

**A. INTRODUCTION**

This chapter describes existing and future New York City solid waste disposal practices, and assesses the impacts of the reasonable worst-case development scenario's (RWCDS) solid waste generation on the city's collection needs and disposal capacity in comparison to the conclusions of the 2008 Final Generic Environmental Impact Statement (FGEIS) and subsequent technical memoranda. The proposed project's consistency with the City's Solid Waste Management Plan is also assessed.

**PRINCIPAL CONCLUSIONS**

This analysis finds that the RWCDS would not result in significant adverse impacts to solid waste and sanitation that were not addressed in the 2008 FGEIS or subsequent technical memoranda.

While the RWCDS would create new demands on solid waste and sanitation services, the municipal systems serving the project site area have adequate capacity to meet the projected increases in demand. The New York City Department of Sanitation (DSNY), which collects solid waste and recyclables, is anticipated to provide municipal solid waste and sanitation services to the District. Private carters currently and will continue to provide these services to non-residential users. The RWCDS would cumulatively increase the volumes of solid waste and recyclables, but would not affect the delivery of these services, nor place a significant burden on the City's solid waste management services (public or private) or require any amendments to the City's solid waste management objectives as stated in the SWMP. As disclosed in the 2008 FGEIS, the RWCDS would displace waste transfer businesses from the District by 2032, but this displacement would not have a significant adverse impact on the waste and sanitation services in Queens or in New York City.

**B. SUMMARY OF FINDINGS—2008 FGEIS AND SUBSEQUENT TECHNICAL MEMORANDA**

The 2008 FGEIS concluded that, although the Willets Point Development Plan and anticipated development on Lots B and D would cumulatively increase the volumes of solid waste and recyclables, but would not affect the delivery of these services, nor place a significant burden on the City's solid waste management services (public or private). The 2008 FGEIS noted that the Willets Point Development Plan would displace two waste transfer businesses from the District, but that this displacement would not have a significant adverse impact on waste and sanitation services in Queens or in New York City. Therefore, the 2008 FGEIS concluded that no significant adverse impacts on solid waste and sanitation services would result from the Willets Point Development Plan and the anticipated development on Lots B and D. Subsequent technical memoranda approved on September 23, 2008, November 13, 2008, November 18, 2009, and

February 10, 2011 also concluded that proposed revisions to the Willets Point Development Plan would not have significant adverse impacts on solid waste and sanitation services.

### C. METHODOLOGY

According to the 2012 *CEQR Technical Manual*, a solid waste and sanitation services assessment should be conducted if a project would generate solid waste or enacts regulatory changes affecting the management of the city's waste, or if the action involves the construction, operation, or closing of any type of solid waste management facility. The manual also states that projects with a generation rate of less than 100,000 pounds per week are not considered large and do not warrant detailed analysis.

To assess the potential impacts on solid waste and sanitation services from the RWCDs, this chapter:

- Describes the existing solid waste management services in the project site area, and using solid waste generation rates for typical land uses and activities provided in the 2012 *CEQR Technical Manual*, assesses current levels of solid waste generation for all portions of the project site (Willets West, the Special Willets Point District, and the Roosevelt Avenue parking areas) as well as Lot B;
- Assesses the effect of the potential displacement of one existing waste transfer business in the District;
- Determines future solid waste demands with the RWCDs; and
- Assesses the effects of this incremental demand on municipal and private sanitation services.

### D. EXISTING CONDITIONS

#### SANITATION SERVICES

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.

Commercial carters pick up solid waste from businesses, manufacturers, and offices and take the waste 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 New York City. The recyclable materials are sold and transported to manufacturing facilities. Private carters handle about 14,830 tons per week of recyclables and solid waste. In addition, private carters handle about 19,070 tons per day (tpd) of construction debris and excavated materials.<sup>1</sup> DSNY collects approximately 16,500 tpd of refuse and recyclables, of which approximately 5,000 tons are recycled.

The city's solid waste management services are undertaken in accordance with the existing Solid Waste Management Plan (SWMP) (September 2006), which is the responsibility of DSNY. The existing SWMP, which modified the city's previously approved 1992 plan (as amended in 1996 and 2000), was approved for submission to the New York State Department of Environmental Conservation (NYSDEC) by a resolution of the City Council on July 19, 2006. The city adopted

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<sup>1</sup> The DSNY SWMP anticipates and provides for a projected increase in solid waste generation citywide over the 20-year plan period as a result of population growth and non-specific development. By 2020, the SWMP anticipates a daily increase of 2,145 tons, or 12.7 percent.

the existing plan on July 27, 2006. The SWMP was approved by NYSDEC in a letter received by DSNY on October 27, 2006.

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. Under the law, commercial establishments are also 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 new SWMP includes a Long Term Export Program for residential waste. The city's Long Term Export Program is anticipated to be implemented through: the development of four converted marine transfer stations; the award of up to five contracts with private transfer stations for barge or rail export of DSNY-managed waste for disposal; and 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 includes the use of up to nine converted marine transfer station (MTS) facilities 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 used at MTS facilities would transport sealed intermodal containers capable of being transported on barge or rail. The four converted MTS facilities would be designed to each process at least 4,290 tpd and accommodate 30 collection vehicles per hour. In the interim, pending implementation of each Long Term Export Program element, DSNY-managed municipal solid waste would be trucked out of the city.<sup>1</sup>

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

## **SOLID WASTE GENERATION**

The District portion of the project site currently has a number of active uses that generate solid waste. Waste generated by the single existing occupied dwelling unit in the District is assumed to be negligible. The solid waste generated by the portions of the project site currently used for parking—Willets West, South Lot and Lot D—as well as Lot B, which is also currently used for parking, is assumed to be minimal and therefore has not been included in the calculations provided below.

Table 14-1 of the 2012 *CEQR Technical Manual* provides solid waste generation rates for various categories of land use. These rates were utilized in this analysis. Table 14-1 provides

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<sup>1</sup> DSNY, *Comprehensive Solid Waste Management Plan*, September 2006.

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generation rates for two categories of industrial uses. The average of the two rates, estimated at 183 pounds per week per employee, is utilized in this analysis as representative of construction, manufacturing, and auto uses (not including auto wholesale and auto retail). The waste generated by waste management and remediation businesses was assumed to be the waste generated by employees and was approximated with the office use solid waste generation rate of 13 pounds per week per employee.

Based on these assumptions, the project site's current uses generate a total of approximately 165,310 pounds (about 12 tpd) of solid waste per week (see **Table 12-1**). These private business uses are served by commercial solid waste and recycling management companies.

**Table 12-1**  
**Existing Solid Waste Generation in the Project Site**

Existing Use	Number of Businesses	Number of Employees	Solid Waste Rate lbs/wk/employee	Total lbs/week
Auto Businesses (not including wholesale and retail)	158	469	183 <sup>1</sup>	85,827
Construction	6	147	183 <sup>1</sup>	26,901
Manufacturing	5	72	183 <sup>1</sup>	13,176
Wholesale Trade (including auto wholesale)	11	265	66	17,490
Retail Trade (including auto retail)	31	210	79	16,590
Administrative & Support, Waste Management and Remediation <sup>2</sup>	5	178	13	2,314
Accommodation and Food	4	12	251	3,012
<b>Total</b>				<b>165,310</b>
<b>Notes:</b> <sup>1</sup> Assumed to be the average of two industrial use generation rates in the 2012 <i>CEQR Technical Manual</i> . <sup>2</sup> Assumed that the only waste generated by the waste management businesses was that of employees, approximated with the office use generation rate from the <i>CEQR Technical Manual</i> . <sup>3</sup> Based on the general retail use waste generation rate from the <i>CEQR Technical Manual</i> .				

## E. THE FUTURE WITHOUT THE PROPOSED PROJECT

As described in **Chapter 1**, "Project Description," for the purposes of a conservative analysis, the RWCDS for this EIS assumes that no changes to land use occur on the project site by 2032. Thus, no changes with respect to solid waste generation from the project site are expected to occur by 2032. As described in **Chapter 2**, "Land Use, Zoning and Public Policy," a number of development projects are anticipated to be constructed in the surrounding area by 2032. There would also be some changes in the City's waste management services. The existing North Shore MTS, which serves the project site, has been demolished, and a new MTS is under construction on the same site in College Point. The new MTS is expected to be completed by June 2013. The new MTS will receive and allow for containerization of solid waste. Containerized solid waste will then be exported from the new MTS by barge. The new MTS will have the capacity to handle up to 3,672 tpd of solid waste under normal conditions. Under upset conditions as a result of an event that reduces processing capacity of one or more elements of DSNY's waste management system—such as fire or equipment outages—thereby requiring a temporary reallocation of municipal solid waste from other wastesheds to this transfer station for a period of a few days duration, allowable capacity of the new MTS will be 4,290 tpd of solid waste. In the event of a public emergency event affecting the entire or large part of DSNY's waste management system, thereby requiring DSNY—acting on the basis of protecting the public health—to use the maximum design capacity of the North Shore MTS, 5,280 tpd of solid waste

will be allowed. However, the average daily throughput is expected to be 2,200 tons of DSNY waste and 1,000 tons of commercial waste.<sup>1</sup>

## **F. PROBABLE IMPACTS OF THE PROPOSED PROJECT**

### **RWCDS**

Consistent with the conclusions of the 2008 FGEIS and subsequent technical memoranda, the RWCDS is anticipated to result in the displacement of two waste transfer businesses currently operating in the District (Tully Environmental and Crown Container). It is anticipated that the businesses would be able to continue operations through Phases 1A and 1B, but would be displaced upon completion of Phase 2 of the proposed project. Crown Container is authorized to process construction and demolition debris. The permitted capacity of Crown Container is small, and the waste generated at that facility could be absorbed at other facilities in Queens or other boroughs. Tully Environmental currently processes putrescible municipal (DSNY) waste under a contract with the City, and is permitted to handle up to 1,375 tpd.<sup>2</sup> The North Shore MTS, when completed, will have the capacity to process the municipal waste currently handled by Tully. Until it is displaced by Phase 2, Tully could still maintain handling of waste generated by the private sector, per its permitted capacity.

The proposed project would place additional demands on the solid waste and sanitation services in the area. To determine future solid waste volumes, solid waste generation rates from the 2012 *CEQR Technical Manual* and from published environmental impact statements were applied to the RWCDS. **Table 12-2** presents the cumulative solid waste volumes expected under the RWCDS using these assumptions. As shown in the table, it is estimated that the RWCDS would generate approximately 924,486 pounds of solid waste per week (66 tpd) in 2032.<sup>3</sup> This daily demand would result in a 54 tpd increase in 2032 over the existing demand and is the equivalent of 0.4 percent of the total amount of solid waste currently handled each day in New York City. This is not a significant increase in the City's solid waste stream.

While most of the existing solid waste generated by the project site is from non-residential uses and is therefore collected by private carting companies, in 2032 an estimated 251,589 pounds (18 tpd) per week of solid waste generated by the proposed project would be from residential, school, and community facility uses. This residential and public solid waste would be collected by DSNY. According to the 2012 *CEQR Technical Manual* guidelines, the typical DSNY collection truck has a capacity of 12.5 tons. Therefore, the proposed project would be expected to generate solid waste for DSNY collection that would require up to two added truckloads per day in 2032. This is not a significant impact on solid waste services for DSNY.

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<sup>1</sup> North Shore Marine Transfer Station Waste Containerization Facility Part 360 Permit Application, January 2007.

<sup>2</sup> <http://www.tullyconstruction.com/company/affiliates/> (October 2012).

<sup>3</sup> The solid waste generated by the portions of the project site currently used for parking—Willets West, South Lot and Lot D—as well as Lot B, which is also currently used for parking, is assumed to be minimal and therefore has not been included in the calculations in Table 13-2.

**Table 12-2**  
**Solid Waste Generation of the RWCDs in 2032**

Use	Size (gsf)	Individuals	Solid Waste Rates (lbs/week)	Total (lbs/week)
Residential	5,850,000 (5,850 units)	16,029 residents <sup>1</sup>	41 per resident	239,850
Retail	2,834,500	7,086 employees	79 per employee	559,814
Office	780,000	3,120 employees	13 per employee	40,560
Convention Center	400,000	160 employees	13 per employee <sup>2</sup>	2,080
Hotel	560,000 (625 rooms)	259 employees	75 per employee	19,444
Community Facility	150,000	150 employees	13 per employee <sup>3</sup>	1,950
School	230,000 (2,340 seats)	2,340 pupils 213 employees	3 per pupil 13 per employee	9,789
<b>Total</b>				<b>873,487</b>
Lot B Retail	184,500	461 employees	79 per employee	36,439
Lot B Commercial	280,000	1,120 employees	13 per employee	14,560
<b>RWCDs<sup>4</sup></b>				<b>924,486</b>
<b>Notes:</b> <sup>1</sup> Based on the average household size of 2.74 for Community District 7 in 2010 Census data. <sup>2</sup> Based on solid waste generation rate used in the <i>Atlantic Yards Arena and Redevelopment Project FEIS</i> . <sup>3</sup> Based on the solid waste generation rate used in the <i>West Harlem Rezoning and Academic Mixed-Use Development FEIS</i> . <sup>4</sup> As discussed in Chapter 1, "Project Description," the RWCDs includes the potential future development on Lot B as analyzed in the 2008 FGEIS, as well as the proposed project.				

The non-residential solid waste (retail, office, convention center, and hotel uses) would be collected by private contractors. The total amount of this waste would be 672,897 pounds (48 tpd) per week in 2032. Given that the typical collection truck averages a 12.5-ton capacity, the RWCDs would require up to four private contractor truckloads per day. This is not a significant increase in demand and would be met by private-sector response to the increase in service needs.

In summary, this analysis finds that the RWCDs would not result in any significant adverse impacts related to solid waste and sanitation that were not addressed in the 2008 FGEIS and subsequent technical memoranda. Additionally, the proposed project would not conflict with or require any amendments to the City's solid waste management objectives as stated in the SWMP. \*