes initiatives and programs for waste minimization, reuse, recycling, composting, and siting a new waste conversion facility to derive energy from waste, waste transfer, transport, and out-of-city disposal at waste-to-energy facilities and landfills. The SWMP mandates that solid waste be transferred to solid waste management facilities located in each borough, including special (hazardous materials) waste collection sites, composting facilities, and bulk residential waste sites. Local Law 19 of 1989 requires that DSNY and private carters collect recyclable materials and deliver them to material recovery facilities. The SWMP also provides that commercial establishments are subject to the recycling requirements described above.

DSNY delivers most of the refuse it collects to certain public or private solid waste management facilities, known as transfer stations, within the City or adjoining

[2] Comprehensive Solid Waste Management Plan, September 2006; Attachment IV, Table IV 2-2.

[3] Comprehensive Solid Waste Management Plan, September 2006; Attachment II, Table II 2-6.

communities, for processing and transporting to out-of-city disposal facilities. Solid waste that is not recycled, reused, or converted to a useful product locally must be exported from the City for disposal because New York City does not have public or private local disposal facilities, such as sanitary landfills, construction and demolition debris landfills, traditional incinerators, or waste-to-energy resource recovery facilities. Similarly, commercial refuse and other solid waste that is not carted directly to disposal facilities is delivered to transfer stations for transport to disposal facilities. Non-putrescible waste, such as construction and demolition debris, is typically sorted at transfer stations, which remove clean fill materials, metal, and wood for recycling, and send the residue to landfills for disposal. With respect to commercial waste, the SWMP provides the capacity for barge export of certain amounts of commercial refuse from four converted DSNY marine transfer stations (MTS), provides for barge export of construction and demolition waste from the existing DSNY MTS at West 59th Street, and requires rail export of commercial refuse from the three private transfer stations 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.

Designated recyclable materials are delivered to privately operated materials recovery facilities (MRFs) in the City and surrounding communities. Paper recyclables collected by DSNY in Manhattan, Staten Island, and parts of Brooklyn are not taken to an MRF but are transported directly to the Pratt Industries Paper Plant on Staten Island, which processes them for use in the production of liner board and similar products.

SOLID WASTE GENERATION ON PROJECTED DEVELOPMENT SITES

The projected development sites currently contain residential, local retail, office, other commercial, warehouse, auto-related, and manufacturing uses (see **Table 12-1**). Approximately 99.3 tons of solid waste are generated per week, including approximately 98.7 tons handled by private carters and approximately 0.6 ton handled by DSNY.

Table 12-1
Existing Solid Waste Generation on the Projected Development Sites

Use	Floor Area (gsf)	Population/DU	Solid Waste Generation Rate (lbs/wk)	Solid Waste Generation (lbs/wk)	Solid Waste Generation (tons/wk)
Residential	9,273	28	41	1,148	0.57
Local Retail	54,805	165	79	13,002	6.50
Office	748,395	2,994	13	38,197	19.46
Other Commercial	112,870	113	79	8,917	4.46
Warehouse	489,327	33	9	294	0.15
Auto-Related	14,936	15	72.5	1,083	0.54
Manufacturing	757,345	757	182.5	138,215	69.11
Total Solid Waste Generation				***198,515***	***99.26***
Solid Waste Handled by DSNY (includes residential and all CF uses)				***1,148***	***0.57***
Solid Waste Handled by Private Carters				***197,367***	***98.68***

Notes: gsf = gross square feet; DU = dwelling unit; CF = community facility
Source: *CEQR Technical Manual* Table 14-1

D. THE FUTURE WITHOUT THE PROPOSED ACTIONS (NO ACTION CONDITION)

As discussed in Chapter 1, “Project Description,” in the No Action condition, the projected development sites would be developed with new residential, commercial, community

facility, warehouse, and manufacturing uses. In the No Action condition, approximately 280 tons of solid waste per week are projected to be generated on the projected development sites. Of that total, approximately 109 tons of solid waste would be handled by DSNY and approximately 171 tons of solid waste would be handled by private carters (see **Table 12-2**). The New York City Commercial Waste Zones program is expected to be in place by the 2035 analysis year independent of the Proposed Actions. As noted above, this program is expected to improve the efficiency of commercial waste collection and carter truck miles.

Table 12-2
No Action Solid Waste Generation on the Projected Development Sites

Use	Floor Area (gsf)	Population/DU	Solid Waste Generation Rate (lbs/wk)	Solid Waste Generation (lbs/wk)	Solid Waste Generation (tons/wk)
Residential	2,260,332	5315	41	217,915	108.96
Local Retail	341,300	1025	79	80,969	40.48
Office	1,808,364	7233	13	94,035	47.02
Other Commercial	53,470	53	79	4,224	2.11
Warehouse	821,932	55	9	493	0.25
Auto-Related	14,936	15	72.5	1,083	0.54
Manufacturing	887,767	888	182.5	162,017	81.01
			Total Solid Waste Generation	***560,737***	***280.37***
			Solid Waste Handled by DSNY (includes residential and all CF uses)	***217,915***	***108.96***
			Solid Waste Handled by Private Carters	***342,822***	***171.41***

Notes: gsf = gross square feet; DU = dwelling unit; CF = community facility
Source: *CEQR Technical Manual* Table 14-1

E. THE FUTURE WITH THE PROPOSED ACTIONS (WITH ACTION CONDITION)

In the With Action condition, the projected development sites would include residential, local retail, life science, office, community facility (including a 599-seat intermediate school), and manufacturing floor area.

As a result, there would be an increase in solid waste generation on the projected development sites in the With Action condition as compared to the No Action condition. The Proposed Actions would generate approximately 1,122 tons (841 incremental tons) of solid waste per week, of which approximately 806 tons (697 incremental tons) of solid waste would be handled by DSNY and approximately 316 tons (144 incremental tons) of solid waste would be handled by private carters. Typical commercial trucks have a capacity of between 12 and 15 tons of waste material per truck, and typical DSNY collection trucks have a capacity of 12.5 tons of waste material per truck. Based on these truck capacities, development resulting from the Proposed Actions would require up to 12 incremental private carter collection trucks and approximately 56 incremental DSNY trucks per week.

As shown in **Table 12-3**, most of the solid waste per week generated on the projected development sites in the future with the Proposed Actions would be generated by the residential uses. Solid waste generated by commercial uses would be collected by private commercial carters, and commercial buildings on the development sites would be subject to mandatory recycling requirements for paper, metals, construction waste, aluminum foil, glass, and plastic containers.

Table 12-3
With Action Solid Waste Generation on the Projected Development Sites

Use	Floor Area (gsf)	Population/DU	Solid Waste Generation Rate (lbs/wk)	Solid Waste Generation (lbs/wk)	Solid Waste Generation (tons/wk)
Residential	16,632,900	39123	41	1,604,043	802.02
Local Retail	911,053	2736	79	216,136	108.07
Life Science	345,707	1383	13	17,977	8.99
Office	4,373,824	17495	13	227,439	113.72
Other Commercial	0	0	79	0	0.00
Community Facility	187,105	187	0.03	5,613	2.81
School	104,679	599 seats	4	2,396	1.20
Warehouse	0	0	9	0	0.00
Auto-Related	0	0	72.5	0	0.00
Manufacturing	930,150	930	182.5	169,752	84.88
			Total Solid Waste Generation	***2,243,356***	***1,121.68***
			Solid Waste Handled by DSNY (includes residential and all CF uses)	***1,612,052***	***806.03***
			Solid Waste Handled by Private Carters	***631,304***	***315.65***

Notes: gsf = gross square feet; DU = dwelling unit; CF = community facility
Source: *CEQR Technical Manual* Table 14-1

As shown in **Table 12-4**, compared with the No Action condition, the Proposed Actions would result in an approximately 697-ton and 144-ton net increase in weekly solid waste handled by DSNY and private carters, respectively.

The With Action condition (approximately 316 tons with private carters) would represent approximately 0.43 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 2025, as projected in the current SWMP. It is expected that private carter collection fleets operating within the Commercial Waste Zones regulatory framework would be sufficiently flexible to accommodate this increased demand for solid waste collection. Therefore, the incremental commercial solid waste handled by private carters as a result of the Proposed Actions would not overburden the City's waste management system.

Table 12-4
Comparison of Weekly Solid Waste Generation in Tons on Projected Development Sites

	Existing Condition (tons/week)	No Action Condition (tons/week)	With Action Condition – Proposed Project (tons/week)	With Action Increment – Proposed Project (tons/week)
Total solid waste generation	99.3	280.4	1,121.7	841.3
Solid waste handled by DSNY	0.6	109.0	806.0	697.1
Solid waste handled by Private Carters	98.7	171.4	315.7	144.2

The projected development sites would incorporate on-site trash storage within the proposed buildings to minimize placement of trash on sidewalks. Trash would be compacted and containerized prior to collection; recyclables would also be containerized. It is expected that trash would be picked up two or three times per week depending on the use. By containerizing and minimizing the placement of trash on sidewalks, rodents, odors, and other related nuisances would be minimized in the With Action condition.

Overall, the Proposed Actions would not conflict with the SWMP, or have a direct effect on a solid waste management facility. The incremental difference in solid waste generated by the Proposed Actions would not overburden the City's solid waste handling systems, and therefore the Proposed Actions would not have a significant adverse impact on the City's solid waste and sanitation services. ✷