A. INTRODUCTION

The solid waste and sanitation services analysis in this Environmental Impact Statement (EIS) adheres to *City Environmental Quality Review (CEQR) Technical Manual* guidelines for solid waste assessments. This chapter concludes that the solid waste systems which would serve the project site have adequate capacity to meet the relatively modest increase in demand for solid waste handling generated by the proposed project. Therefore, the proposed project would not result in significant adverse impacts on sanitation services.

PRINCIPAL CONCLUSIONS

Compared with the project site's solid waste generation in the future without the proposed project (the "No Action" condition), the proposed project would result in a net increase of approximately 59 tons of solid waste per week, 49 tons of which would be handled by the New York City Department of Sanitation (DSNY), and 10 tons of which would be handled by private carters. As the residential waste generated by the proposed project would be only approximately 49 tons per week, and since less than one DSNY truck trip per day would be generated, the city's solid waste management facilities are expected to have sufficient capacity to accommodate the additional municipal waste generated by the proposed project. Additionally, the proposed project would comply with the City's recycling program. Overall, the proposed project is not expected to have an adverse impact on solid waste handling and disposal methods or recycling in the city.

As described in Chapter 23, "Mitigation," the New York City School Construction Authority (SCA) may locate an approximately 100,000-square-foot public elementary and intermediate school within the community facility space in the Refinery complex. The inclusion of a public school would not result in any significant adverse impacts on solid waste and sanitation services.

B. EXISTING CONDITIONS

In the City of New York, residential and institutional refuse is handled by DSNY, while solid waste from commercial and manufacturing uses is collected by private carters. These materials are taken to transfer stations for sorting and transfer to larger trucks. From there, private carters transport the materials to out-of-city landfills and waste-to-energy plants. DSNY collects over 12,000 tons of residential and institutional refuse and recyclables per day.[1]

Commercial carters pick up waste from businesses, manufacturers, and offices and transport the materials to transfer stations, where the recyclable materials are separated from the solid waste. The solid waste is consolidated into larger trucks for transport and disposal in landfills outside of

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

New York City. The recyclable materials are sold and transported to manufacturing facilities. According to DSNY's website, private carters handle about 13,000 tons of recyclables and solid waste per day.

DSNY has developed a new Solid Waste Management Plan (SWMP) to address management of expected future demands for the city's solid waste. The new SWMP was approved by the New York City Council in July 2006 and by the New York State Department of Environmental Conservation (NYSDEC) in October 2006, and is effective for the next 20 years, with compliance reports to NYSDEC every two years starting in 2009. DSNY is in the process of implementing the SWMP.

The city's solid waste management services are undertaken in accordance with the SWMP, through DSNY. New York City adopted a Comprehensive SWMP in August 1992, and the implementation of the SWMP was altered slightly in May 1993 to gain approval from NYSDEC. It has since been updated to reflect changing conditions. In order to close the Fresh Kills landfill, New York City developed interim plans to export all of the municipal waste that it collects throughout the city. The new long-term plan implements large-scale trucking of municipal solid waste. A new SWMP was released in October 2004, with a focus on municipal solid waste. The Final Environmental Impact Statement (FEIS) for the new SWMP was released in April 2005 and follows two main principles: (1) containerization of waste, and (2) long-distance export of that waste by barge or rail.

The SWMP 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 minimization; reuse, recycling, or composting; and export for out-of-city disposal. The 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. 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 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.

The existing buildings on the project site are vacant, with the exception of a small security office. Therefore, the site currently generates a negligible amount of solid waste. Any solid waste currently generated on the project site is disposed of via private carters.

C. FUTURE WITHOUT THE PROPOSED PROJECT

As described in Chapter 2, "Analytical Framework," absent the proposed project, the project site would be developed as-of-right with approximately 106,300 square feet (sf) of industrial distribution space, approximately 60,000 sf of storage space, 40,000 sf of catering hall/restaurant space, and 61,000 sf of land used for building materials storage (as well as 5,000 sf of office space for this use). As shown in Table 15-1, the development that would be constructed on the project site in the No Action condition would generate solid waste at a rate of 24,407 pounds (approximately 12 tons) per week, all of which would be handled by private carters.

Table 15-1
Project Site Solid Waste Generation in the No Action condition

Use	Size	Generation Rate (pounds per week)	DSNY (pounds per week)	Private Carters (pounds per week)	Total (pounds per week)
Industrial distribution space	106 employees	66 per employee	0	6,996	6,996
Building materials storage	5 employees	66 per employee	0	330	330
Storage space	4 employees	66 per employee	0	264	264
Catering hall/ restaurant	67 employees	251 per employee	0	16,817	16,817
		Total	**0**	**24,407**	**24,407**

Source: *City Environmental Quality Review (CEQR) Technical Manual*.

In the No Action condition, the City's new SWMP will take effect. The new SWMP addresses 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 Sims 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 the South Brooklyn Marine Terminal. The facility will be barge-fed from Sims Hugo Neu Corporation sites in Queens and the Bronx, and a potential DSNY location in Manhattan. This facility will also receive DSNY residential recyclables from the local Brooklyn catchment area.

The new SWMP includes a Long Term Export Program for residential waste. The City's Long Term Export Program will be implemented through: (1) the development of four 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. The new SWMP mandates the use of up to nine converted MTS and private transfer stations within the five boroughs, at which solid waste will be consolidated, containerized, and barged or railed out of the city. 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 at least 4,290 tons per day and accommodate 30 collection vehicles per hour. In the interim, all municipal solid waste would be trucked out of the city.[1]

The new SWMP also proposes three broad categories of action to address traffic issues associated with commercial waste handling as follows: (1) improve conditions at and around transfer stations; (2) facilitate a transition from a network heavily reliant on trucks to one that relies primarily on barge and rail; and (3) redistribute private transfer capacity from a small number of communities that have the largest proportion of the system's impacts.

Under the new SWMP, the methods of handling commercial solid waste are not expected to change significantly from current methods. In March 2004, DSNY published the Commercial Waste Management Study (CWMS) pursuant to Local Law 74 of 2000. The purpose is to: (1)

[1] DSNY, Draft Comprehensive Solid Waste Management Plan, October 2004.

address the siting and operations of private transfer station and waste collection operations, (2) determine future demand for commercial transfer capacity, and (3) facilitate a transition from the current mode of truck-based export to export by barge and/or rail. The study found that the basic system of private carters collecting and disposing of waste from commercial facilities is expected to remain unchanged. Overall, the major change to solid waste collection systems serving New York City is greater reliance on private carters to transport and dispose of DSNY-handled waste outside the city. Municipal waste and privately handled waste will continue to be shipped to licensed landfills and resource recovery facilities outside the city. Recyclables are expected to be sorted and sold.

D. THE FUTURE WITH THE PROPOSED PROJECT

This section discloses the anticipated future demand for solid waste handling under the proposed project for the 2020 analysis year. The solid waste assessment applies *CEQR Technical Manual* methodology, using gross square footage figures as outlined in Table 1-1 of Chapter 1, "Project Description." As described in Chapter 1, "Project Description," the proposed project would introduce a total of 2.44 million gross square feet (gsf) of residential use, up to 146,451 gsf of community facility use, up to 127,537 gsf of retail use, and up to 98,738 gsf of commercial office space. The program also includes publicly accessible open space which, in addition to the below-grade mechanical and parking space, is not included in the solid waste analysis because the demand for solid waste services generated by these uses would be minimal.

As shown in Table 15-2, the proposed project would generate solid waste at a rate of 142,185 pounds (approximately 71 tons) per week. Of this amount, about 49 tons per week would be handled by DSNY, and private carters would handle about 22 tons per week. This represents a relatively small increase in the city's waste stream (approximately 0.6 percent of the weekly amount currently handled by DSNY, and 0.02 percent of the weekly amount handled by private carters, assuming a six-day work week). Given that a truck can haul about 10 tons of solid waste, the proposed project would require approximately seven truck trips per week.

Table 15-2
Solid Waste Generation for the Proposed Project

Use	Size	Generation Rate (pounds per week)	DSNY (pounds per week)	Private Carters (pounds per week)	Total (pounds per week)
Residential	2,400 units	41 per unit	98,400	0	98,400
Retail/ Parking	417 employees	79 per employee	0	32,943	32,943
Office	395	13 per employee	0	5,135	5,135
Community Facility	439 employees	13 per employee	0	5,707	5,707
Total			**98,400**	**43,785**	**142,185**

Source: *City Environmental Quality Review (CEQR) Technical Manual*.

Compared with the project site's solid waste generation in the No Action condition as shown in Table 15-1, the proposed project would result in a net increase of approximately 117,778 pounds (59 tons) of solid waste per week, 49 tons of which would be handled by DSNY and 10 tons of which would be handled by private carters.

According to the *CEQR Technical Manual*, the City's SWMP is based on projected rates of growth in the generation of solid waste. The measures proposed to be implemented by the City pursuant to the SWMP are therefore designed to meet the goals of the SWMP notwithstanding further development within certain defined future conditions. In other words, the solid waste

handling system assumed to be in place in the future analysis year was designed to accommodate future growth in the generation of solid waste, which includes growth from the proposed project.

Under the new SWMP, new residential development at the project site would be served by existing DSNY collection routes, with DSNY adjusting appropriate collection levels to service the community. The new SWMP would require all municipal waste generated from the project site to be trucked to the truck-to-rail transfer stations at 215 Varick Avenue and/or Scott Avenue/Scholes Street, where waste would be received, containerized, and exported by rail. As the residential waste generated by the proposed project would be only approximately 49 tons per week, and since less than one DSNY truck trip per day would be generated, these facilities are expected to have sufficient capacity to accommodate the additional municipal waste generated by the proposed project.

The proposed project would comply with the City's recycling program. The project would be designed to accommodate source separation of recyclables in conformance with the City's recycling regulations. This would include recycling paper, glass, metals, and certain plastics. With an effective recycling program, it is estimated that the waste stream could be reduced by up to 25 percent. Overall, the proposed project is not expected to have an adverse impact on solid waste handling and disposal methods or recycling in the city.

PUBLIC SCHOOL OPTION

As described in Chapter 23, "Mitigation," SCA may locate an approximately 100,000-square-foot public elementary and intermediate school within the community facility space in the Refinery complex. At this time, the school program has not been determined. For the purposes of analysis, it is assumed that a school of this size could accommodate approximately 700 elementary and intermediate students. Using a solid waste generation rate of 4 pounds per week per student, the school would generate approximately 2,800 pounds of solid waste per week during the school year, which would be less than the estimated 3,900 pounds of solid waste per week that would be generated by a different community facility use (based on approximately 3 employees per 1,000 square feet and 13 pounds per week per employee). To comply with the City's recycling plan, the school would be required to accommodate the source separation of recyclable materials. Unlike the analyzed community facility use, disposable wastes and recyclable materials from a school would be collected by DSNY instead of private carters. The school-generated waste would be negligible compared with the 12,000 tons per day handled by DSNY, and would not have a significant impact on New York City's solid waste disposal system. ✶