3.13 SOLID WASTE AND SANITATION SERVICES

INTRODUCTION

The proposed action would not result in significant adverse impacts to solid waste and sanitation services.

According to the *CEQR Technical Manual*, actions involving construction of housing or other development generally do not require evaluation for solid waste impacts unless they are unusually large (a generation rate of less than 10,000 pounds per week, for example, is not considered large). Compliance with applicable requirements generally eliminates possible significant adverse impacts. In accordance with these guidelines, this chapter analyzes the effects of the proposed action on solid waste and sanitation services.

As discussed in Chapter 2.0, "Project Description," a reasonable worst-case development scenario (RWCDS) for development associated with the proposed action at the 26 projected development sites by 2017 has been identified. The RWCDS results in net increases of 2,328 DUs, including 498 units of affordable housing; 208,586 sf of retail commercial space; 436,015 sf of office commercial space; 11,672 sf of hotel space (total net increment of commercial space is 552,314 sf); and net decreases of 110,985 sf of community facility space; 26,824 sf of storage and manufacturing space; and 110,406 sf of parking/auto related uses.

In order to determine whether the increase in residential, retail, and commercial office space due to the proposed action conforms to the City's Comprehensive Solid Waste Management Plan, a quantitative assessment was conducted. This entails the calculation of existing solid waste generation on the projected development sites, as well as a comparison of equivalent calculations in the future with and without the proposed action in place.

3.13.1 EXISTING CONDITIONS

Description of Current Sanitation Services

In New York City, the Department of Sanitation (DSNY) is the agency responsible for the collection and disposal of solid waste and recyclable materials generated by residences, some nonprofit institutions, tax exempt properties, and City agencies. DSNY also collects waste from street litter baskets, and handles street-sweeping operations and lot cleaning activities. Commercial operations handle solid waste from other uses, e.g., commercial retail, office, and industrial operations. Fresh Kills Landfill, which was New York City's last operating landfill, was officially closed in March 2001. DSNY continues to collect residential and institutional solid waste and recyclables (the municipal waste stream) which are now transported out of the City. Currently, most of the City's municipal solid waste is collected and delivered to transfer stations for sorting and transfer to larger "hopper" trucks, and then transported out of the City. Likewise, municipal solid waste from the project area is collected and trucked via transfer stations to out-of-state landfills and waste-to-energy facilities. Private carters also consolidate solid waste from commercial and industrial operations and haul it to waste transfer facilities both inside and

outside New York City, where it is then transported to out-of-City disposal facilities. It is estimated that DSNY collects over 12,000 tons of residential and institutional refuse and recyclables (solid waste) per day. It is also estimated that the non-residential (commercial/industrial) waste stream is about 13,000 tons per day (tpd). The total solid waste generated in the City therefore averages approximately 25,000 tpd.[1]

The City's solid waste management services are undertaken in accordance with the City's Solid Waste Management Plan (SWMP). The DSNY developed a new Draft SWMP in October 2004 to address anticipated future demands for solid waste management for the City. The Draft SWMP was subsequently revised in July 2006 and approved by the New York City Council on July 19, 2006. The new SWMP is effective for the next 20 years and is expected to be fully operational by 2009. The new SWMP addresses and recognizes the interdependency of the systems for managing recycling, residential waste, and commercial waste. The new SWMP introduces a shift from the current mode of truck-based export to export by barge and/or rail. The City intends to commit to a long-term (20-year) contract with the Hugo Neu Corporation for the processing and marketing of metal, glass, and plastic (MGP). An MGP processing facility will be developed in the City at the 30th Street Pier in South Brooklyn Marine Terminal. The plant will be barge-fed from Hugo Neu Corporation sites in Queens and the Bronx and a potential DSNY location in Manhattan.

The new SWMP includes a Long-Term Export Program for residential waste. The City's Long-Term Export Program is anticipated to be implemented through: (1) the development of four new converted marine transfer stations (MTS); (2) the award of up to five contracts with private transfer stations for barge or rail export of DSNY-managed waste for disposal; and (3) an intergovernmental agreement to dispose of a portion of Manhattan's DSNY-managed waste at a Port Authority waste-to-energy facility in New Jersey. Solid waste would be consolidated, containerized, and barged or railed out of the City from the converted MTSs or the five existing private transfer stations. The barges currently used at MTS facilities will be replaced or retrofitted with new sealed containers or "intermodal containers" capable of being transported on barge or rail. The four converted MTS facilities will be designed to each process up to 4,290 tons per day and accommodate 30 collection vehicles per hour. In the interim, all municipal solid waste will be trucked out of the City.

Local Law 19 of 1989 requires that DSNY and private carters collect recyclable materials and deliver them to material recovery facilities. New York City residents are required to separate aluminum foil, glass, plastic and metal containers, and newspapers and other paper wastes from household waste for separate collection. The SWMP also mandates that commercial and industrial establishments are subject to recycling requirements. Businesses must source-separate certain types of paper wastes, cardboard, metal items, and construction wastes. Food and beverage establishments must recycle metal, glass, and plastic containers, and aluminum foil, in addition to meeting the commercial recycling requirements.

[1] DSNY website: http://www.nyc.gov/html/dsny/html/about/about.shtml

Quantitative Analysis of Solid Waste Generation

As solid waste/sanitation services is a density-based technical analysis, only those developments on identified projected development sites form the basis for the assessment of solid waste and sanitation services. The 26 projected development sites currently contain vacant land and vacant structures, which are not included in estimating existing solid waste generation. As stated above, the project area currently has a number of active uses that generate solid waste. Both residential and community facility uses are present on the projected development sites, and the solid waste generated by these uses is collected by the DSNY municipal service routes. There are also a number of private businesses on the projected development sites, and these uses are served by commercial solid waste and recycling management companies.

Table 3.13-1 summarizes the current solid waste generation conditions on the projected development sites. As shown in the table, the existing uses currently generate a total of approximately 74 tons of solid waste per week, most of which is collected by private carters.

Table 3.13-1
Estimated Weekly Solid Waste Generation on
Projected Development Sites Under Existing Conditions

Use	EXISTING	
	SF/DU	Solid Waste Generated* (pounds per week)
Storage/Manufacturing	40,788	9,330
Parking/Auto	126,908	29,030
Community Facility	80,058	24,017
Residential	2	82
Office/Commercial	115,605	6,011
Retail	336,641	79,784
Hotel	8,512	319
TOTAL		148,574

*Based on the following assumptions:
Storage/Manufacturing: assume 1 employee for 800 sf and 183 lbs of solid waste per week per employee (utilize average rates for the two industrial categories listed in *CEQR Technical Manual* Table 3M-1).
Parking/Auto: assume 1 employee for 800 sf and 183 lbs of solid waste per week per employee (utilize average rates for the two industrial categories listed in *CEQR Technical Manual* Table 3M-1).
Community Facility: assume 0.03 lbs per square foot (utilize rate for "government office in *CEQR Technical Manual* Table 3M-1).
Residential: assume 41 lbs per DU (utilize rate for "household" in *CEQR Technical Manual* Table 3M-1).
Office/Commercial: assume 1 employee for 250 sf and 13 lbs of solid waster per week per employee (utilize rate for "office building" in *CEQR Technical Manual* Table 3M-1).
Retail: assume 3 employees for 1000 sf and 79 lbs of solid waste per week per employee (utilize rate for "general retail" in *CEQR Technical Manual* Table 3M-1.
Hotel: assume 1 employee for 2000 sf (based on *Renaissance Plaza Expansion EAS*, 2002) and 75 lbs of solid waste per week per employee (utilize rate for "hotels" in *CEQR Technical Manual* Table 3M-1).

3.13.2 FUTURE WITHOUT THE PROPOSED ACTION

If the proposed action is not implemented, the existing zoning controls would remain in place. It is expected that the rezoning area would experience some growth in commercial and residential uses. In the future without the proposed action, as-of-right development would be expected to occur on some of the 26 projected development sites. With new development in the proposed action area, the No-Action RWCDS is expected to result in higher solid waste generation on the projected development sites in the future without the proposed action than under existing conditions.

In the future without the proposed action, the existing zoning controls would remain in place. It is expected that the rezoning area would experience some growth in commercial and residential uses. In the future without the proposed action (No-Build), as-of-right development would be expected to occur on some of the 26 projected development sites identified by DCP in the rezoning area. Development on the 26 projected development sites is expected to consist of 304 dwelling units (DUs); 635,337 sf of retail; 512,305 sf of office space; 8,512 sf of hotel space (together the retail, office, and hotel space would comprise a total of 1,156,154 sf of commercial space); 26,824 sf of storage/manufacturing uses; 112,404 sf of parking/auto related uses; 182,493 sf of community facility space; and 20,586 sf of institutional conversion space.

In the future without the proposed action, it is expected that the 26 projected development sites would contain an incremental difference of 302 dwelling units (DUs); 298,685 sf of retail; 396,700 sf of office space; (together retail and office space would comprise a total difference of 695,385 sf of commercial space); 102,435 sf of community facility space (including 20,586 sf of institutional conversion space), and a reduction of 13,964 sf of storage/manufacturing uses and 14,504 sf of parking/auto related uses.

Table 3.13-2 summarizes the solid waste generation for each use under No-Action conditions. The same assumptions utilized for existing conditions were applied in calculating solid waste generation on the projected development sites in the future without the proposed action. As shown in Table 3.13-2, it is estimated that the 26 projected development sites would generate approximately 114 tons of solid waste per week in the future without the proposed action. The majority of the solid waste produced would be removed by private carters.

Table 3.13-2
Estimated Weekly Solid Waste Generation on Projected Development Sites
Under 2017 No-Action Conditions

Use	NO-ACTION	
	SF	Solid Waste Generated* (pounds per week)
Storage/Manufacturing	26,824	6,136
Parking/Auto	112,404	25,712
Community Facility	182,493	5,475
Residential	273,600	12,464
Office/Commercial	512,305	26,640
Retail	635,337	150,575
Hotel	8,512	319
TOTAL		227,321

*Refer to Table 3.13-1 for generation rate assumptions.

The development projected in the no-action condition would increase the volumes of solid waste and recyclables generated, but would not affect the delivery of these services, nor would it place a significant burden on the City's solid waste management services (both public and private). In addition, the proposed action would not conflict with, or require amendments to, the City's Solid Waste Management Plan.

3.13.3 FUTURE WITH THE PROPOSED ACTION

As described in Chapter 1, "Project Description," it is expected that under With-Action conditions, the projected development sites would consist of 2,632 DUs (498 of which would be affordable housing units); 843,923 sf of commercial retail space; 948,319 sf of commercial office space; 20,184 sf of hotel space (total retail, office and hotel commercial space is 1,812,426 sf); 92,094 sf of community facility space (including 20,586 sf of institutional conversion space); and 1,998 sf of parking/auto related uses.

The incremental difference between the With-Action and No-Action solid waste generation amounts serves as the basis for the impact analyses. The RWCDS results in net increases of 2,328 DUs, including 498 units of affordable housing; 208,586 sf of commercial retail space; 436,015 sf of commercial office space; 11,672 sf of hotel space (total net increment of commercial space is 656,273 sf); and net decreases of 110,985 sf of community facility space; 26,824 sf of storage and manufacturing space; and 110,406 sf of parking/auto related uses.

The same assumptions utilized under existing and future No-Action conditions were applied in calculating solid waste generation on the 26 projected development sites in the future with the proposed action. Table 3.13-3 shows the solid waste expected to be generated by the projected development sites in the future with the proposed action, comparing it to the future without the proposed action, and identifying the incremental change in solid waste generation associated with the proposed action. It is estimated that the 26 projected development sites would generate

approximately 181 tons of solid waste per week in the future with the proposed action. Therefore, the proposed action would result in an incremental increase of approximately 67 tons of solid waste generated weekly compared to No-Action conditions.

Table 3.13-3
Estimated Weekly Solid Waste Generated on Projected Development Sites Under 2017 With-Action Conditions, Compared to No-Action Conditions, With Incremental Change Associated with Proposed Action

	NO-ACTION		WITH-ACTION		INCREMENTAL
Use	SF/DU	Solid Waste Generated* (pounds per week)	SF/DU	Solid Waste Generated* (pounds per week)	Solid Waste Generated* (pounds per week)
Storage/Manufacturing	26,824	6,136	0	0	-6,136
Parking/Auto	112,404	25,712	1,998	457	-25,255
Community Facility	182,493	5,475	92,094	2,763	-2,712
Residential	304	12,464	2,632	107,912	95,448
Office/Commercial	512,305	26,640	948,319	49,313	22,673
Retail	635,337	150,575	843,923	200,010	49,435
Hotel	8,512	319	20,184	757	438
TOTAL		227,321		361,211	133,890

*Refer to Table 3.13-1 for generation rate assumptions.

The solid waste generated by residential and community facilities would be collected by the New York City Department of Sanitation (DSNY). Under the With-Action conditions, the solid waste generated by these uses would be equivalent to approximately 55 tons per week, for a net increase of 46 tons per week compared to No-Action conditions. According to the *CEQR Technical Manual*, the typical DSNY collection truck for residential refuse carries approximately 12.5 tons of waste material. Therefore, the uses subject to municipal collection by DSNY induced by the proposed action on the 26 projected development sites would be expected to generate a net solid waste equivalent of approximately one-half truck load per day (assuming a seven-day week). This increase is not expected to burden the DSNY's solid waste handling services, and the proposed action would not have a significant adverse impact on the City's solid waste and sanitation services.

In addition, it is expected that the net increase in commercial waste (41,154 pounds per week) could be handled by the private solid waste management industry. The per-week increase is the equivalent of about 3 tons per day. This represents an increase of less than 0.1 percent in the City's commercial waste stream. This is a small increase and it is expected to be met by a slight increase in private solid waste management services that already service the area.

CONCLUSION

The proposed action is not anticipated to result in significant adverse solid waste impacts. Development pursuant to the proposed action would occur in an area which is currently served by DSNY residential trash and recycling pick-ups. The proposed action would not affect the

delivery of these services, or place a significant burden on the City's solid waste management system. The resulting net increase in solid waste to be picked up by DSNY is relatively small (less than seven tons per day) when compared to the estimated 12,000 tons of residential and institutional refuse and recyclables collected by DSNY per day. In addition, due to the proposed action, non-residential waste serviced by private carters would increase by less than 3 tons per day, an insignificant amount compared to the estimated 13,000 tons of commercial/industrial waste currently removed by private carters.

It is concluded that in the future with the proposed project in 2017, there would be no significant adverse impacts on residential or commercial solid waste collection and disposal services, nor would the proposed project conflict with, or require any amendments to, the City's solid waste management objectives as stated in the SWMP.