

A. INTRODUCTION

This chapter considers the proposed project's effects on solid waste and sanitation services. According to the *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 proposed project would redevelop the northern portion of the Bronx Psychiatric Center (BPC) campus with a mix of commercial and medical office, bio-tech/research, hotel, accessory, college/trade school, community facility, and retail uses along with open space and parking facilities. For the purposes of this Environmental Impact Statement (EIS), it is assumed that in the future without the proposed project (the "No-Action" condition), the three primary, existing buildings (Bronx Children's Psychiatric, Thompson, and Parker Buildings) would remain vacant. The powerhouse, two metal shelters, and small storage building on the project site would also be vacated and decommissioned, and the ballfields would remain as in the existing condition. The proposed project would be completed in two phases, with 2023 as the analysis year for Phase I completion, and 2028 as the year for Phase II full build-out, or "With-Action" condition. In order to assess the effects of the proposed project 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 the No-Action and With-Action conditions.

PRINCIPAL CONCLUSIONS

This analysis finds that the proposed project would not result in a significant adverse impact on solid waste and sanitation services. Additionally, the proposed project would not directly affect a solid waste management facility. The proposed project would generate an increment above the No-Action condition of approximately 61 tons per week of solid waste, of which approximately 8.18 tons (0.0071 percent of the City's anticipated future solid waste generation) would be handled by the New York City (NYC) Department of Sanitation (DSNY), and approximately 52.43 tons (0.071 percent of the City's anticipated future commercial waste generation) would be handled by private carters. This correlates to approximately 0.65 additional truckloads per week of solid waste handled by DSNY, and approximately 4 additional truckloads per week handled by private carters. Although this would be an increase compared with the conditions in the future without the proposed project, the additional solid waste resulting from the proposed project would be a negligible increase relative to the approximately 12,260 tons of solid waste handled by the DSNY or the 13,000 tons handled by private carters per day.¹ As such, the proposed project would not

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

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result in an increase in solid waste that would overburden available waste management capacity. The proposed project 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 proposed 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 project would result in development and activities generating more than 50 tons of solid waste per week, an analysis was conducted.

The analysis describes existing and future NYC solid waste disposal practices, including the collection system and disposal methods; estimates the solid waste generated by activities on the project site under existing conditions and in the No-Action condition for the 2023 and 2028 analysis years; 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 project's incremental solid waste generation on municipal and private sanitation services and on the community.

C. EXISTING CONDITIONS

DESCRIPTION OF CURRENT SOLID WASTE SANITATION SERVICES

DSNY is the City agency responsible for the collection and disposal of municipal solid waste, refuse and designated recyclable materials generated by residences, public schools and some nonprofit institutions, tax exempt non-residential facilities 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 composed of 2,100 refuse and recycling collection trucks, with trucks collecting an average of 12,000 tons of refuse and recycling each day.² For Bronx Community District (CD) 11, DSNY collected 156.1 tons of residential and institutional refuse and approximately 21 tons per day of recyclable material.³ A typical collection truck utilized by DSNY for residential use is able to hold up to 12.5 tons of waste material. Recycling trucks utilized by DSNY are able to carry approximately 11.5 tons of paper or approximately 10.0 tons of metal, glass, and plastic containers.⁴

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 transporting to out-of-City disposal facilities. Solid wastes that are not recycled, reused, or converted to a useful product locally must be exported from the City for disposal because NYC does not have public or private local disposal facilities such as sanitary landfills, construction and demolition debris landfills, traditional incinerators, or waste-to-energy resources recovery

² DSNY website: <https://www1.nyc.gov/assets/dsny/site/about/fleet>, accessed August 2018.

³ DSNY website: https://dsny.cityofnewyork.us/wp-content/uploads/2018/08/about_dsny-collections-monthly-2018-06.pdf, accessed August 2018.

⁴ 2014 *CEQR Technical Manual*.

facilities. DSNY-managed refuse from the Bronx is driven to a private transfer station in Harlem River Yards, from which it is further transported by rail to a landfill in Virginia.

DSNY collects designated recyclables, including metal, glass, and plastic and designated paper recyclables and delivers them to materials recovery facilities. Such recyclables from the Bronx are transferred to barges at the private Sims Municipal Recycling facility on Edgewater Road, for further sorting at the Sims facility on the 30th Street Pier in Brooklyn and subsequent export from the City. In addition, DSNY collects residential yard waste on certain fall weekends and delivers it to the City's yard waste and composting facilities. DSNY developed SWMP to address management of expected future demands for the City's solid waste. The SWMP was approved by the NYC Council in July 2006 and by the New York State Department of Environmental Conservation (NYSDEC) in October 2006, and covers the period through 2025.⁵

The City's solid waste management services are undertaken in accordance with the SWMP, through DSNY. The SWMP establishes a hierarchy of preferred solid waste management methods to reduce and process solid waste generated within the City. The methods of the SWMP are, in order of priority: waste reduction; recycling; composting; resource conservation and energy production; and, lastly, landfill disposal. The SWMP reduces waste hauling traffic, provides for solid waste to be transferred at various solid waste transfer stations located in each borough, and includes drop-off sites for certain problem wastes such as latex paint and batteries, and composting facilities. Local Law 19 of 1989 requires that DSNY and private carters collect recyclable materials and deliver them to material recovery facilities. City residents are required to separate aluminum foil, glass, plastic, and metal containers, and newspaper, cardboard and other paper wastes from household waste for separate collection. Under New York City's Recycling Law, commercial establishments are also subject to mandatory recycling requirements. Businesses must source-separate waste paper, cardboard, bulk metal, and metal, glass, and plastic containers.

The Mayor has announced that DSNY will expand voluntary residential food waste collection to the entire City in the next few years. Such waste is to be converted in the region to compost, biogas, and/or other beneficial use. DSNY's voluntary organics program enables it to increase the diversion of food and other organic waste from landfills and waste-to-energy plants, in accordance with SWMP and the Mayor's *One NYC: The Plan for a Strong and Just City*. The City also mandates composting or biogas production for the food waste from certain large food waste generators such as food manufacturers with at least 25,000 square feet (sf) of floor area, food wholesalers (at least 20,000 sf), restaurants of hotels with at least 150 rooms, stadiums, arenas, retail food stores (at least 25,000 sf), food service establishments (at least 15,000 sf), and chain food service establishments with at least 100 locations in New York City.. The food waste is taken to composting facilities and anaerobic digestion facilities in the region.

The recycling and organic food waste laws are part of New York City's "ZeroWaste" program, an initiative aimed at reducing commercial waste by 90 percent by 2030. While all NYC businesses must contract with licensed private carters to remove their waste, large businesses that are mandated to separate organic waste are given the option to arrange for collection by a private carter, transport organic waste themselves, or process the material on site. Suitable processing methods are reviewed and approved by DSNY.⁶

⁵ DSNY website: <https://www1.nyc.gov/assets/dsny/site/resources/reports/solid-waste-management-plan>.

⁶ NYC Commercial Organics Law: July 2nd, 2015 <http://rules.cityofnewyork.us/tags/organic-waste>.

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The Electronic Equipment Recycling and Reuse Act, enacted in May 2010, established a state-wide reuse and recycling program for certain waste electronic equipment. The law prohibits disposal of such e-waste within the state by those other than individuals and households as of January 1, 2012, and by individuals and households as of January 1, 2015.⁷ Local law 97 of 2005 also bans the disposal of rechargeable batteries as solid waste and requires them to be taken instead to local retailers that sell such batteries so that they may be recycled pursuant to a program arranged by the battery manufacturer.

Medical facilities are required to submit waste disposal plans to DSNY that outline how the facility will dispose of both their regulated medical waste and ordinary waste. The New York State Department of Health (NYSDOH) and the New York State Department of Environmental Conservation (NYSDEC) regulate the generation, treatment, storage, transfer, and disposal of regulated medical waste (i.e. potentially hazardous or infectious materials). Regulated medical waste must be placed in special sealed containers and disposed of in facilities permitted to process such waste by approved methods. Medical facilities are also required by law to recycle their ordinary waste.

Private carters also consolidate commercial solid waste for commercial establishments (restaurants, retail facilities, offices, industries, etc.), collection, processing, and/or disposal of various kinds of solid waste, construction and demolition debris, non-hazardous industrial wastes, and recyclables.

Waste collection from the residential and community facility uses in the study area is handled by DSNY. In the study area, private carters are contracted to collect waste for retail, commercial, and institutional uses.

The City's Business Integrity Commission licenses over 4,000 private carting trucks to collect the City's commercial municipal solid waste and recyclables, and registers over 4,000 more trucks to haul private sector construction and demolition debris in the City (2013 figures), with more than 2,000 private carting businesses authorized to serve NYC. According to the *CEQR Technical Manual*, commercial carters typically carry between 12 and 15 tons of waste material per truck. The City's businesses, whose waste is collected by private carting companies, generate approximately 13,000 tons of refuse each day.

SOLID WASTE GENERATION ON THE PROJECT SITE

The project site currently contains uses that generate a negligible amount of solid waste. Currently occupying the site are the vacant Bronx Children's Psychiatric, Thompson, and Parker Buildings as well as the steam-generating powerhouse, two metal shelters, and small storage building, which are also vacated and decommissioned. Additionally, there are ball fields that occupy the project site. These uses generate a negligible amount of solid waste on the project site.

D. THE FUTURE WITHOUT THE PROPOSED PROJECT

As described in Chapter 1, "Project Description," independent of the proposed project, the Bronx Children's Psychiatric, Thompson, and Parker Buildings have been vacated and their uses relocated to new BPC facilities located at the southern portion of the campus. For the purposes of the EIS, it is assumed that in the future without the proposed project (the "No-Action" condition) these existing buildings would remain vacant. The steam-generating powerhouse, two metal

⁷ NYSDEC website: http://www.dec.ny.gov/docs/materials_minerals_pdf/ewastelaw2.pdf

shelters, and small storage building on the project site would also remain vacated and decommissioned. The ball fields would remain as in existing conditions. Overall, since there are no changes anticipated by the 2023 and 2028 analysis years on the project site, the No-Action condition assumes that there would continue to be negligible solid waste generation on the project site as in the existing conditions.

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 a 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 2025.⁸ The amount of DSNY-managed waste is projected to increase to approximately 118,830 tons per week.⁹ The SWMP encompasses the known plans to manage the City's future solid waste management practices closest to the 2023 and 2028 analysis years.

E. THE FUTURE WITH THE PROPOSED ACTIONS —2023

As described in Chapter 1, "Project Description," in the future with the proposed project under the 2023 analysis year, or Phase I completion, would include the redevelopment of the Thompson and Parker Buildings and the development of a new retail building. Phase I would include commercial office, medical office, bio-tech/research, accessory uses, a hotel, a college/trade school, retail, community facility, accessory amenity, parking, and open space.

As shown in **Table 12-1**, the total solid waste generation for Phase I of the proposed project would be approximately 41 tons per week.

⁸ SWMP, September 2006. Attachment IV, Table IV 2-2.

⁹ SWMP, September 2006, Attachment II, Table II 202.

Table 12-1
With-Action Solid Waste Generation on the Project Site—2023

Use	Floor Area (gsf)	Population ¹	Solid Waste Generation Rate (lbs/wk)	Solid Waste Generation	
				(lbs/week)	(tons/wk)
Commercial Office	217,000	1,431	13 per employee	18,603	9.30
Medical Office and Biotech/Research²	425,500	2,807	13 per employee	36,491	18.25
Accessory Use	100,000 (100 dwelling units)	100	41 per household	4,100	2.05
Hotel Rooms	124,300 (133 rooms)	73	75 per employee	5,475	2.74
College/Trade School³	100,000	-	-	-	-
Students	-	2,778	1 per pupil	2,778	1.39
Faculty and Staff	-	226	13 per employee	2,938	1.5
General Retail	33,500	139	79 per employee	10,981	5.49
Community Facility and Amenity	12,100	25	13 per employee	325	0.16
Total Solid Waste Generation				81,691	40.85
Notes:					
¹ The population of the proposed project was developed based on estimates provided by Simone Development.					
² The solid waste generation rate for commercial office was applied to the medical office/biotech research use.					
³ Assumes approximately 36 sf per student in a community college facility based on SF per student at the Bronx Campus of Mercy College in Hutchinson MetroCenter (approximately 3,500 students in 125,000 GSF). Assumes 730sf per staff/faculty in a community college facility based on the CUNY Hunter building program analyzed in the <i>Memorial Sloan-Kettering Cancer Center Ambulatory Care Center and CUNY-Hunter College—Science and Health Professions Building FEIS</i> (CEQR No. 13DME003M) (547 faculty and staff in 402,990 gsf).					
Sources: Simone Development, <i>CEQR Technical Manual</i> Table 14-1					

Of the 41 tons of solid waste per week generated in the With-Action condition, commercial uses would generate an estimated 35.78 tons. Solid waste generated by commercial uses would be collected by private commercial carters, and commercial buildings developed with the proposed project would be subject to mandatory recycling requirements for paper, metals, construction waste, aluminum foil, glass, and plastic containers. Accessory use, college/trade school, and community facility and amenity space would generate an estimated 5.22 tons of solid waste per week. Solid waste generated by these uses would be collected by DSNY and would be served by DSNY collection routes. As a general practice, DSNY adjusts its operations to service the community. Residents would be required to participate in the City’s recycling program for paper, metals, and certain types of plastics and glass.

As shown in **Table 12-2**, relative to the No-Action condition, the proposed project would result in an approximately 5.22-ton increase in weekly solid waste handled by DSNY. This increment would represent approximately 0.0045 percent of the City’s anticipated future solid waste generation handled by DSNY (it is estimated that DSNY will manage 115,830 tons of solid waste for export, recycling compost and refuse per week by 2026), as projected in the 2006 SWMP.¹⁰ Based on the typical DSNY collection truck capacity of approximately 12.5 tons, the new residential, college/trade school and community facility and amenity space uses introduced by the proposed project would be expected to generate additional solid waste equivalent to approximately 0.42 truckloads per week. This would not be expected to overburden DSNY’s solid waste handling services.

**Table 12-2
Comparison of Weekly Solid Waste Generation in Tons on the
Project Site—2023**

	No-Action Condition (tons/week)	With-Action Condition (tons/week)	With-Action Increment (tons/week)
Total solid-waste generation	0	41	41
Solid waste handled by DSNY	0	5.22	5.22
Solid waste handled by Private Carters	0	35.78	35.78

Also shown in **Table 12-2**, compared with the No-Action condition, the Proposed Actions would result in an approximately 35.78-ton increase in weekly solid waste handled by private carters. This would represent approximately 0.048 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 SWMP.¹¹ Based on the typical commercial truck capacity of between 12 and 15 tons of waste material per truck, development resulting from the proposed project would require between approximately 3 private carter collection trucks per week. There are more than 2,000 private carting businesses authorized to service NYC, and it is expected that their collection fleets would be sufficiently flexible to accommodate this increased demand for solid waste collection. Therefore, the incremental commercial solid waste handled by private carters would not overburden the City’s waste management system.

Project-generated solid waste handled by DSNY would be containerized and either picked up curbside or at specified locations within project buildings. Curbside pickup would entail the loading of trash into 2-cubic yard containers, which would be wheeled out onto the street for pickup by DSNY trucks. Commercial solid waste would be hauled by private carters and handled in a similar manner. The proposed project would incorporate on-site trash storage within the proposed buildings to minimize placement of trash on sidewalks. Trash at the proposed project 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

¹⁰Comprehensive Solid Waste Management Plan, September 2006; Attachment II, Table 2-6, p. 25 Accessed August 17, 2018.

¹¹Comprehensive Solid Waste Management Plan, September 2006; Attachment II, Table IV 2-2, p. 4, Accessed August 8, 2016.

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on the use. By containerizing and minimizing the placement of trash on sidewalks the proposed project would minimize rodents, odors, and other related nuisances.

Overall, the proposed project would not conflict with the SWMP, or have a direct effect on a solid waste management facility. The incremental solid waste generated by the proposed project would not overburden the City’s solid waste handling systems, and therefore the proposed project would not have a significant adverse impact on the City’s solid waste and sanitation services.

F. THE FUTURE WITH THE PROPOSED ACTIONS —2028

In the future with the proposed project under the 2028 analysis year, or Phase II full build-out, would include commercial office space, medical office space, accessory uses, retail space, parking, and open space. As shown in **Table 12-3**, the total solid waste generation for Phase II full build-out (Phase I and II) of the proposed project would be approximately 61 tons per week.

**Table 12-3
With-Action Solid Waste Generation on the
Project Site—2028**

Use	Floor Area (gsf)	Population ¹	Solid Waste Generation Rate (lbs/wk)	Solid Waste Generation	
				(lbs/week)	(tons/wk)
Commercial Office	467,000	2,743	13 per employee	35,659	17.83
Medical Office and Biotech/Research ²	800,000	4,774	13 per employee	62,062	31.03
Accessory Use	250,000 (250 dwelling units)	250	41 per household	10,250	5.13
Hotel Rooms	124,300 (133 rooms)	73	75 per employee	5,475	2.74
College/Trade School ³	100,000	-	-	-	-
Students	-	2,778	1 per pupil	2,778	1.39
Faculty and Staff	-	226	13 per employee	2,938	1.50
General Retail	40,000	160	79 per employee	1,659	0.83
Community Facility and Amenity	12,100	25	13 per employee	325	0.16
Total Solid Waste Generation				121,146	60.57

Notes:

- ¹ The population of the proposed project was developed based on estimates provided by Simone Development.
- ² The solid waste generation rate for commercial office was applied to the medical office/biotech research use.
- ³ Assumes approximately 36 sf per student in a community college facility based on SF per student at the Bronx Campus of Mercy College in Hutchinson MetroCenter (approximately 3,500 students in 125,000 GSF). Assumes 730sf per staff/faculty in a community college facility based on the CUNY Hunter building program analyzed in the *Memorial Sloan-Kettering Cancer Center Ambulatory Care Center and CUNY-Hunter College—Science and Health Professions Building FEIS* (CEQR No. 13DME003M) (547 faculty and staff in 402,990 gsf).

Sources: Simone Development, *CEQR Technical Manual* Table 14-1

Of the 61 tons of solid waste per week generated in the With-Action condition, commercial uses would generate an estimated 52.43 tons. Solid waste generated by commercial uses would be collected by private commercial carters, and commercial uses developed with the proposed project would be subject to mandatory recycling requirements for paper, metals, construction waste, aluminum foil, glass, and plastic containers. Residential, College/Trade School, and community facility and amenity space would generate an estimated 8.18 tons of solid waste per week. Solid waste generated by these uses would be collected by DSNY and would be served by DSNY collection routes. As a general practice, DSNY adjusts its operations to service the community. Residents would be required to participate in the City’s recycling program for paper, metals, and certain types of plastics and glass.

As shown in **Table 12-4**, relative to the No-Action condition, the proposed project would result in an approximately 8.18-ton increase in weekly solid waste handled by DSNY. This increment would represent approximately 0.0071 percent of the City’s anticipated future solid waste generation handled by DSNY (it is estimated that DSNY will manage 115,830 tons of solid waste for export, recycling compost and refuse per week by 2026), as projected in the 2006 SWMP.¹² Based on the typical DSNY collection truck capacity of approximately 12.5 tons, the new residential, college/trade school and community facility and amenity space uses introduced by the proposed project would be expected to generate additional solid waste equivalent to approximately 0.65 truckloads per week. This would not be expected to overburden DSNY’s solid waste handling services.

Table 12-4
Comparison of Weekly Solid Waste Generation in Tons on the
Project Site—2028

	No-Action Condition (tons/week)	With-Action Condition (tons/week)	With-Action Increment (tons/week)
Total solid-waste generation	0	61	61
Solid waste handled by DSNY	0	8.18	8.18
Solid waste handled by Private Carters	0	52.43	52.43

Also shown in **Table 12-4**, compared with the No-Action condition, the proposed project would result in an approximately 52.43-ton increase in weekly solid waste handled by private carters. This would represent approximately 0.071 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 SWMP.¹³ Based on the typical commercial truck capacity of between 12 and 15 tons of waste material per truck, development resulting from the proposed project would require between approximately four private carter collection trucks per week. There are more than 2,000 private carting businesses authorized to service NYC, and it is expected that their collection fleets would be sufficiently flexible to accommodate this increased demand for

¹²Comprehensive Solid Waste Management Plan, September 2006; Attachment II, Table 2-6, p. 25 Accessed August 17, 2018.

¹³Comprehensive Solid Waste Management Plan, September 2006; Attachment II, Table IV 2-2, p. 4, Accessed August 17, 2018.

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solid waste collection. Therefore, the incremental commercial solid waste handled by private carters would not overburden the City's waste management system.

As in the 2023 With-Action condition, the proposed project would incorporate on-site trash storage within the proposed buildings to minimize placement of trash on sidewalks. Trash at the proposed project 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 the proposed project would minimize rodents, odors, and other related nuisances.

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