

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 Applicant is seeking discretionary approvals to facilitate the development of the Western Rail Yard (Block 676, Lots 1 and 5) in the Hudson Yards neighborhood of Manhattan (the "WRY Site" or the "Development Site") with approximately 6.2 million gross square feet (gsf) of new mixed use development including residential, commercial, and community facility space, a hotel resort with gaming and new public open space (the "Proposed Project"). There is an ongoing state process underway to designate locations for downstate gaming licenses; therefore, Applicant is also presenting for environmental analysis purposes an Alternative Scenario that reflects a similar density and the same open space configuration as the Proposed Project but includes residential and commercial buildings and a hotel in place of the hotel resort with gaming. The scenario that would result in the more conservative analysis is analyzed for each technical area. For this assessment of solid waste, the Proposed Project is analyzed because it is estimated to generate more total solid waste in the 2031 analysis year than the Alternative Scenario. However, the Alternative Scenario is also analyzed because it is estimated to generate more solid waste handled by the New York City Department of Sanitation (DSNY) than the Proposed Project.

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 (the No Action condition) and with the Proposed Actions (the With Action condition) for the 2031 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 2031 With Action condition would require up to 20 additional private carter collection trucks and 3 additional (DSNY) trucks per week compared to the No Action condition.

In the 2031 analysis year, the Proposed Project would result in a net increase in solid waste of approximately 131 tons per week, comprised of a reduction of approximately 40 tons of waste handled by DSNY, and an increase of approximately 171 tons of waste handled by private carters when compared to the No Action condition. This correlates to an increment of up to 15 additional truckloads per week that would be handled by private carters compared to the No Action condition. The Alternative Scenario would result in a net increase in solid waste of approximately 91 tons per week, comprised of a reduction of approximately 34 tons of waste handled by DSNY, and an increase of approximately 125 tons of waste handled by private carters when compared to the No Action condition. This correlates to an increment of up to 11 additional truckloads per week that would be handled by private carters 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 Project or the Alternative Scenario 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 under both scenarios 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 also would 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 2031 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 2031 With Action condition. As described above, for this assessment of solid waste, both the Proposed Project and Alternative Scenario are analyzed in comparison with the No Action condition in the 2031 analysis year.

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

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

(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 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 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

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

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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 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 THE DEVELOPMENT SITE

The Development Site currently contains a Long Island Rail Road (LIRR) train yard, with the capacity for 386 train cars on 30 tracks. The Development Site also contains other facilities that support the daily operation of LIRR, including a railroad-interior cleaning

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

facility, storage, and buildings that house other operational functions. LIRR performs interior cleaning of trains parked in the yard. Approximately four tons per week of solid waste are generated by the existing LIRR operations at the Development Site.

D. FUTURE WITHOUT THE PROPOSED ACTIONS

As discussed in Chapter 1, "Project Description," in the No Action condition, the Development Site would be developed with new residential, commercial, and community facility uses. In the No Action condition, approximately 150 tons of solid waste per week are projected to be generated on the Development Site. Of that total, approximately 72 tons of solid waste would be handled by DSNY and approximately 78 tons of solid waste would be handled by private carters (see **Table 12-1**). The New York City Commercial Waste Zones program is expected to be in place by the 2031 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 12-1

No Action Solid Waste Generation on the Development Site

Use	Floor Area (gsf)	Population/DU	Solid Waste Generation Rate (lbs/wk)	Solid Waste Generation	
				(lbs/wk)	(tons/wk)
Residential	2,514,225	3,454 dwelling units	41 per household	141,614	70.81
Office	2,185,000	8,740 employees	13 per employee	113,620	56.81
Retail	164,500	494 employees	79 per employee	39,026	19.51
Cultural Space	16,000	48 employees	79 per employee	3,792	1.90
Community Facility – Day Care	10,000	66 students	1 per student	66	0.033
Community Facility – School	120,000				
Elementary Seats		420 students	3 per student	1,260	0.63
Intermediate Seats		330 students	4 per student	1,320	0.66
Total Solid Waste Generation				300,698	150.35
Solid Waste Handled by DSNY (includes residential and all CF uses)				144,260	72.13
Solid Waste Handled by Private Carters				156,438	78.22
Source: CEQR Technical Manual Table 14-1					

Source: CEQR Technical Manual Table 14-1

E. FUTURE WITH THE PROPOSED ACTIONS

PROPOSED PROJECT

In the 2031 With Action condition, under the Proposed Project, the Development Site would be developed with approximately 6,226,560 gsf in three buildings. The Proposed Project would include residential, retail, and office uses, a hotel resort with gaming, a public school, a day care center, space for a local cultural institution, and publicly accessible open space.

As a result, there would be an increase in solid waste generation on the Development Site with the Proposed Project in the 2031 With Action condition as compared to the No Action condition. The Proposed Project would generate approximately 281 tons of solid waste per week, of which approximately 32 tons of solid waste would be handled by DSNY and approximately 249 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 20 additional private carter collection trucks and approximately 3 additional DSNY trucks per week.

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As shown in **Table 12-2**, most of the solid waste per week generated on the Development Site in the future with the Proposed Project would be generated by the commercial uses associated with the hotel resort with gaming. Solid waste generated by commercial uses would be collected by private commercial carters, and commercial buildings on the Development Site would be subject to mandatory recycling requirements for paper, metals, construction waste, aluminum foil, glass, and plastic containers.

Table 12-2

Proposed Project Solid Waste Generation on Development Site

Use	Floor Area (gsf)	Population/DU	Solid Waste Generation Rate (lbs/wk)	Solid Waste Generation (lbs/week)	Solid Waste Generation (tons/wk)
Residential	1,208,623	1,507 dwelling units	41 per household	61,787	30.89
Office	2,179,899	8,720 employees	13 per employee	113,360	56.68
Retail – Non-resort	24,638	74 employees	79 per employee	5,846	2.92
Cultural Space	16,000	48 employees	79 per employee	3,792	1.90
Community Facility – Day Care	10,000	66 students	1 per student	66	0.033
Community Facility – School	120,000				
Elementary Seats		420 students	3 per student	1,260	0.63
Intermediate Seats		330 students	4 per student	1,320	0.66
Hotel Resort and Gaming	2,667,400	5,000 employees	75 per employee	375,000	187.5
Total Solid Waste Generation				562,431	281
Solid Waste Handled by DSNY (includes residential and all CF uses)				64,433	32
Solid Waste Handled by Private Carters				497,998	249

Source: CEQR Technical Manual Table 14-1

ALTERNATIVE SCENARIO

In the 2031 With Action condition, under the Alternative Scenario, the Development Site would be developed with approximately 6,259,170 gsf in three buildings. The Alternative Scenario would include residential, retail, and office uses, a hotel, a public school, a day care center, space for a local cultural institution, and publicly accessible open space.

As a result, there would be an increase in solid waste generation on the Development Site in the 2031 With Action condition with the Alternative Scenario as compared to the No Action condition. The Alternative Scenario would generate approximately 241 tons of solid waste per week, of which approximately 38 tons of solid waste would be handled by DSNY and approximately 203 tons of solid waste would be handled by private carters. Based on estimated truck capacities, development resulting from the Alternative Scenario would require up to 17 additional private carter collection trucks and approximately 3 additional DSNY trucks per week. As shown in **Table 12-3**, most of the solid waste per week generated on the Development Site with the Alternative Scenario would be generated by the commercial uses associated with the hotel.

As shown in **Table 12-4**, compared with the No Action condition, the Proposed Project and Alternative Scenario would result in an approximately 131-ton and 91-ton net increase in weekly solid waste handled by DSNY and private carters, respectively. With the Proposed Project, there would be an approximately 40-ton decrease in the amount of solid waste to be handled by DSNY (approximately 32 tons/week, compared to 72 tons/week in the No Action condition) and an approximately 171-ton increase in the amount of solid waste to be handled by private carters (approximately 249 tons/week, compared to 78 tons/week in the No Action condition).

Table 12-3

Alternative Scenario Solid Waste Generation on Development Site

Use	Floor Area (gsf)	Population/DU	Solid Waste Generation Rate (lbs/wk)	Solid Waste Generation	
				(lbs/week)	(tons/wk)
Residential	1,482,476	1,816 dwelling units	41 per household	1816	37.23
Office	3,745,932	14,984 employees	13 per employee	14,984	105.07
Retail – Non-resort	34,868	105 employees	79 per employee	105	16.00
Cultural Space	16,000	48 employees	79 per employee	3,792	1.90
Community Facility – Day Care	10,000	66 students	1 per student	66	0.03
Community Facility – School	120,000				
Elementary Seats		420 students	3 per student	1,260	0.63
Intermediate Seats		330 students	4 per student	1,320	0.66
Hotel	849,894	2,125 employees	75 per employee	159,375	79.69
Total Solid Waste Generation				482,396	241
Solid Waste Handled by DSNY (includes residential and all CF uses)				77,102	38
Solid Waste Handled by Private Carters				405,294	203

Source: CEQR Technical Manual Table 14-1

With the Alternative Scenario, there would be an approximately 34-ton decrease in the amount of solid waste to be handled by DSNY (approximately 38 tons/week, compared to 72 tons/week in the No Action condition) and an approximately 125-ton increase in the amount of solid waste to be handled by private carters (approximately 203 tons/week, compared to 78 tons/week in the No Action condition). This would represent approximately 0.23 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. Based on estimated truck capacities, development resulting from the Proposed Actions would require up to 15 additional private carter collection trucks per week and a decrease of up to 4 DSNY trucks per week, compared to the No Action condition. 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 Development Site

	No Action Condition (tons/week)	With Action Condition – Proposed Project (tons/week)	With Action Condition – Alternative Scenario (tons/week)	With Action Increment – Proposed Project (tons/week)	With Action Increment – Alternative Scenario (tons/week)
Total solid waste generation	150	281	241	131	91
Solid waste handled by DSNY	72	32	38	-40	-34
Solid waste handled by Private Carters	78	249	203	171	125

The Development Site under both scenarios would incorporate on-site trash storage within the proposed buildings to minimize placement of trash on sidewalks. Trash at the Development Site 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

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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. *