
CHAPTER 13: SOLID WASTE AND SANITATION SERVICES

A. INTRODUCTION

Because the proposed actions would encourage a substantial number of new residents, employees and visitors to the rezoning area by 2017 with the proposed project in place there would be an increase in the amount of solid waste generated. This chapter evaluates the potential impacts of the proposed project on the collection and disposal of municipal solid waste and recyclable materials. The analyses utilized in this chapter follow the guidelines contained in Section 3M of the *CEQR Technical Manual*.

B. OVERVIEW

No significant adverse impacts on solid waste collection and disposal are anticipated to result from the proposed project. The New York City Department of Sanitation (DSNY) is responsible for the collection and disposal of municipal solid waste and recyclables generated by residences, city agencies, tax exempt properties and some nonprofit organizations. Solid waste and recyclables from commercial and industrial establishments are collected and disposed of by private carters. Private carters use manual and containerized collection methods, depending on the source, amount and collection route, and generally bill customers on a per-cubic-yard basis. Litter basket waste, street sweeping and lot cleaning activities are also under the jurisdiction of DSNY.

In accordance with the city's mandatory recycling law, DSNY has implemented recycling rules for residential buildings, city agencies and institutions that require the separation of designated recyclable materials¹ and other related materials from household waste for separate collection.

DSNY does not collect commercial waste, regulated medical waste, asbestos, hazardous or industrial wastes, construction and demolition debris, dredge spoils or fill materials. For an assessment of the proposed project's potential solid waste impacts during construction, please refer to Chapter 19, "Construction Impacts."

DSNY is the world's largest manager of solid waste, collecting over 12,000 tons of residential and institutional refuse and recyclables a day. The city's businesses (whose waste is collected by private carting companies) generate another 13,000 tons of refuse daily. The department operates out of 59 districts, using approximately 2,230 collection trucks, 450 mechanical street sweepers, 275 specialized collection trucks, 365 salt/sand spreaders, 298 front end loaders, and 2,360 various other support vehicles.

DSNY transports the collected municipal solid waste to transfer stations, or solid waste management facilities, which are located throughout the city. Transfer stations process and deliver the waste to out-of-city disposal facilities, regardless of whether the waste experienced treatment or a reduction in volume at the transfer station.

Under the New York State Solid Waste Management Act of 1988, the city's solid wastes must be managed in compliance with a state-approved Comprehensive Solid Waste Management Plan (SWMP).

¹ Pursuant to §§ 16-304 and 16-305 of the New York City Administrative Code, designated recyclable materials are defined as metal cans, metal items, aluminum foil, containers made of glass, plastic bottles, jugs and beverage cartons; and newspapers magazines, catalogs, phone books, mixed paper and corrugated cardboard.

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The city's first SWMP was approved in 1992, amended in 1996 and again in 2000, and provided the framework for solid waste management and recycling through April 2005.

In September 2006 the city adopted a new SWMP. Proposed for a 20-year planning period, the new SWMP builds on the previous SWMP to provide for the long-term management of all solid waste generated in the city. Programs designed to reduce, reuse, prevent, recycle and compost solid waste will be continued under the new SWMP. A key component of the new SWMP is the development of state-of-the-art marine transfer stations (Converted MTSs) at four of DSNY's existing MTS sties. These new facilities would receive and containerize DSNY-managed waste for transport by barge to an out-of-city disposal site. Through containerization, the Converted MTSs will enable the city to maximize transport and disposal options, and control costs in an environmentally-responsible manner.

With respect to solid waste, the *CEQR Technical Manual* stipulates that actions involving construction of housing or other development generally do not require an evaluation of solid waste impacts unless they are unusually large. This is because the city's Comprehensive Solid Waste Management Plan (SWMP) assumes projected rates of growth in the generation of solid waste. For example, residential waste projections are based on presumed increases in population and presumed increases in waste generated per household. A very large project, or an action involving a use with unusual waste generation characteristics, could potentially increase an element of the city's waste stream beyond the projections incorporated in the SWMP. Under CEQR, a solid waste generation rate of less than 10,000 pounds per week is not considered large. Medical and other waste with special characteristics must comply with specific waste handling and disposal regulations. Generally, compliance with all applicable rules and regulations would eliminate the potential for significant adverse impacts. Given the size of the development that is expected to result from the proposed project and the associated potential solid waste generation, this chapter provides a detailed analysis of the impacts to the SWMP and to solid waste and sanitation services.

C. METHODOLOGY

To evaluate the proposed project in context and assess the potential for impacts, *CEQR Technical Manual* generation rates have been utilized to calculate conservative solid waste generation estimates. Specifically, the solid waste currently being generated on the projected development sites was calculated. The solid waste anticipated to be generated on the projected development sites in the future, both with and without the proposed project was then calculated. The increment between the two future scenarios represents the project-generated waste. The *CEQR Technical Manual* states that most actions should use the citywide average solid waste generation rates that have been established in the SWMP.

D. EXISTING CONDITIONS

As shown in Table 13-1, the existing uses on the 40 projected development sites are estimated to generate approximately 51,614 pounds of solid waste each week. In arriving at this figure, it was estimated that each of the existing 24 dwelling units contained one household. Per the guidelines contained in the *CEQR Technical Manual*, each of these households was assumed to generate 41 pounds of solid waste a week. It was estimated that the existing retail uses have a density of 3 employees per 1,000 square feet of floor area and generate 79 pounds of solid waste per week per employee. It was further estimated that the existing office uses have a density of 1 employee per 250 square feet of floor area and generate 13 pounds of solid waste per week per employee. Because the *CEQR Technical Manual* only provides generation

rates for two industrial uses, their average was calculated and applied to an employment density of one employee per thousand square feet of floor area.

**Table 13-1
Existing Solid Waste Generation
at Projected Development Sites**

Use	Floor Area/Dwelling Units ¹	Solid Waste Generated (pounds/week)
Retail ²	4,875 sf	1,155
Office ³	31,323 sf	1,629
Industrial/ Manufacturing ⁴	261,451 sf	47,846
Residential ⁵	24 DUs	984
Total Solid Waste Generation		51,614

Notes:

- 1 Generation rates from the *CEQR Technical Manual* except where noted.
- 2 Assume 3 employees per 1,000 sf and 79 pounds of solid waste per week per employee.
- 3 Assume 1 employee per 250 sf and 13 pounds of solid waste per week per employee
- 4 Assume 1 employee per 1,000 sf and 183 pounds of solid waste per week per employee (based on the average of the two industrial use rates contained in the *CEQR Technical Manual*).
- 5 Residential calculations assume 41 pounds of solid waste per week per household.

Source: *CEQR Technical Manual* and *NYCDCP*.

E. FUTURE CONDITION WITHOUT THE PROPOSED ACTIONS

This condition assumes no area-wide rezoning or any other element of the proposed actions (i.e., zoning text amendments, mapping actions, etc.); the 40 projected development sites are assumed to either remain unchanged from their existing condition, or to be developed with uses that are permitted under the existing zoning regulations as indicated in Chapter 2; Land Use, Zoning and Public Policy.

This scenario estimates that in 2017 the projected development parcels would contain 22 dwelling units, approximately 41,884 square feet of retail space, 132,848 square feet of office space, 196,320 square feet of hotel space, 183,011 square feet of industrial space and 81,470 square feet of community facility space. These uses would generate approximately 61,034 pounds of solid waste per week, an increase of approximately 9,420 pounds per week from the existing rate (Table 16-2). The information contained in Table 13-2 was derived using the same generation rates and assumptions used in calculating the existing conditions. In the case of hotels, a density of 1 employee per 2,000 square feet of floor area was calculated.

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**Table 13-2
Solid Waste Generation at Projected Development Sites
Without the Proposed Actions**

Use	Floor Area/ Dwelling Units	Solid Waste Generated ¹ (pounds/week)	Increment From Existing Condition	Increment From Existing Condition (pounds/week)
Retail ²	41,884 sf	9,927	37,009 sf	8,772
Office ³	132,848 sf	6,908	101,525 sf	5,279
Industrial/ Manufacturing ⁴	183,011 sf	33,491	-78,440 sf	-227,960
Residential ⁵	22 DUs	902	-2 DUs	-82
Hotel ⁶	196,320 sf	7,362	196,320 sf	7,362
Community Facility ⁷	81,470 sf	2,444	81,470 sf	2,444
Total		61,034	--	9,420

Notes:

- 1 Generation rates from the *CEQR Technical Manual* except where noted.
- 2 Assume 3 employees per 1,000 sf and 79 pounds of solid waste per week per employee.
- 3 Assume 1 employee per 250 sf and 13 pounds of solid waste per week per employee.
- 4 Assume 1 employee per 1,000 sf and 183 pounds of solid waste per week per employee (based on the average of the two industrial use rates contained in the *CEQR Technical Manual*).
- 5 Residential calculations assume 41 pounds of solid waste per week per household.
- 6 Assume 1 employee per 2,000 sf and 75 pounds of solid waste per week per employee
- 7 Assume 0.03 pounds of solid waste per week per sf.

Source: *CEQR Technical Manual* and *NYCDGP*.

F. FUTURE CONDITION WITH THE PROPOSED ACTIONS

Under the future condition with the proposed project, the total build out expected to occur on the 40 projected development sites includes approximately 1,555 dwelling units; 173,582 square feet of commercial floor area; 2,475 square feet of industrial floor area and 39,773 square feet of community facility floor area. Relative to the future condition without the proposed actions, the incremental increase in residential solid waste is estimated to be approximately 63,755 pounds per week. However, this would be offset by a decrease in solid waste generated by community facilities of 1,251 pounds per week. The resulting total impact to DSNY from the proposed project is estimated to be approximately 62,504 pounds per week (Tables 13-3 and 13-4).

G. CONCLUSION

The proposed project is expected to result in a net increase of approximately 62,504 pounds per week (4.5 tons per day) of solid waste from residences and community facilities. This figure amounts to approximately 0.04 percent of the solid waste collected by DSNY each day. Based on the assumption that the average DSNY collection truck has a capacity of 12.5 tons, the proposed project would require an additional 3 trucks to service the rezoning area each week. The proposed project would not result in a significant adverse impact on Solid Waste and Sanitation Services and would not conflict with the city's SWMP.

**Table 13-3
Solid Waste Generation at Projected Development Sites
With the Proposed Actions**

Use	Floor Area/ Dwelling Units	Solid Waste Generated ¹ (pounds/week)	Increment From No-Build Condition	Increment From No-Build Condition (pounds/week)
Retail ²	173,582 sf	41,139	131,698 sf	31,212
Office	0	0	-132,848 sf	-6,908
Industrial/ Manufacturing ³	2,475 sf	453	-180,536 sf	-33,038
Residential ⁴	1,577 DUs	64,657	1,555 DUs	63,755
Hotel	0	0	-196,320 sf	-7,362
Community Facility ⁵	39,773 sf	1,193	-41,697 sf	-1,251
Total		107,442	--	112,484

Notes:

- 1 Generation rates from the *CEQR Technical Manual* except where noted.
- 2 Assume 3 employees per 1,000 sf and 79 pounds of solid waste per week per employee.
- 3 Assume 1 employee per 1,000 sf and 183 pounds of solid waste per week per employee (based on the average of the two industrial use rates contained in the *CEQR Technical Manual*).
- 4 Residential calculations assume 41 pounds of solid waste per week per household.
- 5 Assume 0.03 pounds of solid waste per week per sf.

Source: *CEQR Technical Manual* and *NYCDCP*.

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**Table 13-4
Incremental Difference of Solid Waste Generation at Projected Development Sites
With the Proposed Project and Without the Proposed Actions**

Use	Without the Proposed Project		With the Proposed Project		Increment (pounds/week)
	Flr. Area/ DUs ¹	Solid Waste Generated (pounds/week)	Floor Area/DUs	Solid Waste Generated (pounds/week)	
Retail ²	41,884 sf	9,927	173,582 sf	41,139	31,212
Office	132,848 sf	6,908	0 sf	0	-6,908
Industrial/ Manufacturing ³	183,011 sf	33,491	2,475 sf	453	-33,038
Residential ⁴	22 DUs	902	1,577 DUs	64,657	63,755
Hotel	196,320 sf	7,362	0 sf	0	-7,362
Community Facility ⁵	81,470 sf	2,444	39,773 sf	1,193	-1,251
Total	--	61,034	--	107,442	46,408

Notes:

- 1 Generation rates from the *CEQR Technical Manual* except where noted.
- 2 Assume 3 employees per 1,000 sf and 79 pounds of solid waste per week per employee.
- 3 Assume 1 employee per 1,000 sf and 183 pounds of solid waste per week per employee (based on the average of the two industrial use rates contained in the *CEQR Technical Manual*).
- 4 Residential calculations assume 41 pounds of solid waste per week per household.
- 5 Assume 0.03 pounds of solid waste per week per sf.

Source: *CEQR Technical Manual* and NYCDPCP.