Chapter 11 : Solid Waste and Sanitation Services

I. INTRODUCTION

This chapter considers the potential for the Proposed Actions to affect solid waste and sanitation services. According to the *2014 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 described in Chapter 1, "Project Description," the Applicant is seeking a set of Proposed Actions in the form of discretionary approvals to include zoning map and text amendments, a large-scale general development (LSGD) special permit, a City Map Amendment to re-establish a portion of Beach 52nd Street south of Rockaway Beach Boulevard to reconnect with Rockaway Freeway, and public funding and/or financing from various City and New York State agencies and/or programs related to affordable housing development on the Project Site. The Project Site is situated in Queens Community District 14 (CD 14). The Proposed Actions would facilitate the Proposed Project to consist of an approximately 2,371,000 gross square feet (gsf) development on the Project Site, comprised of 11 buildings with approximately 2,200 income-restricted dwelling units (DUs), of which 1,927 DUs would be income-restricted up to 80% of the Area Median Income (AMI), to include approximately 201 DUs set aside for Affordable Independent Residences for Seniors (AIRS) senior housing, with the remaining 273 DUs restricted to income levels not exceeding 130% of AMI. In addition to the residential DUs, the Proposed Project would include approximately 72,000 gsf of retail space, including a fitness center and a supermarket, approximately 77,000 gsf of community facility space, approximately 24,000 square feet (sf) of publicly-accessible open space, and approximately 973 accessory parking spaces.

To assess the potential effects of the Proposed Actions on solid waste and sanitation services, the analysis in this chapter estimates the amount of existing solid waste generated by the Proposed Project and provides a comparison of estimates in the future without the Proposed Actions (the No-Action condition) and the future with the Proposed Actions (the With-Action condition).

II. PRINCIPAL CONCLUSIONS

A detailed analysis was conducted and concluded that the Proposed Actions would not result in a significant adverse impact on solid waste and sanitation services. The Proposed Actions would not directly affect a solid waste management facility and would not result in an increase in solid waste that would overburden available waste management capacity. The development resulting from the Proposed Actions would generate an increment above the No-Action condition of approximately 50 tons per week of solid waste, of which approximately 67% would be handled by the New York City Department of Sanitation (DSNY), and 33% would be handled by private carters. This translates to approximately three additional truckloads per week of solid waste handled by DSNY, and approximately one additional truckload per week handled by private carters. Although this would be an increase compared to 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 every day, or the 13,000 tons handled daily by private carters.[1] As such, the Proposed Actions would not result in an increase in solid waste that would overburden available waste management capacity.

[1] DSNY website: http://www1.nyc.gov/assets/dsny/site/about, accessed March 2018.

III. METHODOLOGY

According to the *CEQR Technical Manual*, if a proposed project may lead to substantial new development resulting in the generation of 50 tons or more (100,000 pounds) of solid waste 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 that would generate more than 50 tons of solid waste per week, a detailed analysis was conducted.

The detailed analysis describes existing and future solid waste disposal practices, including the collection system and disposal methods; estimates the solid waste generated by activities on the Proposed Project Site under existing conditions and in the future without the proposed project ("No-Action condition") for the 2034 analysis year; and a comparison of forecasted solid waste generation in the future with the project ("With-Action condition",) 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.

IV. 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. Private carters collect solid waste from commercial and manufacturing uses. DSNY also collects waste from City litter baskets, street-sweeping operations, and lot cleaning activities. 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] In total, DSNY collects approximately 10,500 tons of residential and institutional refuse, and approximately 1,760 tons per day of recyclable material daily.[3]

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 facilities.

DSNY collects designated recyclables, including metal, glass, and plastic and designated paper recyclables and delivers them to materials recovery facilities. 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 a 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.[4]

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 and establishes a hierarchy of preferred solid waste management methods to reduce and process solid waste generated within the City. The objectives of the SWMP are, in order of importance: waste reduction, recycling, composting, resource conservation and energy production, and lastly, landfill disposal. The

[2] Ibid.
[3] Ibid.
[4] DSNY website: http://www1.nyc.gov/assets/dsny/site/resources/reports/solid-waste-management-plan, accessed March 2018

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 "ZeroWaste" program is a City initiative aimed at reducing commercial waste by 90% by 2030. As part of the ZeroWaste program, all NYC businesses are required to recycle metal, glass, plastic, beverage cartons, paper, and cardboard. Wholesale food stores larger than 20,000 gsf or food service establishments in hotels, arenas, and stadiums have been required since July 2016 to separate out organic waste. 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.

Waste collection from the residential and community facility uses for the Proposed Project would be handled by DSNY. Private carters would be contracted to collect waste for retail uses and commercial establishments.

The City's Business Integrity Commission (BIC) 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

Since the Project Site is currently vacant, there is no solid waste generation under existing conditions.

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

As described in Chapter 1, "Project Description," absent the Proposed Actions, the Project Site would remain under the existing zoning designations. Some residential development, along with supporting retail space would be feasible on the Project Site and would be constructed as-of-right, in conformance with existing zoning designations. As-of-right development on the Project Site would yield 12 buildings, including approximately 482,523 gsf of residential space (providing 568 DUs), approximately 21,659 gsf of retail space, approximately 800 gsf of community facility space, and approximately 557 accessory parking spaces. The No-Action condition would result in approximately 544,982 gsf of development on the Project Site. Based on the Citywide average rates for solid waste generation used in the SWMP (provided in Table 14-1 of the *CEQR Technical Manual*), the No-Action conditions would generate an estimated total of 15.07 tons of solid waste per week **(Table 11-1: Solid Waste Generation on the Project Site – No-Action Condition)**.

Medical office use would be programmed for the approximately 800 gsf of community facility space under the No-Action condition. Regulated Medical Waste is defined as any solid waste generated in the diagnosis, treatment, or immunization of human beings or animals, in research pertaining thereto, or in the production or testing of biologicals including cultures of infectious agents, human pathological wastes, liquid waste human blood and blood products, sharps including hypodermic needles, contaminated animal carcasses, wastes from surgery or autopsy, laboratory wastes from research, dialysis wastes, and biological wastes from humans or animals isolated to protect others (6 NYCRR Part 360-17.2(h)). Disposal of Regulated Medical Waste from medical office use under the No-Action condition would conform to applicable City,

State and Federal regulations. The New York State Department of Health (NYSDOH) and the DEC regulate the generation, storage, transfer, and disposal of Regulated Medical Waste. In the City, Regulated Medical Waste must be placed in sealed containers and disposed of in facilities permitted to process such waste. Each medical facility is required to submit a plan to DSNY explaining how it plans to dispose of its waste.

Table 11-1: Solid Waste Generation on the Project Site – No-Action Condition

Use	Floor Area (gsf)	Population[1]	Solid Waste Generation Rate (lbs/wk)	Solid Waste Generation	
				(lbs/week)	*(tons/wk)*
Residential	568 DUs	568 households	41 per household	23,288	11.64
Retail	21,659	87 employees	79 per employee	6,844	3.42
Community Facility	800	1 employee	13 per employee	10	0.01
			Total Solid Waste Generation	**30,143**	**15.07**

Notes:

[1] Estimate of workers based on one employee per 250 gsf of retail use and one employee per 1,000 gsf of community facility use
[2] Community facility is assumed to be medical offices

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.[5] The amount of DSNY managed waste is projected to increase to approximately 118,830 tons per week.[6] The SWMP encompasses the known plans to manage the City's future solid waste management practices closest to the 2034 analysis year.

Under the SWMP, residential refuse collected by DSNY from Queens CD 14 goes to the North Shore Marine Transfer Station in Queens, from where – pursuant to a long-term contract – it is transported by barge and rail to the Covanta Resource Recovery Facilities in Chester, PA and Niagara Falls, NY, where it is burned to create electricity, metals are extracted, and the ash residue is transported to lined landfills.

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

In the future with the Proposed Actions, under the Reasonable Worst Case Development Scenario (RWCDS), the Proposed Project would consist of a total of 2,200 residential DUs, 72,000 gsf of retail space, including a fitness center and a supermarket, and approximately 77,000 gsf of community facility space programmed for medical offices. As shown in **Table 11-2: Solid Waste Generation on the Project Site – With-Action Condition,** the total solid waste generation under the With-Action condition would be approximately 56.98 tons per week, which represents 41.91 additional tons in weekly solid waste generation as compared to the No-Action condition.

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

Table 11-2: Solid Waste Generation on the Project Site – With-Action Condition

Use	Floor Area (gsf)	Population[1]	Solid Waste Generation Rate (lbs/wk)	Solid Waste Generation	
				(lbs/week)	*(tons/wk)*
Residential	2,200 DUs	2,200 households	41 per household	90,200	45.10
Retail	72,000	288 employees	79 per employee	22,752	11.38
Community Facility[2]	77,000	77 employees	13 per employee	1,001	0.50
			Total Solid Waste Generation	**113.953**	**56.98**

Notes:

[1] Estimate of workers based on one employee per 250 gsf of retail use and one employee per 1,000 gsf of community facility use
[2] Community facility is assumed to be medical offices

Medical office use would be programmed for the approximately 77,000 gsf of community facility space under the With-Action condition. Disposal of Regulated Medical Waste from medical office use under the Proposed Project would conform to applicable City, State and Federal regulations. NYSDOH and the DEC regulate the generation, storage, transfer, and disposal of Regulated Medical Waste. In the City, Regulated Medical Waste must be placed in sealed containers and disposed of in facilities permitted to process such waste. Each medical facility is required to submit a plan to DSNY explaining how it plans to dispose of its waste.

Of the 56.98 tons of solid waste per week generated in the With-Action condition, commercial uses would generate an estimated 11.38 tons. Solid waste generated by commercial uses would be collected by private commercial carters, and commercial buildings developed under the Proposed Actions would be subject to mandatory recycling requirements for paper, metals, construction waste, aluminum foil, glass, and plastic containers. Residential and community facility uses would generate an estimated 45.6 tons of solid waste per week. Solid waste generated by residential 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 11-3: Comparison of Weekly Solid Waste Generation in Tons on the Project Site**, compared to the No-Action condition, the Proposed Actions would result in an approximately 33.46 ton increase in weekly solid waste handled by DSNY. This increment would represent approximately 0.03% 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 2025), as projected in the 2006 SWMP.[7] Based on the typical DSNY collection truck capacity of approximately 12.5 tons, the new residential use introduced by the Proposed Actions would be expected to generate additional solid waste equivalent to approximately three truckloads per week. This would not be expected to overburden DSNY's solid waste handling services.

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

Table 11-3: Comparison of Weekly Solid Waste Generation in Tons on the Project Site

	No-Action Condition (tons/wk)	With-Action Condition (tons/wk)	With-Action Increment (tons/wk)
Total Solid-Waste Generation	15.07	56.98	41.91
Solid Waste Handled by DSNY	11.64	45.10	33.46
Solid Waste Handled by Private Carters	3.43	11.88	8.45

Also shown in **Table 11-3,** compared to the No-Action condition, the Proposed Actions would result in an approximately 8.45 ton increase in weekly solid waste handled by private carters. This would represent approximately 0.01% 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.[8] Based on the typical commercial truck capacity of between 12 and 15 tons of waste material per truck, development resulting from the Proposed Actions would require approximately one additional private carter collection truck per week as compared to the No-Action condition. There are more than 2,000 private carting businesses authorized to serve 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.

Overall, the Proposed Actions 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 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.

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