



# 8

## Water and Sewer Infrastructure

This chapter evaluates the potential for the Proposed Actions in connection with the Proposed Project to result in significant adverse impacts on the City's water supply, as well as its wastewater and stormwater conveyance and treatment infrastructure.

### Introduction

The Applicant, Commodore Owner LLC, is seeking several discretionary approvals from the City Planning Commission (CPC)—including special permits and zoning text amendments (the Proposed Actions)—to facilitate approximately 2,992,161 gross square feet (gsf) (2,246,515 zsf) of mixed-use development space, including a hotel, office, and public space (the Proposed Project). The Development Site would contain approximately 2,108,820 gsf<sup>1</sup> of office space; an approximately 452,950-gsf, 500-room hotel; public space; and retail space on the cellar, ground, and second floors of the proposed building. The Proposed Project would also include significant public realm improvements, as well as subway and mass transit improvements to enhance circulation and reduce congestion at Grand Central Terminal (GCT, or the Terminal) and the Grand Central – 42nd Street subway station.

According to the *CEQR Technical Manual*, discretionary actions that would increase density or change drainage conditions may warrant a water and sewer infrastructure analysis. Specifically, development that would result in an exceptionally large demand for water (more

<sup>1</sup> Development may also occur under an All Office Scenario. Under this scenario, the overall building square footage and building massing would be the same as under the Proposed Project but would be comprised of approximately 2,561,770 gsf of office space, retail, and no hotel.

than one million gallons per day [mgd]) or that are located in an area that experiences low water pressure require an analysis of potential impacts on the water supply system. Additionally, development located in a combined sewer area exceeding incremental development thresholds (above the predicted No-Action condition) of 1,000 residential units or 250,000 square feet (sf) of commercial, public facility, and institutional and/or community facility space in Manhattan, require an analysis of potential impacts on the wastewater and stormwater conveyance and treatment system.

The Proposed Actions would result in a total daily water demand of approximately 0.78 mgd therefore no water supply system analysis is warranted. The Proposed Actions would result in an incremental net increase of 451,554<sup>2</sup> gsf of commercial space and 452,950 gsf of hotel space in a combined sewer area as compared with the No-Action condition. Therefore, an analysis of the Proposed Actions' potential impacts on the City's wastewater and stormwater conveyance and treatment system is provided in this chapter.

## Principal Conclusions

The Proposed Actions would not result in a significant adverse impact on the City's water and sewer infrastructure. Based on the methodology set forth in the *CEQR Technical Manual*, although the Proposed Actions would create new demand for water and treatment of sewage, the incremental increases would be well within the capacity of the City's systems, and the impacts would not be considered significant or adverse.

## Water Supply

New York City consumes approximately 1.3 billion gallons of water per day from a reservoir system with a total storage capacity of approximately 550 billion gallons.<sup>3,4</sup> The total water usage as a result of the Proposed Actions is calculated to equal approximately 0.78 mgd, which is an increment of 0.32 mgd (or 69.8 percent), compared to the No-Action condition projected demand of 0.46 mgd. This incremental demand would represent 0.00006 percent of the City's overall water supply. As the total water usage as a result of the Proposed Actions would result in less than 1 mgd, the Proposed Actions would not have a significant adverse impact on the City's water supply or system water pressure.

## Sanitary Sewage

Sanitary sewage generated by the Proposed Actions would discharge to the Newtown Creek wastewater treatment plant (WWTP), which has a State Pollution Discharge Elimination System (SPDES)-permitted dry weather flow capacity of 310 mgd.<sup>5</sup> The average monthly flow over a 12-month period is 210 mgd.<sup>6</sup> The Proposed Actions have the potential to result in a total generation of 0.34 mgd of sanitary sewage discharge, an increment of 0.17 mgd (or

<sup>2</sup> Includes the incremental increase of 426,484 gsf of commercial office and 25,070 gsf of retail as compared to the No-Action condition.

<sup>3</sup> Source: New York City's Wastewater Treatment System, New York City Department of Environmental Protection; <https://www1.nyc.gov/site/dep/water/>

<sup>4</sup> Source: 2020 CEQR Technical Manual

<sup>5</sup> Source: New York City's Wastewater Treatment System, New York City Department of Environmental Protection.

<sup>6</sup> 12-month period through April 2016

97.7 percent) over the No-Action total sewage generation, which is estimated at 0.17 mgd. This incremental increase in sanitary flow would represent approximately 0.05 percent of the Newtown Creek WWTP's SPDES-permitted capacity. As the projected increase in sanitary sewage would not cause the Newtown Creek WWTP to exceed its operational capacity or SPDES-permitted capacity, the Proposed Actions would not result in significant adverse impacts to sanitary sewage conveyance and treatment.

## Stormwater Drainage and Management

The Project Area is served by a combined sewer system, collecting both dry-weather wastewater and stormwater. The Proposed Actions would not result in an increase in impervious surfaces as compared to Existing conditions and therefore is not expected to generate additional stormwater runoff. However, as the Proposed Actions would result in increased sanitary sewage flows, the total volume to the combined sewer system would be increased. As noted previously, the incremental increase in sanitary flow is well within the capacity of the existing system and would not result in significant adverse impacts to the City's sewer infrastructure. Additionally, due to the New York City Department of Environmental Protection (DEP)'s current stormwater management requirements, stormwater runoff from new developments is expected to substantially decrease as compared to Existing conditions. Based on the analysis pursuant to the *CEQR Technical Manual*, with stormwater Best Management Practices (BMPs) implemented on the Development Site by the Applicant to reduce runoff, it is concluded that the Proposed Actions would not result in significant adverse impacts on stormwater conveyance and treatment infrastructure.

## Methodology

This analysis follows the *CEQR Technical Manual* guidelines that recommend a preliminary water analysis be completed if a project would result in an exceptionally large demand of water (over one million gpd), or is located in an area that experiences low water pressure (i.e., in an area at the end of the water supply distribution system such as the Rockaway Peninsula or Coney Island). The Development Site is not located in an area that experiences low water pressure, and the Proposed Development would generate a water demand of 784,165 gpd (an increase of 322,431 gpd compared with the No-Action condition). Therefore, the Proposed Development does not meet the *CEQR Technical Manual* threshold requiring a detailed analysis. It is expected that there would be adequate water service to meet the incremental water demand and that there would be no significant adverse impacts on the City's water supply.

As described above, the Development Site is located in a combined sewer area and the Proposed Project would represent an increase of approximately 451,554 gsf of commercial space as compared to the No-Action condition, which exceeds the *CEQR Technical Manual* threshold of 250,000 square feet. Therefore, following the guidelines of the *CEQR Technical Manual*, an analysis of the Proposed Project's potential impacts on the wastewater and stormwater conveyance and treatments system was performed. Existing and future water demand and sanitary sewage generation are calculated based on use rates set by the *CEQR Technical Manual*. The DEP Flow Volume Calculation Matrix is then used to calculate the overall combined sanitary sewage and stormwater runoff volume discharged to the combined sewer system for four rainfall volume scenarios with varying durations. The ability

of the City's sewer infrastructure to handle the anticipated demand from the Proposed Project is assessed by estimating existing sewage generation rates, and then comparing these existing rates with the No-Action and With-Action conditions, per *CEQR Technical Manual* methodology.

As discussed in **Chapter 1, Project Description**, for conservative analysis purposes the EIS considers the two building program options to determine the With-Action reasonable worst case development scenario (RWCDs) for each density-based technical area: the Proposed Project with a mix of hotel, commercial office, local retail, and publicly accessible space; and the All Office Scenario, based on the same overall building square footage and building massing as the Proposed Project but comprised of approximately 2,561,770 gsf of office space, retail, and no hotel. In each chapter, where applicable, the EIS analyzes the scenario with the greater potential for impacts. This chapter evaluates the With-Action condition including the hotel space, as described above, because it represents the Proposed Project, and for the purposes of this analysis is not any less conservative than the All Office Scenario.

## Existing Conditions

The study area consists of the Development Site (Manhattan Block 1280, Lot 30) and Lots 1, 54, and 154 of Block 1280 and consists of 57,292 sf. The Project Area has a combined area of approximately 203,872 sf and approximately 669 feet of frontage on East 42nd Street; 340 feet of frontage on Vanderbilt Avenue; and 253 feet of frontage on Lexington Avenue. Within the Project Area, the Development Site constitutes approximately 275 feet of frontage along East 42nd Street and approximately 208 feet along Lexington Avenue.

## Water Supply

The New York City water supply system consists of a network of reservoirs, lakes, and aqueducts extending north into the Catskill region, and a grid of underground distribution mains that distributes water within the City. As mentioned earlier, approximately 1.3 billion gpd of water are consumed by New York City through this water supply system.

Most of New York City obtains water from three surface water supply systems operated by DEP – Delaware, Catskill, and Croton. The watersheds of the three systems cover almost 2,000 square miles, with 19 reservoirs and three control lakes, which have a combined storage capacity of approximately 550 billion gallons.

Two of the three surface water systems, the Delaware and Catskill systems, collect water from watershed areas in the Catskill Mountains and deliver it to the Hillview Reservoir in Yonkers. From there, it is distributed to the City through three tunnels: City Tunnel 1, which runs through the Bronx and Manhattan to Brooklyn; City Tunnel 2, which goes through the Bronx, Queens, and Brooklyn (and from there through the Richmond Tunnel to Staten Island); and City Tunnel 3 (Stage 1), which goes through the Bronx and Manhattan and ends in Queens. Stage 2 of City Tunnel 3 is currently under construction in Queens and Brooklyn.

The third surface water system, the Croton system, collects water from watershed areas in Dutchess, Putnam, and Westchester Counties and delivers it to the Jerome Park Reservoir in the Bronx. From there, it is distributed to the Bronx and Manhattan through the New Croton Aqueduct.

Once in the City, the aqueducts distribute water into a network of water mains. Water mains up to 96 inches in diameter feed smaller mains, such as 20, 12, and 8-inch mains, which deliver water to their final destination, including to fire hydrants along many of the City's streets. Nearly all of the water reaches consumers by gravity alone, with roughly four percent (generally located at the outer limits of the system where in-line pressure is lowest, at high elevations, or at pressure extremity such as Far Rockaway) being pumped to its final destination. Water pressure throughout the City's water supply system is monitored and controlled by pressure regulators.

It is estimated that the existing uses on the Development Site consume approximately 497,244 gpd as shown in **Table 8-1**.

**Table 8-1 Existing Water Consumption and Sewage Generation**

Land Use	Area (sf)	Dwelling Units / Hotel Rooms	Domestic Water/Wastewater Generation (gpd)	Air Conditioning (gpd)
Hotel	1,001,998	1,300	312,000	170,340
Retail <sup>1</sup>	36,353	-	8,725	6,180
Commercial/Office	0	-	0	0
Water Consumption Subtotals			320,725	176,520
Sewage Generation Subtotal			320,725	
Total Water Consumption			497,244	
Total Wastewater Generation			320,725	

Notes:

<sup>1</sup> The 36,353-sf retail square footage includes approximately 26,122 sf of local retail from the Hyatt site and approximately 10,231 gsf of local retail from the MTA areas that would be affected by the Proposed Development.

Water consumption and wastewater generation rates were derived from the *CEQR Technical Manual* and are provided in **Table 8-2**.

**Table 8-2 Water Consumption and Wastewater Generation Rates**

Land Use	Rate			
	Domestic	Units	Air Conditioning	Units
Hotel	120	gpd/room/occupant	0.17	gpd/sf
Retail	0.24	gpd/sf	0.17	gpd/sf
Commercial/Office	0.10	gpd/sf	0.17	gpd/sf

Notes: Consumption rates obtained from the 2020 *CEQR Technical Manual* Table 13-2 "Water Usage and Sewage Generation Rates for Use in Impact Assessment"

## Conveyance System

The Development Site is located in a part of New York City served by a combined sewer system that collects both sanitary sewage and stormwater. In periods of dry weather, the combined sewers (sized to convey an amount of sanitary sewage that is based on density

levels according to zoning regulations) located in the adjacent streets convey only sanitary sewage. Two existing sewer lines serve the site: one is situated in the southeast corner of the Project Area under Lexington Avenue, by the Grand Hyatt Hotel; while the other is situated in the southwest corner along the southern curb front of Grand Central Terminal. The first line has a 24-inch diameter vitrified clay pipe (VCP) portion running south underneath Lexington Avenue and then joins another segment of the line running eastbound along East 42nd Street and continuing east beyond Lexington Avenue. The second line has a 54-inch by 36-inch cross section pipe component running southbound underneath Vanderbilt Avenue, then merges with a 14-inch diameter cast iron pipe (CIP) into a 42-inch CIP running eastbound along East 42nd Street before running southeast crossing Park Avenue. Another segment of this second line begins near the southwest corner of the Grand Hyatt Hotel, with an 18-inch diameter CIP running westbound along the north curb of East 42nd Street, before crossing to the south side and then transitioning into a 30-inch diameter pipe westbound to form the connection.

The two sewer lines serving the Development Site eventually run east along East 41st Street to Regulator NC-M45. Regulators are structures that control the flow of sewage to interceptors, i.e., larger sewers that connect the combined sewer system to the City's sewage treatment system. From Regulator NC-M45, flow is conveyed to an interceptor running south along the approach roads to the Queens Midtown Tunnel and First Avenue and across the East River to the Newtown Creek WWTP, the largest of the City's 14 WWTPs.

At the Newtown Creek WWTP, wastewater is fully treated by physical and biological process before it is discharged into the East River. The quality of the treated wastewater (effluent) is regulated by a State Pollutant Discharge Elimination System (SPDES) permit issued by the New York State Department of Environmental Conservation (NYSDEC), which establishes limits for effluent parameters (i.e., suspended solids, fecal coliform bacteria, and other pollutants). Since the volume of flow to a WWTP affects the level of treatment a plant can provide, the maximum permitted capacity for the Newtown Creek WWTP is 310 million gallons per day (mgd). During and immediately after wet weather, combined sewers can experience a much larger flow due to stormwater runoff collection. To control flooding at the Newtown Creek WWTP, the regulators built into the system allow only approximately two times the amount of design dry weather flow into the interceptors. The interceptor then takes the allowable flow to the WWTP, while the excess flow is discharged to the nearest waterbody as Combined Sewer Outflow (CSO). The Development Site is located within one CSO drainage area: in wet weather, sanitary flow and stormwater runoff is conveyed to CSO outfall NCM-037, located at the foot of East 41st Street<sup>7</sup>.

## Sanitary Flows

For purposes of analysis, the amount of sanitary sewage is estimated as all water demand generated by the existing uses on the Development Site except water used by air conditioning, which is typically not discharged to the sewer system. With a total of 1,038,351 gsf, including 1,300 hotel rooms (approximately 1,001,998 gsf), and approximately 36,353 gsf

<sup>7</sup> While a portion of the Development Site falls within subcatchment area NCM-038, the majority of the lot is located in subcatchment area NCM-037 and therefore it is assumed that combined flows generated on the Projected Development Site would be discharged into subcatchment area NCM-037.

of retail, the existing on-site building generates an estimated 320,725 gpd of daily sanitary sewage with a total water demand of 497,244 gpd, as shown in **Table 8-1**.

### Stormwater Flows

The Development Site is comprised of Block 1280, Lot 30, a 57,282-sf lot that currently contains the Grand Hyatt Hotel, a 26-story, approximately 1,028,120-sf, 295-foot-tall steel and glass building with approximately 1,300 guest rooms and approximately 60,000 square feet of conference/event space. Within the Grand Hyatt Hotel there is approximately 26,122 gsf of retail, while approximately 10,231 gsf is on the portion of the MTA property that would be modified by the Proposed Development, totaling to approximately 36,353 gsf of combined retail. The surface cover type on the Development Site in the Existing condition consists entirely of building rooftop. **Table 8-3** summarizes the surfaces and surface areas, as well as the weighted runoff coefficient (the fraction of precipitation that becomes surface runoff for each surface type).

**Table 8-3 Existing Surface Coverage**

Affected CSO Outfall	Surface Type	Roof	Pavement and Walkways	Other	Grass and Soft Scope	Total
	Area (%)	100%	0%	0%	0%	100%
NCM-037	Surface Area (sq. ft.)	57,282	0	0	0	57,282
	Runoff Coefficient <sup>1</sup>	1.00	0.85	0.85	0.20	-

Source: DCP Building Footprint; aerial photographs

Notes:

<sup>1</sup> Runoff coefficients for each surface type as per DEP

## The Future Without the Proposed Actions

As described in **Chapter 1, Project Description**, absent the Proposed Actions, the Development Site will be redeveloped with a No-Action development consisting of 1,682,336 gsf of office space and 18,300 gsf of retail.

### Sanitary Flows

**Table 8-4** summarizes the water and sewage generation of the No-Action building. The No-Action building is expected to generate an estimated 172,626 gpd of daily sanitary sewage with a total water demand of 461,734 gpd, based on CEQR rates for wastewater generation and water consumption from **Table 8-2**.

**Table 8-4 No-Action Water Consumption and Sewage Generation**

Land Use	Area (sf)	Dwelling Units / Hotel Rooms	Domestic Water/Wastewater Generation (gpd)	Air Conditioning (gpd)
Hotel	0	0	0	0
Retail	18,300	-	4,392	3,111
Commercial/Office	1,682,336	-	168,234	285,997
Water Consumption Subtotals			172,626	289,108
Sewage Generation Subtotal			172,626	
Total Water Consumption			461,734	
Total Wastewater Consumption			172,626	

When compared to the existing conditions (shown in **Table 8-1**), the total water consumption is expected to decrease from 497,244 gpd to 461,734 gpd, a decrease of about 35,511 gpd, while the wastewater consumption is expected to decrease from 320,725 gpd to 172,626 gpd, a decrease of 148,099 gpd. The change in use from hotel space to office space, and the decrease in retail in the No-Action scenario attribute to the net reduction of wastewater consumption.

### Stormwater Flows

Since the No-Action building would occupy the full Development Site, the surface areas and the weighted runoff coefficient will remain as shown in **Table 8-3**.

## The Future With the Proposed Actions

The Proposed Project With-Action condition would contain 426,484 gsf more office space, 452,950 gsf (500 rooms) more hotel space and 25,070 gsf more retail space than the No-Action condition and would therefore consume more water and generate more sewage. The results of the analysis of the With-Action condition on water and sewer infrastructure are described below.

### Sanitary Flows

As shown on **Table 8-5**, the With-Action condition is expected to generate 341,291 gpd of daily sanitary sewage with a total water demand of 784,165 gpd.



**Table 8-5 With-Action Water Consumption and Sewage Generation**

Land Use	Area (sf)	Dwelling Units / Hotel Rooms	Domestic Water/Wastewater Generation (gpd)	Air Conditioning (gpd)
Hotel	452,950	500	120,000	77,002
Retail	43,370	0	10,409	7,373
Commercial/Office	2,108,820	0	210,882	358,499
Water Consumption Subtotals			341,291	442,874
Sewage Generation Subtotal			341,291	
Total Water Consumption			784,165	
Total Wastewater Consumption			341,291	

The incremental sanitary sewage generated by the With-Action condition, as compared with the No-Action development, would be 168,665 gpd. This incremental increase in sewage generation would be approximately 0.05 percent of the Newtown Creek WWTP capacity of 310 mgd. In addition, in accordance with the New York City Plumbing Code (Local Law 33 of 2007), the Proposed Project would be required to utilize low-flow plumbing fixtures, which would reduce sanitary flows to the plant. Therefore, the With-Action condition would not result in a significant adverse impact to the City's sanitary sewage conveyance and treatment system.

### Stormwater Flows

The With-Action condition would not feature any adjustments to the sidewalk pavements or overall building footprint; therefore, the surface coverage from **Table 8-3** would remain the same.

The DEP Flow Volume Calculation Matrix was completed for the existing conditions and the With-Action condition. The calculations from the Flow Volume Calculation Matrix help to determine the change in wastewater flow volumes to the combined sewer system from existing With-Action conditions and include four rainfall volume scenarios with varying durations. The summary tables of the Flow Volume Calculation Matrix are included in **Table 8-6** and **Table 8-7** for Sub-catchment Area NCM-037.

**Table 8-6 DEP Flow Volume Matrix – Existing Conditions for NCM-037**

Rainfall (inches) <sup>1</sup>	Duration (hours)	Total Area (acres) <sup>2</sup>	Weighted Runoff Coefficient <sup>3</sup>	Stormwater Runoff (MG) <sup>4</sup>	Sanitary to CSS (MG) <sup>5</sup>	Total Volume to CSS (MG)
0.00	3.80	1.32	1.0	0.000	0.051	0.051
0.40	3.80	1.32	1.0	0.010	0.051	0.061
1.20	11.30	1.32	1.0	0.040	0.151	0.191
2.50	19.50	1.32	1.0	0.090	0.261	0.351

Notes:

<sup>1</sup> Storm event rainfalls per NYCDEP Volume Calculation Matrix.<sup>2</sup> Total surface area onsite for Projected Development sites within subcatchment area.<sup>3</sup> Runoff coefficients for surface type area as per NYCDEP.<sup>4</sup> Stormwater runoff derived from NYCDEP Volume Calculation Matrix.<sup>5</sup> Sanitary volumes derived using methodology and consumption rates per the *2020 CEQR Technical Manual*.

CSS = Combined Sewer System

MG = million gallons

**Table 8-7 DEP Flow Volume Matrix – With-Action Condition for NCM-037**

Rainfall (inches) <sup>1</sup>	Duration (hours)	Total Area (acres) <sup>2</sup>	Weighted Runoff Coefficient <sup>3</sup>	Stormwater Runoff (MG) <sup>4</sup>	Sanitary to CSS (MG) <sup>5</sup>	Total Volume to CSS (MG) <sup>6</sup>
0.00	3.80	1.32	1.0	0.000	0.054	0.054
0.40	3.80	1.32	1.0	0.010	0.054	0.064
1.20	11.30	1.32	1.0	0.040	0.161	0.201
2.50	19.50	1.32	1.0	0.090	0.277	0.367

Notes:

<sup>1</sup> Storm event rainfalls per NYCDEP Volume Calculation Matrix.<sup>2</sup> Total surface area onsite for Projected Development sites within subcatchment area.<sup>3</sup> Runoff coefficients for surface type area as per NYCDEP.<sup>4</sup> Stormwater runoff derived from NYCDEP Volume Calculation Matrix.<sup>5</sup> Sanitary volumes derived using methodology and consumption rates per the *2020 CEQR Technical Manual*.

CSS = Combined Sewer System

MG = million gallons

As shown in **Table 8-6**, depending on the rainfall volume and duration, the total volume to the combined sewer system from the Development Site under existing conditions could be between approximately 0.051 and 0.351 mgd. As shown in **Table 8-7**, for the With-Action condition, the total combined sewer system could be between approximately 0.054 and 0.367 mgd to Newtown Creek subcatchment area NCM-037.

**Table 8-8** compares the estimated combined flows (stormwater runoff and sanitary flows) to the combined sewer system under existing and With-Action conditions using the DEP Flow Volume Calculation Matrix. As shown in the table, depending on the rainfall volume and duration, the With-Action increment to the combined sewer system could be between 0.003 and 0.016 mgd, a range of approximately 4.6 to 5.9 percent. Typically, an increase of 5.0 percent or more over existing conditions could warrant further review by DEP, in which the implementation of BMPs would help mitigate that increase.

**Table 8-8 Existing and With-Action Combined Stormwater Runoff and Wastewater Generation**

Rainfall (inches) <sup>1</sup>	Duration (hours)	Total Volume to Combined Sewer System (MG)			Percentage Change (%)
		Existing Conditions	With- Action Condition	Increment	
0.00	3.80	0.051	0.054	0.003	5.9%
0.40	3.80	0.061	0.064	0.003	4.9%
1.20	11.30	0.191	0.201	0.010	5.2%
2.50	19.50	0.351	0.367	0.016	4.6%

The Flow Volume Matrix calculations do not reflect the use of any sanitary and stormwater source control BMPs to reduce sanitary flow and stormwater runoff volumes to the combined sewer system. As noted above, the Proposed Project would incorporate low-flow plumbing fixtures to reduce sanitary flow in accordance with the New York City Plumbing Code. In addition, stormwater BMPs would be required as part of the DEP site connection approval process in order to bring the building into compliance with the required stormwater release rate. Based on the DEP Guidelines for the Criteria for Detention Facility Design, dated November 19, 2012, for new developments, the required stormwater release rate for the Proposed Project would be the greater of 0.25 cubic feet per second (cfs) or 10 percent of the allowable flow, unless the allowable flow is less than 0.25 cfs, in which case the stormwater release rate is equal to the allowable flow.<sup>8</sup> To achieve this release rate, stormwater could be managed by utilizing one or a combination of detention or infiltration techniques identified in the *NYC Green Infrastructure Plan*. Green technologies, such as green and blue roofs, subsurface detention and infiltration, and permeable pavement, could be implemented to retain or release stormwater with slowed discharge rates to control peak runoff rates. Specific BMP methods will be determined with further refinement of the building design and in consultation with DEP.

The incorporation of the appropriate sanitary flow and stormwater source control BMPs that would be required as part of the site connection approval process, with the review and approval of DEP, would reduce the overall volume of sanitary sewer discharge and stormwater runoff as well as the peak stormwater runoff rate from the Development Site. Sewer conveyance near the Development Site and the treatment capacity at the Newtown Creek WWTP is sufficient to handle wastewater flow resulting from the Proposed Project. Therefore, there would be no significant adverse impacts on wastewater treatment or stormwater conveyance infrastructure.

<sup>8</sup> Source: <https://www1.nyc.gov/assets/dep/downloads/pdf/about/water-and-sewer-forms/criteria-determination-detention-facility-volume.pdf>