Zoning for Coastal Flood Resiliency
Chapter 12: Solid Waste & Sanitation Services

A. INTRODUCTION

This chapter examines the Proposed Action's potential effects on solid waste and sanitation services. According to the 202014 *City Environmental Quality Review* (CEQR) *Technical Manual*, a solid waste and sanitation services assessment is intended to determine whether a project has the potential to cause a substantial increase in solid waste production that may overburden available waste management capacity or otherwise be inconsistent with the City's *Solid Waste Management Plan* or with state policy related to the City's integrated solid waste management system

As detailed in **Chapter 1, "Project Description,"** the New York City Department of City Planning (DCP) is proposing a zoning text amendment to update the Special Regulations Applying in Flood Hazard Areas (Article VI, Chapter 4) of the New York City Zoning Resolution (ZR), which includes the "Flood Resilience Zoning Text" (the "2013 Flood Text") and "Special Regulations for Neighborhood Recovery" (the "2015 Recovery Text"). These temporary zoning rules were adopted on an emergency basis to remove zoning barriers that were hindering the reconstruction and retrofitting of buildings affected by Hurricane Sandy and to help ensure that new construction there would be more resilient. The 2013 Flood Text provisions are set to expire with the adoption of new and final Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs), which is anticipated to occur within the next few years. Applicability of the 2015 Recovery Text expired in July 2020. Therefore, DCP is proposing a citywide zoning text amendment, "Zoning for Coastal Flood Resiliency" (the "Proposed Action"), to improve upon and make permanent the relevant provisions of the existing temporary zoning rules of the 2013 Flood Text and 2015 Recovery Text. In addition, the Proposed Action includes special provisions to help facilitate the city's long-term recovery from the COVID-19 pandemic and its associated economic effects by providing more time for existing non-conforming uses to reopen and builders to undertake certain construction projects. The Proposed Action also includes updates to other sections of the ZR, including the Special Regulations Applying in the Waterfront Area (Article VI, Chapter 2) and provisions within various Special Purpose Districts. The Proposed Action would mostly affect New York City's current 1% annual and 0.2% annual chance floodplains. However, select provisions of the Proposed Action would be applicable citywide. To help the City prepare for or respond to other disasters, select provisions in the Proposed Action regarding power systems and other mechanical equipment, ramps and lifts, vulnerable populations, and disaster recovery rules, would be applicable citywide.

Due to the broad applicability of the Proposed Action, it is difficult to predict the sites where development would be facilitated. In addition, the Proposed Action is not in-and-of-itself expected to induce development where it would not otherwise have occurred absent the Proposed Action. Although the Proposed Action may allow developments and existing buildings to retrofit to resilient standards, the overall amount, type, and location of construction within the affected area is not anticipated to change. Owing to the generic nature of this action, there are no known or projected as-of-right development sites identified as part of the Proposed Action's Reasonable Worst-Case Development Scenario (RWCDS). To produce a reasonable analysis of the likely effects of the Proposed Action, 14 representative Prototypical Analysis Sites containing either new developments, infill, reconstructions, or retrofits of existing buildings in the city's 1% and 0.2% annual chance floodplains were identified to demonstrate the wide range of proposed regulations for sites that would be able to develop as-of-right in the future with the Proposed Action, detailed further in **Chapter 1**.

B. PRINCIPAL CONCLUSIONS

The Proposed Action would not result in any significant adverse impacts on solid waste or sanitation services. In accordance with the methodology outlined in the 20202~~14~~ *CEQR Technical Manual*, a preliminary assessment was conducted to assess the potential of the Proposed Action to affect demand for solid waste and sanitation services. As noted above, as the Proposed Action is a generic action, there are no known potential or projected development sites. To produce a reasonable analysis of the likely effect of the Proposed Action, representative Prototypical Analysis Sites were developed. The analysis found that none of the 14 Prototypical Analysis Sites would result in a net increase of more than 50 tons of solid waste per week. As such, the Proposed Action would not result in significant adverse solid waste and sanitation services impacts, and detailed analysis is not warranted.

C. PRELIMINARY ASSESSMENT

According to the 20202~~14~~ *CEQR Technical Manual*, actions with a generation rate of less than 50 tons (100,000 pounds) of solid waste per week would not result in a significant adverse impact on the City's waste management capacity and do not warrant detailed analysis.

As detailed above, the Proposed Action is not expected to induce development or cause a significant change in the overall amount, type, or location of development. As detailed in **Chapter 1**, the Proposed Action would not result in an incremental increase of any residential dwelling units (DUs) on any Prototypical Analysis Site as compared to No-Action conditions. As presented in **Table 12-1**, the Proposed Action would generate an increase of four retail workers on Prototypical Analysis Site 7 in the 1% annual chance floodplain scenario, an increase of one retail worker on Site 8 in both the 1% and 0.2% floodplain scenarios, and an increase of three retail workers on Site 9 in both the 1% and 0.2% annual chance floodplain scenarios as compared to No-Action conditions. The Proposed Action would also result in a net decrease of four retail workers on Site 7 in the 0.2% annual chance floodplain scenario, as compared to No-Action conditions.

Table 12-1: Workers Generated by the Proposed Action

Site	*No-Action Workers (1% Floodplain Scenario)*	*With-Action Workers (1% Floodplain Scenario)*	*Action-Generated Worker Increment (1% Floodplain Scenario)*	*No-Action Workers (0.2% Floodplain Scenario)*	*With-Action Workers (0.2% Floodplain Scenario)*	*Action-Generated Worker Increment (0.2% Floodplain Scenario)*
1	-	-	-	-	-	-
2	-	-	-	-	-	-
3	-	-	-	-	-	-
4	-	-	-	-	-	-
5	-	-	-	-	-	-
6	-	-	-	-	-	-
7	13	17	**+ 4 retail workers**	22	18	**- 4 retail workers**
8	3	4	**+ 1 worker**	3	4	**+ 1 worker**
9	15	18	**+ 3 retail workers**	15	18	**+ 3 retail workers**
10	12	12	**0**	12	12	**0**
11	-	-	-	-	-	-
12	-	-	-	-	-	-
13	-	-	-	-	-	-
14	-	-	-	-	-	-

Notes: Standard worker generation rates of one employee per 333 gsf of retail space and one employee per 1,000 gsf of industrial space were utilized.

As the incremental increase is less than five workers on any Prototypical Analysis Site in both the 1% and 0.2% annual chance floodplain scenarios, it is assumed none of these sites would generate more than 50

tons (100,000 lbs.) of solid waste per week. Per the *CEQR Technical Manual*, commercial retail employees generate 79 pounds of solid waste per week. **Table 12-2** shows the expected incremental increase in solid waste generated by the Proposed Action. The increase of eight commercial retail employees on Sites 7, 8, and 9 in the 1% floodplain scenario would produce 632 pounds of waste per week, far below the CEQR threshold requiring detailed analysis. Industrial employees produce between 125 to 240 pounds of waste per week per employee.

Table 12-2: 1% Annual Floodplain Scenario Solid Waste Generation by Prototypical Analysis Site

Site	No-Action Workers	Generation Rate (lbs per week)	Solid Waste Generation (lbs per week)	With-Action Workers	Generation Rate (lbs per week)	Incremental Solid Waste (lbs/week)
1	Residential Units: 1	41 lbs./unit	41	Residential Units: 1	41	**0**
2	Residential Units: 1	41 lbs./unit	41	Residential Units: 1	41	**0**
3	Residential Units: 2	41 lbs./unit	82	Residential Units: 2	82	**0**
4	Residential Units: 3	41 lbs./unit	123	Residential Units: 3	123	**0**
5	Residential Units: 54	41 lbs./unit	2,214	Residential Units: 54	2,214	**0**
6	Residential Units: 320	41 lbs./unit	13,120	Residential Units: 320	13,120	**0**
7	Residential Units: 10 Commercial Retail (4,400 gsf): 13 Employees	41 lbs./unit 79lbs./employee	410 1,027	Residential Units: 10 Commercial Retail (5,510 gsf): 17 Employees	410 1,343	**0** **316**
8	Residential Units: 13 Commercial Retail (1,140 gsf): 3 Employees	41 lbs./unit 79 lbs./employee	533 237	Residential Units: 13 Commercial Retail (1,290 gsf): 4 Employees	533 316	**0** **79**
9	Commercial Retail (5,040 gsf): 15 Employees	79 lbs./employee	1,185	Commercial Retail (6,000 gsf): 18 Employees	1,422	**237**
10	Industrial (11,500 gsf): 12 Employees	Up to 240 lbs./employee	2,880	Industrial (12,000 gsf): 12 Employees	2,880	**0**
11	Residential Units: 1	41 lbs./unit	41	Residential Units: 1	41	**0**
12	Residential Units: 1	41 lbs./unit	41	Residential Units: 1	41	**0**
13	Residential Units: 2	41 lbs./unit	82	Residential Units: 2	82	**0**
14	N/A	N/A	N/A	N/A	N/A	**N/A**

Notes: Solid Waste generation rates based on Table 14-1 in the 2020~~14~~ *CEQR Technical Manual*.
*The 0.2% annual chance floodplain scenario for each Prototypical Analysis Site produces the same or less incremental solid waste per week as a result of the Proposed Action, and is therefore not detailed in the above table (see **Appendix A**).
*Site 14 illustrates the proposed modifications to waterfront regulations for open space. Refer to **Appendix A** for more details.

D. CONCLUSIONS

The preliminary assessment conducted to assess solid waste and sanitation services pertaining to the Proposed Action found that none of the 14 Prototypical Analysis Sites would result in a net increase of more than 50 tons of solid waste per week. As such, the Proposed Action would not affect solid waste and sanitation services, and detailed analysis is not warranted.