

## **A. INTRODUCTION**

The Willets Point Development Plan would generate new demands on solid waste management and sanitation services provided in the Willets Point Development District. In accordance with the approach outlined in Chapter 2, “Procedural and Analytical Framework,” this chapter analyzes the cumulative impact of both the Willets Point Development Plan and the anticipated development on Lot B on these services, and considers the net cumulative incremental impact between the continuation of the existing on-site uses in the future without the proposed Plan, and the proposed Plan and the anticipated development on Lot B in the 2017 analysis year. The cumulative impact is also assessed for the No Convention Center Scenario, as discussed in Chapter 2.

## **PRINCIPAL CONCLUSIONS**

While the proposed Plan and the anticipated development on Lot B would create new demands, the municipal systems serving the Willets Point Development District have adequate capacity to meet the projected increases in demand from the proposed Plan. No significant adverse impacts on solid waste and sanitation services would result from the proposed Plan and the anticipated development on Lot B. The New York City Department of Sanitation (DSNY), which collects solid waste and recyclables, is currently scheduled to provide municipal solid waste and sanitation services to the Willets Point Development District. Private carters provide these services to non-residential users. The proposed Plan and the anticipated development on Lot B 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 proposed Plan would displace two waste transfer businesses from the District, but this displacement would not have a significant adverse impact on the waste and sanitation services in Queens or in New York City. The No Convention Center Scenario would result in a marginally higher demand on solid waste and sanitation services, but this would also not result in a significant cumulative adverse impact.

## **B. METHODOLOGY**

As discussed below, this chapter:

- Describes the existing solid waste management services in the Willets Point Development District, using solid waste generation rates for typical land uses and activities provided in the *City Environmental Quality Review (CEQR) Technical Manual*;
- Assesses the effect of the potential displacement of the existing waste transfer business displacement in the District;
- Determines future solid waste demands with the proposed Plan and the anticipated development on Lot B for 2017 with and without the proposed convention center; and

- Assesses the effects of this incremental demand on municipal and private sanitation services.

## **C. EXISTING CONDITIONS**

### **DESCRIPTION OF SOLID WASTE AND SANITATION SERVICES**

In New York City, DSNY is the agency responsible for the collection and disposal of solid waste and recyclable materials generated by residences, public schools, 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. 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, from where it is 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.<sup>1</sup> 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.

The City's solid waste management services are undertaken in accordance with a 20-year Solid Waste Management Plan (SWMP). DSNY developed a new comprehensive SWMP that was approved by the New York State Department of Environmental Conservation (DEC) on October 27, 2006. The new SWMP addresses and recognizes the interdependency of the systems for managing recycling, residential waste, and commercial waste, and introduces a shift from the current mode of truck-based export to export by barge and/or rail. The new SWMP includes a Long-Term Export Program for residential waste, which will be implemented through: (1) the redevelopment 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 will 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 tpd and accommodate 30 collection vehicles per hour. In the interim, all municipal solid waste will be trucked out of the City.<sup>2</sup> In September 2007, DEC permitted the construction and operation of the converted North Shore MTS, in the College Point Section of Queens, to the east of the proposed Plan. The facility is expected to be operational in 2011.

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

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<sup>1</sup> DSNY Web site: <http://www.nyc.gov/html/dsny/html/about/about.shtml> (July 24, 2007).

<sup>2</sup> DSNY, Comprehensive Solid Waste Management Plan, September 2006.

aluminum foil, glass, plastic and metal containers, newspapers and other paper wastes from household waste for separate collection. Under the SWMP, 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, plastic containers, and aluminum foil, in addition to meeting the commercial recycling requirements. The Willets Point Development District is within DSNY's Queens Community Service District 7 for public solid waste collection services. Commercial and industrial operations are handled by private carters.

### SOLID WASTE GENERATION

The Willets Point Development District currently has a number of active uses that generate solid waste. Waste generated by the single existing occupied dwelling unit in the Willets Point Development District is assumed to be negligible.

Table 3M-1 of the *CEQR Technical Manual* provides rates for two categories of industrial uses. The average of the two rates, estimated at 183 pounds per week per employee, is utilized as representative of construction, manufacturing, and auto uses, not including auto wholesale and auto retail. The solid waste generation rates for wholesale and retail uses, including auto wholesale and auto retail, were based on the generation rates provided in Table 3M-1 of the *CEQR Technical Manual*, as was the waste generation rate for accommodation and food uses. The waste generated by waste management and remediation businesses was assumed to be the waste generated by employees and approximated with the office use solid waste generation rate of 13 pounds per week per employee, as specified in the *CEQR Technical Manual*. The waste generation rate for the health club (arts, entertainment, and recreation use group) was based on the waste generation rate for general retail uses provided in Table 3M-1.

Based on these assumptions, the Willets Point Development District uses generate a total of approximately 207,449 pounds of solid waste per week (about 15 tpd). These private businesses uses are served by commercial solid waste and recycling management companies. Table 15-1 summarizes the current solid waste generation conditions in the Willets Point Development District.

**Table 15-1**  
**Existing Solid Waste Generation in the Willets Point Development District**

| Existing Use                                                                                                                                                                                          | Number of Businesses | Number of Employees | Solid Waste Rate lbs/wk/employee | Total lbs/week |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|---------------------|----------------------------------|----------------|
| Auto Businesses (not including wholesale and retail)                                                                                                                                                  | 168                  | 576                 | 183 <sup>1</sup>                 | 105,408        |
| Construction                                                                                                                                                                                          | 8                    | 153                 | 183 <sup>1</sup>                 | 27,999         |
| Manufacturing                                                                                                                                                                                         | 5                    | 79                  | 183 <sup>1</sup>                 | 14,457         |
| Wholesale Trade (including auto wholesale)                                                                                                                                                            | 10                   | 268                 | 66                               | 17,688         |
| Retail Trade (including auto retail)                                                                                                                                                                  | 54                   | 423                 | 79                               | 33,417         |
| Administrative & Support, Waste Management and Remediation <sup>2</sup>                                                                                                                               | 6                    | 180                 | 13                               | 2,340          |
| Health Club (Arts, Entertainment and Recreation)                                                                                                                                                      | 1                    | 11                  | 79 <sup>3</sup>                  | 869            |
| Accommodation and Food                                                                                                                                                                                | 7                    | 21                  | 251                              | 5,271          |
| Other Services                                                                                                                                                                                        | 1                    | 0                   | N/A                              | 0              |
| <b>Total</b>                                                                                                                                                                                          |                      |                     |                                  | <b>207,449</b> |
| <b>Notes:</b>                                                                                                                                                                                         |                      |                     |                                  |                |
| <sup>1</sup> Assumed to be the average of two industrial use generation rates in the <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> .                                                                                            |                      |                     |                                  |                |

## **D. FUTURE WITHOUT THE PROPOSED PLAN**

In 2017, in the future without the proposed Plan, it is conservatively assumed that the uses currently in the Willets Point Development District would remain, although it is possible that some properties currently vacant would be reused and that some limited development would occur. However, it is anticipated that most growth and development would occur in neighboring communities, such as College Point. There would also be some changes in the City's waste management services. Changes anticipated to occur by 2017 without the proposed Plan are described below.

### **SOLID WASTE AND SANITATION**

In the future without the proposed Plan, no major changes with respect to solid waste generation in the Willets Point Development District are expected to occur by 2017. Under the City's new SWMP, the existing North Shore MTS, which serves the District, will be demolished, and a new MTS will be constructed on the same site in College Point that will receive and allow for containerization of solid waste. Containerized solid waste will then be exported from the new MTS by barge. As part of these improvements, the new North Shore MTS will have the capacity to handle up to 3,672 tpd of solid waste under normal conditions and 4,290 tpd of solid waste under upset conditions. The average daily throughput is expected to be 2,200 tons of DSNY waste and 1,000 tons of commercial waste.<sup>1</sup>

## **E. PROBABLE IMPACTS OF THE PROPOSED PLAN**

### **PROPOSED PLAN**

The proposed Plan would result in the displacement of two waste transfer businesses (Tully Environmental and Crown Container) currently operating in the District. Tully Environmental has the capacity to process 900 tpd of putrescible municipal (DSNY) waste. Crown Container is authorized to process 375 tpd of mostly construction and demolition debris. There are four other facilities in Queens and 24 other facilities in the City that process construction and demolition waste. The permitted capacity of Crown Container is small, approximately 3 percent of the City construction and demolition capacity<sup>2</sup>, and the waste generated at that facility could be absorbed at other facilities. Tully Environmental currently processes putrescible municipal waste under a contract with the City. The North Shore MTS, when completed, will have the capacity to process the waste currently handled by Tully. If Tully were displaced from the District before the North Shore MTS became operational, DSNY waste currently processed by Tully would temporarily be transported to facilities in New Jersey in DSNY trucks. Therefore, the displacement of the two waste transfer businesses would not significantly impact the waste transfer industry within Queens or New York City.

The proposed Plan and the anticipated development on Lot B would place additional demands on the solid waste and sanitation services in the area. To determine future solid waste volumes, the solid waste generation rates from the *CEQR Technical Manual* were applied to the proposed

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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.nylpi.org/pub/Distribution\\_\\_\\_Capacities\\_of\\_Solid\\_Waste\\_Trasfer\\_Stations.pdf](http://www.nylpi.org/pub/Distribution___Capacities_of_Solid_Waste_Trasfer_Stations.pdf) (November 2007).

Plan and the anticipated development on Lot B. Table 15-2 presents the cumulative solid waste volumes expected under the proposed Plan using these assumptions. As shown in the table, it is estimated that the proposed Plan and the anticipated development on Lot B would generate approximately 690,249 pounds of solid waste per week (49 tpd) in 2017. This daily demand would result in a 34 tpd increase in 2017 over the existing District demand and is the equivalent of 0.14 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 in the Willets Point Development District is from non-residential uses and is therefore collected by private carting companies, in 2017 an estimated 256,015 pounds (128 tons) per week of solid waste generated by the proposed Plan would be from residential, school, and community uses. This residential and public solid waste would be collected by DSNY. According to the *CEQR Technical Manual* guidelines, the typical DSNY collection truck has a capacity of 12.5 tons. Therefore, the proposed Plan would be expected to generate solid waste for DSNY collection that would require up to four added truckloads per day in 2017, assuming a three-day work week for solid waste collection services. This is not a significant impact on solid waste services for DSNY.

**Table 15-2**  
**Solid Waste Generation for the Proposed Development Plan in 2017**

| Future Use                                                                                                                                                                                                                                                                                                                                                                                     | Size                                                  | Individuals         | Solid Waste Rates<br>(lbs per week) | Total<br>(lbs per week) |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|---------------------|-------------------------------------|-------------------------|
| Residential <sup>1</sup>                                                                                                                                                                                                                                                                                                                                                                       | 5,500,000 gross<br>square feet (gsf)<br>(5,500 units) | 14,795<br>residents | 17 per resident                     | 251,515                 |
| Retail                                                                                                                                                                                                                                                                                                                                                                                         | 1,700,000 gsf                                         | 4,711<br>employees  | 79 per employee                     | 372,169                 |
| Office                                                                                                                                                                                                                                                                                                                                                                                         | 500,000 gsf                                           | 3,120<br>employees  | 13 per employee                     | 40,560                  |
| Convention<br>Center                                                                                                                                                                                                                                                                                                                                                                           | 400,000 gsf                                           | 160<br>employees    | 13 per employee <sup>2</sup>        | 2,080                   |
| Hotel                                                                                                                                                                                                                                                                                                                                                                                          | 560,000 gsf (700<br>rooms)                            | 259<br>employees    | 75 per employee                     | 19,425                  |
| Community/<br>Cultural Use                                                                                                                                                                                                                                                                                                                                                                     | 150,000 gsf                                           | 150<br>employees    | 13 per employee <sup>3</sup>        | 1,950                   |
| Primary School                                                                                                                                                                                                                                                                                                                                                                                 | 130,000 gsf<br>(850 seats)                            | 850 pupils          | 3 per pupil                         | 2,550                   |
| <b>Total</b>                                                                                                                                                                                                                                                                                                                                                                                   |                                                       |                     |                                     | <b>690,249</b>          |
| <b>Notes:</b><br><sup>1</sup> Based on the average household size of 2.69 for Community District 7 in the year 2000.<br><sup>2</sup> Based on solid waste generation rate used in the Atlantic Yards Arena and Redevelopment Project EIS.<br><sup>3</sup> Based on the solid waste generation rate used in the Manhattanville in West Harlem Rezoning and Academic Mixed-Use Development FEIS. |                                                       |                     |                                     |                         |

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 434,234 pounds (217 tons) per week in 2017. Given that the typical collection truck averages a 12.5-ton capacity, the proposed Plan would require up to three private contractor truckloads per day, assuming a six-day work week. This is not a significant increase in demand and would be met by private-sector response to the increase in service needs.

### NO CONVENTION CENTER SCENARIO

Under the No Convention Center Scenario, 350,000 square feet (sf) of additional residential use and 50,000 sf of ground floor retail use would replace the proposed convention center use, as discussed in Chapter 2. The volume of solid waste generated by development under this scenario would be approximately 3 percent higher than described above under “Proposed Plan,” as presented in Table 15-3.

This small increase, as compared with the proposed Plan, would not result in a significant adverse impact on municipal or private sanitation services and would not require additional waste collection truck trips.

**Table 15-3**

**Solid Waste Generation for the No Convention Center Scenario**

| Future Use                                                                                                                                                                                                                                                                | Size                                                  | Individuals         | Solid Waste Rates<br>(lbs per week) | Total<br>(lbs per week) |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|---------------------|-------------------------------------|-------------------------|
| Residential <sup>1</sup>                                                                                                                                                                                                                                                  | 5,850,000 gross<br>square feet (gsf)<br>(5,850 units) | 15,737<br>residents | 17 per resident                     | 267,529                 |
| Retail                                                                                                                                                                                                                                                                    | 1,934,500 gsf                                         | 4,836<br>employees  | 79 per employee                     | 382,044                 |
| Office                                                                                                                                                                                                                                                                    | 780,000 gsf                                           | 3120<br>employees   | 13 per employee                     | 40,560                  |
| Hotel                                                                                                                                                                                                                                                                     | 560,000 gsf (700<br>rooms)                            | 259<br>employees    | 75 per employee                     | 19,425                  |
| Community/<br>Cultural Use                                                                                                                                                                                                                                                | 150,000 gsf                                           | 150<br>employees    | 13 per employee <sup>2</sup>        | 1,950                   |
| Primary School                                                                                                                                                                                                                                                            | 130,000 gsf<br>(900 seats)                            | 900 pupils          | 3 per pupil                         | 2,700                   |
| <b>Total</b>                                                                                                                                                                                                                                                              |                                                       |                     |                                     | <b>714,208</b>          |
| <b>Notes:</b><br><sup>1</sup> Based on the average household size of 2.69 for Community District 7 in the year 2000.<br><sup>2</sup> Based on the solid waste generation rate used in the Manhattanville in West Harlem Rezoning and Academic Mixed-Use Development FEIS. |                                                       |                     |                                     |                         |

With or without the convention center, the proposed Plan and anticipated development on Lot B would not result in significant adverse impacts on residential or commercial solid waste collection and disposal services, nor would the proposed Plan conflict with or require any amendments to the City’s solid waste management objectives as stated in the SWMP. \*