

## CHAPTER 15: SOLID WASTE AND SANITATION SERVICES

### 15.1 Overview

Development associated with the Proposed Action would increase the amount of solid waste that is generated in the Project Area due to the introduction of additional employees and new residents and visitors. This chapter presents the potential impacts of the Proposed Action on the operations and capacity of solid waste and sanitation services.

In Staten Island, 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 businesses (retail stores, offices, restaurants, industries, etc.) 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 New York City's mandatory recycling law, DSNY has implemented recycling rules for residences that require the separation of designated recyclable materials<sup>1</sup> and other related materials from household waste for separate collection.

DSNY does not collect commercial waste, including regulated medical waste, asbestos, hazardous or industrial wastes, construction and demolition debris, dredge spoils or fill materials. For an assessment of the Proposed Action's potential solid waste impacts during construction of the Proposed Action, please refer to Chapter 21, "Construction Impacts."

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). 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. A hierarchy for solid waste management is presented in the Plan, placing waste prevention first, followed by reuse, recycling or composting, and export out of the City by barge and/or rail for disposal.

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<sup>1</sup> Designated recyclable materials include aluminum foil, glass, plastic and metal containers, newspapers and other paper wastes.

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DSNY is currently developing amendments to the long-term SWMP. The Draft New SWMP was submitted for public review in Spring 2004 and was transmitted to the City Council for review and approval on October 15, 2004. The Draft New SWMP is expected to be effective in 2006.<sup>2</sup>

Proposed for a 20-year period, the Draft New SWMP will build on the existing 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 proposed SWMP is the development of state-of-the-art Marine Transfer Stations (Converted MTSs) at up to eight of DSNY's existing MTS sites. These new facilities would receive and containerize DSNY-managed waste for transport by container barge to authorized disposal facilities. Together with the Staten Island transfer station now under construction, the Converted MTSs will replace the interim waste export contracts, which were entered into in order to close the Fresh Kills landfill and provide waste transfer and disposal services for DSNY-managed waste pending implementation of a long-term waste export system. Through containerization, the Converted MTSs will enable the City to maximize transport and disposal options, and control costs in an environmentally-responsible manner.

According to the *CEQR Technical Manual*, actions involving the construction of new residential or other development generally do not necessitate an evaluation for solid waste impacts unless they are unusually large. This is because the City's 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. Note that under CEQR, a solid waste generation rate of less than 10,000 pounds per week generally 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.

The Proposed Action is being evaluated for solid waste impacts because it is a relatively large project that involves a substantial Project Area and over 961,200 square feet of development. Under Existing Conditions, an estimation of the weekly amount of solid waste generated by the Project Area is well over 10,000 pounds. To ensure that the Proposed Action would not result in significant adverse impacts to DSNY services on Staten Island, the estimated amount of solid waste that it is expected to be generated should be disclosed during the CEQR process.

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<sup>2</sup> The Environmental Assessment Statement for the *New Comprehensive Solid Waste Management Plan* has a 2006 build year. <http://www.nyc.gov/html/dsny/downloads/pdf/guides/swmp/seqra-ceqr.pdf>

As detailed below, the Proposed Action would introduce new residents and employees, which would increase the amount of solid waste that is generated in the Project Area. However, as DSNY and private solid waste services are expected to have adequate capacity to meet the incremental demand for solid waste and sanitation services, the Proposed Action would not significantly and adversely impact these services.

## **15.2 Methodology**

To evaluate the Proposed Action in context and assess the potential for impacts, *CEQR Technical Manual* methodologies have been utilized to calculate conservative solid waste generation estimates for the Proposed Action. The *CEQR Technical Manual* states that most actions should use the citywide average solid waste generation rates that have been established in the City's Comprehensive Solid Waste Management Plan. It should be noted that this solid waste assessment considers the conformity of the Proposed Action with the proposed SWMP, as currently drafted, since the Draft New SWMP would be in effect by the 2015 analysis year.

The study area for the assessment of solid waste and sanitation services is the Project Area, as defined in Chapter 1, "Project Description."

## **15.3 Existing Conditions**

The following temporary institutional uses are located on the Homeport Site: New York City Police Department (NYPD) Staten Island Task Force, New York City Fire Department (FDNY) Marine Company No. 9, New York City Department of Transportation (NYCDOT) Marine Repair Unit, and Richmond County State Supreme Civil Court. Since the Homeport Site contains institutional uses, it is served by DSNY for collection of solid waste. The Project Area properties situated west of Front Street between Wave and Thompson Streets, also referred to as Projected Development Sites as defined in Chapter 2, "Analytical Framework," are privately owned and contain a mix of manufacturing/light-industrial and commercial uses. The solid waste produced by these parcels is collected by private carters.

Table 15-1 presents the estimated amounts of solid waste generated by existing uses within the Project Area.

**Table 15-1: Project Area Solid Waste Generation, Existing Conditions**

	Square feet of Development, by Use Type			Estimated amount of solid waste (lbs/week)
	Institutional	Manufacturing <sup>2</sup>	Commercial <sup>3</sup>	
<b>Homeport Site<sup>1</sup></b>	282,300	--	--	<b>8,469</b>
<b>Projected Development Sites</b>	--	8,628	66,715	<b>20,309</b>
<b>Project Area Total</b>	282,300	8,628	66,715	<b>28,778</b>

Notes:

Under CEQR, manufacturing and commercial solid waste generation rates are based on number of employees. Solid waste calculations assume an average of 400 square feet of development per employee for manufacturing uses and, to be conservative, 250 square feet of development per employee for commercial uses.

<sup>1</sup> Includes square footage of active buildings on the Homeport Site (only six out of eight are active); assumes Government Office solid waste generation rate of 0.03 lbs per square foot.

<sup>2</sup> Manufacturing use assumes the CEQR solid waste generation rate for Industrial Apparel and Textile Manufacturing (125 lbs per employee).

<sup>3</sup> Existing commercial uses assumed to be wholesale-related (solid waste generation rate of 66 lbs/employee).

Source: The Louis Berger Group, Inc. 2006.

## 15.4 No Build Condition

For the purposes of the No Build Condition analysis, it is assumed that existing uses in the Project Area would remain unchanged in 2015, with the exception of a vacated Homeport Site. Without the Proposed Action, four temporary institutional uses that presently occupy the Homeport Site would be relocated. As a result, the No Build solid waste generation amount for the overall Project Area will decrease relative to Existing Conditions.

None of the Projected Development Sites within the Project Area would be developed in the No Build Condition. However, there will be an increase in the amount of solid waste relating to any background growth that may occur within the region, including the ten anticipated development projects identified in Chapter 2. In terms of solid waste generation within the Project Area, it is assumed that the properties west of Front Street will continue to operate as they do today. Project Area uses under the No Build Condition would generate approximately 20,309 pounds of solid waste per week, or roughly 29 percent less than Existing Conditions (the existing amount less the estimated 8,469 pounds of solid waste generated weekly by the Homeport Site uses).<sup>3</sup>

## 15.5 Build Condition

The Proposed Action would introduce a substantial number of new residents, employees and visitors to Stapleton, and would increase the amount of solid waste generated in the Project Area relative to Existing Conditions. Table 15-2 shows the estimated solid waste generation amounts that are anticipated under the Build Condition.

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<sup>3</sup> Project Area solid waste estimations for the No Build and Build Conditions do not include the ten anticipated development projects identified in Chapter 2, which are situated outside of the Project Area.

**Table 15-2: Project Area Solid Waste Generation, Build Condition**

	Number of Units	Square feet of Development, by Use Type			Projected amount of solid waste (lbs/week)
	Residential	Commercial (Other) <sup>1</sup>	Commercial (Retail) <sup>2</sup>	Commercial (Office) <sup>4</sup>	
<b>Homeport Site</b>	350	145,000 <sup>1</sup>	40,000 <sup>3</sup>	75,000	<b>81,130</b>
<b>Projected Development Sites</b>	288	--	43,700	--	<b>20,439</b>
<b>Project Area Total</b>	638	145,000	83,700	75,000	<b>101,569</b>

Notes:

Under CEQR, commercial solid waste generation rates are based on number of employees. Solid waste calculations assume an average of 250 square feet of development per employee for commercial office, and 400 square feet of development per employee for all other commercial uses (including retail, restaurant/banquet hall, sports complex and farmer's market, and accessory uses).

<sup>1</sup> "Commercial Other" includes proposed restaurant/banquet hall use and the 10,000 square feet of accessory use (assume restaurant rate of 251 lbs per employee), as well as the sports complex use (assumes office building rate of 13 lbs per employee).

<sup>2</sup> Commercial retail use utilizes the solid waste generation rate for general retail use (79 lbs per employee).

<sup>3</sup> Includes 10,000 square-foot proposed farmer's market use (assumes general retail use generation rate of 79 lbs per employee).

<sup>4</sup> Commercial office use utilizes the office building generation rate of 13 lbs per employee.

Source: The Louis Berger Group, Inc. 2006.

Relative to the No Build Condition, the Proposed Action would incrementally increase the amount of solid waste generated within the Project Area by an estimated 81,260 pounds per week, or by approximately 400 percent. The Proposed Action would incrementally increase the amount of commercial solid waste generated in the Project Area by a projected amount of 55,102 pounds per week (approximately 271 percent) over the No Build amount. It is assumed that all residential waste would be handled by DSNY and all commercial waste would be collected by private carters. The Proposed Action would generate a projected 26,158 pounds of residential solid waste per week requiring collection by DSNY.<sup>4</sup> Based on the assumption that an average DSNY truck carries 10.25 tons and an average commercial carter truck load is 13.5 tons, the Proposed Action would require approximately 0.9 DSNY and 2.0 additional commercial hauler truck trips each week.

## 15.6 Conclusion

The Proposed Action would encourage the use of waste-minimization features beyond those required by law. Examples of such features are listed in the Solid Waste and Sanitation Services chapter of the *CEQR Technical Manual*, and include:

- Installation of waste-minimizing equipment such as air-dryers in public lavatories;
- Provisions for on-site composting;

<sup>4</sup> It is generally assumed that no DSNY service to the Project Area would be necessary in the No Build Condition, as the Project Area would contain only businesses that contract with private waste carters for waste and recyclables collection and disposal.

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- Provisions for material storage to allow use of bulk-packaged supplies, which would minimize packaging waste;
- Installation of kitchen garbage disposal units and compactors;
- Use of double-sided photocopying;
- Use of electronic mail rather than communication on paper; and
- Establishing protocol that enables packaging materials to be returned to the manufacturer/supplier.

The Proposed Action would be consistent with the goals of the City's SWMP. It would observe the hierarchy of preferred solid waste management, where the most preferred practice is waste prevention, followed by reuse, recycling (including composting), and export out of the City by barge or rail to transfer and disposal facilities. The Proposed Action would also aid in the City's conformance with its Recycling Law (Local Law 19 of 1989).

Although the development associated with the Proposed Action would create new demand for the disposal of solid waste, DSNY and private solid waste services are expected to have adequate capacity to meet the increases in demand. The incremental amount of waste that the Proposed Action would add to the Project Area, and the additional truck trips necessary to transport and dispose of the additional waste, would be relatively minor. Furthermore, the Proposed Action would comply with the Draft New SWMP. Therefore, no significant adverse impacts on solid waste and sanitation services are expected as a result of the Proposed Action.