

A. INTRODUCTION

This chapter evaluates the potential for the proposed Cornell NYC Tech project to result in significant adverse impacts on New York City's water supply, wastewater and stormwater conveyance and treatment infrastructure. As described in this chapter, on Roosevelt Island the water mains, sanitary pump stations, and sanitary force mains are maintained by New York City Department of Environmental Protection (NYCDEP). However, the existing gravity sanitary and storm sewers are not NYCDEP-maintained infrastructure.¹ All new sewer and water infrastructure within the new mapped streets required to serve the Cornell NYC Tech project would be built to NYCDEP standards and specifications. This chapter discusses all components of the water and sewer infrastructure.

The new uses and project-generated residents, faculty, staff, and other users introduced by the Cornell NYC Tech project would increase the project site's water demand and sewage generation compared to the future without the proposed project in both the 2018 and 2038 analysis years. Stormwater runoff from the site would be reduced from the future without the proposed project in the 2018 analysis year and would be approximately the same in the 2038 analysis year. As described in this chapter, the proposed project would not result in any significant adverse impacts on the city's water supply, wastewater treatment or stormwater conveyance infrastructure in either the 2018 or 2038 analysis year.

B. METHODOLOGY

This analysis follows the methodologies set forth in the June 2012 *City Environmental Quality Review (CEQR) Technical Manual*. According to the *CEQR Technical Manual*, a preliminary water analysis would be needed if a project would result in the exceptionally large demand for water of over 1 million gallons per day (mgd) or is located in an area that experiences low water pressure (i.e., at the end of the water supply distribution system such as the Rockaway Peninsula or Coney Island). The project site is not located in an area that experiences low water pressure,² and the Cornell NYC Tech project (either Phase 1 or at Full Build) would not result in an incremental water demand exceeding 1 mgd. Therefore, further analysis of the project's effects on water supply is not warranted; however, the proposed project's total water demand is

¹ NYCDEP does not own the infrastructure under the street on Roosevelt Island. In the future, NYCDEP's ownership and maintenance obligations will not change unless the infrastructure is built out to NYCDEP specifications and pursuant to an approved drainage plan and NYCDEP accepts the infrastructure into its portfolio.

² Based on hydrant flow tests conducted by NYCDEP in April 2011, the water pressure in the area surrounding the project site is estimated to be 70 pounds per square inch (psi). A pressure of 20 psi is the minimum water pressure acceptable for uninterrupted service and City Fire Department service requirements.

calculated for purposes of the preliminary sewer assessment. Due to their age, the existing water mains in East Loop Road, West Loop Road, and South Loop Road would be replaced to latest NYCDEP standards as part of the project infrastructure work. Unobstructed access to all NYCDEP water mains and other infrastructure would be maintained at all times.

A preliminary sewer assessment is warranted if a project exceeds 100 residential units or 100,000 square feet of commercial/public and institution/community facility use in a separately sewered area zoned R7. The proposed project meets this *CEQR Technical Manual* threshold; therefore, a preliminary sewer assessment is warranted and is provided in this chapter.

The preliminary sewer assessment is undertaken by calculating existing and future water demands and sanitary sewage generation based on use generation rates set by the *CEQR Technical Manual*.³ The estimated amount of sewage generated from the proposed project conservatively includes all of the project site's water consumption excluding air conditioning, which is typically not discharged into the sewer system. The NYCDEP Volume Calculation Matrix is then used to calculate the overall combined sanitary sewage and stormwater runoff volume discharged to the sewer system for four rainfall volume scenarios with varying durations. Stormwater runoff volumes are determined by estimating the project site's pervious and impervious surfaces. This chapter focuses on the changes to the 12.5-acre project site.⁴

The ability of the city's sewer infrastructure to handle the proposed project's anticipated demand is assessed by estimating existing water demand and sewage generation rates, and then comparing the future with and without the proposed project (Phases 1 and 2).

C. EXISTING CONDITIONS

SANITARY SEWAGE

The project site is served by the Bowery Bay Wastewater Treatment Plant (WWTP). The Bowery Bay WWTP treats wastewater through full secondary physical and biological processes before the wastewater is discharged into the East River. Secondary treatment includes the removal of a minimum of 85 percent of biological oxygen demand and total suspended solids from the influent. The quality of effluent from this WWTP is regulated by the New York State Pollutant Discharge Elimination System (SPDES) permit issued by New York State Department of Environmental Conservation (NYSDEC). The permit specifies the maximum limit for effluent parameters that include suspended solids, fecal coliform bacteria and other pollutants; the treatment capacity of the Bowery Bay WWTP is limited to a maximum of 150 mgd. The average monthly flow over the past 12 months is 116 mgd, below the maximum permitted level.

³ *CEQR Technical Manual*, June 2012, p.13-12.

⁴ The loop road adjacent to the project site, which would be slightly widened in the future with the proposed project but would remain mostly paved, is excluded from the stormwater runoff calculations for the project site. The additional area located within the rezoning area, i.e., the promenade, is also not included in the stormwater runoff calculations since no changes would result to the promenade with the proposed project. As set forth in the proposed Special Southern Roosevelt Island District, the waterfront area between the shoreline and West and East Loop Roads would be used exclusively for open recreational uses.

The amount of sanitary sewage generated by the project site is conservatively estimated to be all of the project site’s water consumption excluding air conditioning, which is typically not discharged into the sewer system. As shown in **Table 11-1**, which estimates existing water consumption at the Goldwater Hospital, the amount of daily sanitary sewage currently generated by the existing Goldwater Hospital is estimated to be 297,300 gallons per day (gpd).

**Table 11-1
Existing Water Consumption Goldwater Hospital**

Use	Unit (Beds)	Size (Square feet)	Rate (Gallons per day per unit)	Consumption (Gallons per day)
Domestic	991 ¹	-	300 gpd/bed ²	297,300
Air conditioning		647,900	0.17 gpd/sf	110,143
TOTAL				407,443
1. New York City Health and Hospitals Corporation (NYCHHC) website http://www.nyc.gov/html/hhc/html/facilities/colergoldwater.shtml 2. Rate obtained from <i>CEQR Technical Manual</i> (June 2012 Edition)				

Sanitary sewage from the project site is conveyed via gravity sanitary sewers (10-inch diameter to 18-inch diameter) sewers in East and West Roads. The NYCDEP south pump station receives sanitary sewage from the buildings south of the Ed Koch Queensboro Bridge and pumps flows via a NYCDEP force main to a 30-inch diameter gravity sanitary sewer within Main Street which eventually discharges to the NYCDEP’s main pump station (adjacent to the Island’s automated vacuum collection system [AVAC] building). According to information provided by NYCDEP in December 2011, the south pump station is operating at 17 percent of its design capacity. The NYCDEP north pump station also conveys sanitary flow from Coler Hospital, located at the northern end of Roosevelt Island, to the main pump station. The main pump station is operating at 23 percent of its design capacity. All sanitary flow on Roosevelt Island is eventually conveyed to the main pump station.

From the main pump station, a 20-inch diameter force main extends east, beneath the East River, to a 30-inch diameter combined sewer located within 35th Avenue in Queens. This 30-inch diameter sewer discharges to an 84-inch diameter interceptor in Vernon Boulevard which then conveys flow to the Bowery Bay WWTP.

STORMWATER

The project site is served by a network of 19 outfalls that discharge stormwater runoff east of the site and into the East River (East Channel) and 18 outfalls that discharge stormwater runoff west of the site into the East River (West Channel). The direct discharge of stormwater runoff into the East River does not affect combined sewer overflow (CSO) conditions in the city’s combined sewer system.

The project site is approximately 12.5 acres in size (excluding the roadway/sidewalk within the public rights-of-way). It is estimated that approximately 4.01 acres (32 percent) of the project site is covered by impervious building roof, 5.35 acres (43 percent) is paved, and 3.1 acres (25 percent) is grassed area. **Table 11-2** describes the surface types and areas of the project site, and how stormwater runoff is currently discharged.

Table 11-2
Project Site Surface Coverage: Existing Conditions

Surface Type	Surface Area (sf)	Discharge Method
Building Roofs	174,809	Direct Drainage
Paved Surfaces	233,097	Direct Drainage
Grassed Areas	134,742	Infiltration/Direct Drainage
Total	542,648	----
Source: Site surface data provided by Philip Habib & Associates		

The weighted runoff coefficient of the project site is calculated to be 0.74; the runoff coefficient is the percentage of precipitation that becomes surface runoff.

D. FUTURE WITHOUT THE PROPOSED PROJECT

In both the 2018 and 2038 analysis years, in the future without the proposed project, Goldwater Hospital is expected to be vacant, with the existing water and sanitary sewer connections properly capped within the project site; therefore, water consumption and sewage generation at the project site would be negligible. It is expected that the existing buildings would remain vacant but would not be demolished; therefore, the existing stormwater surface runoff at the project site would remain the same as in existing conditions.

Other recent and future projects that would affect the same infrastructure as described have been identified to analyze the cumulative impacts of additional sanitary flows. The Southtown development, located on Roosevelt Island north of the Queensboro Bridge, is a proposed 540 residential unit development. It is anticipated that the sanitary sewage would be discharged to the 30-inch gravity sanitary sewer in Main Street and the NYCDEP main pump station. Based on an average of 1.79 persons per household in Community Board 8 and using multipliers from the CEQR Technical Manual, the increase in sanitary sewage conveyed by the sanitary sewer infrastructure on Roosevelt Island for the Southtown development is approximately 96,700 gpd, which is approximately 0.06 percent of the permitted average daily flow of 150 mgd at the Bowery Bay WWTP.

E. PROBABLE IMPACTS OF THE PROPOSED PROJECT

2018 ANALYSIS YEAR (PHASE 1)

SANITARY SEWAGE

Table 11-3 summarizes the estimated water consumption of Phase 1 of the proposed project. The proposed uses are estimated to have a water demand of 244,100 gpd, of which an estimated 159,100 gpd would be conveyed to the sanitary sewage system. Water demand could be reduced through water recycling, which would be considered where possible for irrigation of the landscape features, as well as other potential uses.

**Table 11-3
Projected Water Consumption: 2018**

Use	Size	Rate	Consumption (gpd)
Retail¹			
Domestic	10,000 sf	0.24 gpd/sf	2,400
Air Conditioning	10,000 sf	0.17 gpd/sf	1,700
Residential			
Domestic	842 persons	100 gpd/person	84,200
Executive Education Center			
Domestic	225 rooms (1.5 occupants/rm)	120 gpd/rm/occupant	40,500
Air Conditioning	170,000 sf	0.17 gpd/sf	28,900
Commercial/Office²			
Domestic	300,000 sf	0.10 gpd/sf	30,000
Air Conditioning	300,000 sf	0.17 gpd/sf	51,000
Central Utility Plant³			
Domestic	20,000 sf	0.10 gpd/sf	2,000
Air Conditioning	20,000 sf	0.17 gpd/sf	3,400
Total (Domestic)			159,100
TOTAL (Domestic and Air Conditioning)			244,100
Notes:			
1. Retail uses include: campus-oriented retail space.			
2. Commercial uses include: Academic space and corporate co-location space.			
3. No rate for mechanical spaces is provided in the <i>CEQR Technical Manual</i> ; therefore, the Commercial/Office rate was used for the Central Utility Plant.			
Source: Rates from 2012 <i>CEQR Technical Manual</i> .			

Sanitary sewage from the project site would continue to be conveyed via gravity sanitary sewers in East and West Roads with new sanitary sewer connections to the East and West Road sanitary sewers from the new buildings. Due to the condition of the existing sanitary sewers in East and West Roads, nearly all of the sewers would need to be relined or replaced, and two segments require repair or replacement. This work would be required for Phase 1, since the sanitary sewers flow from north to south to reach the south pump station. All sewer construction would conform to NYCDEP standards and be in accordance with the city’s drainage plan. The sanitary pump stations and force mains located on the Island would remain in operation and continue to convey sanitary flow to the interceptor in Vernon Boulevard in Queens. Both the pump stations and force mains would have adequate capacity to handle the Phase 1 flows.

The volume of sanitary sewage generated by Phase 1 of the proposed project would be 0.11 percent of the permitted average daily flow of 150 mgd at the Bowery Bay WWTP and would not result in an exceedance of the Bowery Bay WWTP’s capacity. Therefore, the proposed project would not result in a significant adverse impact on the city’s sanitary sewage treatment system. All project buildings would be required to file site connection proposals for approval to tie into the sewer system. As a part of the standard filing requirements, an Industrial Waste Approval would be submitted as part of the supporting documentation where required. The proposed project does not include laboratory uses which could potentially have hazardous discharges to the sanitary sewer system. Per the New York City Plumbing Code (Local Law 33 of 2007) and consistent with the LEED goals for the project, low-flow fixtures are required to be implemented and would help to reduce sanitary flows from the project site. The existing pump stations and force mains would be adequate to serve Phase 1, since they are currently handling flows from the Goldwater Hospital.

STORMWATER

Based on the proposed site plan under Phase 1, approximately 5.80 acres of the project site would be developed, with 2.91 acres (approximately 23 percent) of the site occupied by building roofs, 1.30 acres (approximately 10 percent) occupied by paved surfaces, and 1.59 acres (approximately 13 percent) occupied by grassed areas and landscaping. The remaining 6.66 acres (approximately 54 percent) of the site would be occupied by interim uses, including a field of photovoltaic panels, a tree nursery, and other vegetated surfaces. Based on the above, the weighted runoff coefficient would be 0.45 which would result in a decrease of stormwater surface runoff in comparison to the No Action and existing conditions.

Using the existing and proposed site data, the NYCDEP Volume Calculation Matrix was completed for the existing, No Action and With Action (Phase 1) conditions and is summarized in **Table 11-4**.

Table 11-4
NYCDEP Volume Calculation Matrix—Existing, No Action and With Action
(Phase 1) Volume Comparison

		Existing				No Action				With Action (Phase 1)			
		542,648 sf / 12.5 Acres				542,648sf / 12.5 Acres				542,648sf / 12.5 Acres			
Rainfall Volume (in.)	Rainfall Duration (hr.)	Runoff Vol. to River (MG)	Runoff Vol. to CSS (MG)	Sanitary Vol. to CSS (MG)	Total Vol. to CSS (MG)	Runoff Vol. to River (MG)	Runoff Vol. to CSS (MG)	Sanitary Vol. to CSS (MG)	Total Vol. to CSS (MG)	Runoff Vol. to River (MG)	Runoff Vol. to CSS (MG)	Sanitary Vol. to CSS (MG)	Total Vol. to CSS (MG)
0.00	3.80	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03
0.40	3.80	0.10	0.00	0.05	0.05	0.10	0.00	0.00	0.00	0.06	0.00	0.03	0.03
1.20	11.30	0.30	0.00	0.14	0.14	0.30	0.00	0.00	0.00	0.18	0.00	0.07	0.07
2.50	19.50	0.63	0.00	0.24	0.24	0.63	0.00	0.00	0.00	0.38	0.00	0.13	0.13
Notes: Vol. = Volume CSS = Sanitary to Combined Sewer System; MG = Million Gallons													

The calculations from the flow volume matrix determine the wastewater volumes to the downstream sewer system from the existing, No Action and Phase 1 With Action conditions. Runoff volumes are calculated for four rainfall volume scenarios with varying durations; all stormwater runoff would continue to be directly discharged to the East River. The increase in sanitary sewer discharge from the project site for the above rainfall volume-duration scenarios from the Phase 1 flows, in comparison to the No Action condition, would be 0.03MG, 0.03MG, 0.07MG and 0.13MG, respectively. However, the Phase 1 flows would represent an overall reduction of 0.02MG, 0.02MG, 0.07MG and 0.11MG of sanitary sewer discharge in comparison to existing conditions and would not result in a significant adverse impact on the city’s sanitary sewage treatment system.

As part of the proposed project, coverage under a NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-10-001) would be required. A Stormwater Pollution Prevention Plan (SWPPP) would be prepared to describe the entire project, with detailed design completed for Phase 1 construction and development and conceptual design calculations for later phases. The SWPPP would be updated prior to later development phases to describe final plans for these areas and would meet State-mandated reductions in sedimentation and flow for the redevelopment of the site. Post-construction stormwater management measures that would be integrated into the proposed project as part of the project’s SWPPP could include bioswales, rain gardens or rainwater collection systems, and reuse of stormwater to the extent possible. Temporary erosion and sediment controls during construction may include settling

ponds and approved filtration systems, some of which could become integrated into permanent site features.

2038 ANALYSIS YEAR (FULL BUILD)

SANITARY SEWAGE

Table 11-5 summarizes the estimated water consumption of the proposed project at Full Build. The proposed uses on the project site are estimated to have a water demand of 625,450 gpd, of which 395,100 gpd would be conveyed to the sanitary system. As stated above, water demand could be reduced through water recycling, which would be considered where possible for irrigation of the landscape features, as well as other potential uses.

**Table 11-5
Projected Water Consumption: 2038**

Use	Size (Square feet)	Rate	Consumption (gpd)
Retail¹			
Domestic	25,000	0.24 gpd/sf	6,000
Air Conditioning	25,000	0.17 gpd/sf	4,250
Residential			
	2,326 persons ²	100 gpd/person	232,600
Executive Education Center			
Domestic	225 rooms (1.5 occupants/rm)	120 gpd/rm/occupant	40,500
Air conditioning	170,000	0.17 gpd/sf	28,900
Commercial/Office³			
Domestic	1,120,000	0.10 gpd/sf	112,000
Air Conditioning	1,120,000	0.17 gpd/sf	190,400
Central Utility Plant⁴			
Domestic	40,000 sf	0.10 gpd/sf	4,000
Air Conditioning	40,000 sf	0.17 gpd/sf	6,800
Total (Domestic)			395,100
TOTAL (Domestic and Air Conditioning)			625,450
Notes:			
1. Retail uses include: Campus-oriented retail space.			
2. Based on Chapter 1, "Project Description."			
3. Commercial uses include: Academic space, corporate co-location space.			
4. No rate for mechanical spaces is provided in the <i>CEQR Technical Manual</i> ; therefore, the Commercial/Office rate was used for the Central Utility Plant.			
Source: Rates from 2012 <i>CEQR Technical Manual</i> .			

Sanitary sewage from the project site would continue to be conveyed via gravity sanitary sewers in East and West Roads. New sanitary sewer connections to the East and West Road sanitary sewers from the new buildings would be built. The sanitary pump stations and force mains located on the Island would remain in operation and would continue to convey sanitary flow to the interceptor in Vernon Boulevard in Queens. ~~Based upon the design capacity information provided by NYCDEP, the pump stations and force mains would have adequate capacity to handle the full build flows. However, NYCDEP has indicated that design capacity is not necessarily reflective of operational capacity. Between publication of the DEIS and the FEIS, the potential impacts of the flow increase on the current operations of the pump station, the force mains, and the interceptor in Vernon Boulevard, will be evaluated and submitted to NYCDEP for review. The conclusions will be incorporated into the FEIS. An analysis was conducted in coordination with NYCDEP to determine the capacity of the south pump station and its ability to handle the flows from the proposed project (see Appendix 11).~~ As indicated above, the

analysis showed that Phase 1 flows are comparable to existing flows from Goldwater Hospital and therefore well within the capacity of the pump station. Although the estimated flows from the Full Build project, at 531 gpm, are below the pump operation point of 770 gpm, NYCDEP has determined that, at that flow level, pump operation would be compromised and an additional pump would likely be needed for redundancy. Therefore, when design begins for the final phase of the project, NYCDEP will be consulted to determine if upgrades are needed at the south pump station; the lead agency will work with Cornell to ensure the appropriate commitments are stated in transactional documents (e.g., the ground lease between Cornell University and the City of New York).

Flows in the interceptor sewer in Vernon Boulevard were monitored in order to verify current flow levels and evaluate its ability to handle the flows from the proposed project as well as other No Action projects. The monitoring confirmed that there is available capacity (see Appendix 11).

Sanitary sewage generated in the Full Build condition would be higher than in Phase 1 by 236,000 gpd. The volume of sanitary sewage generated by the proposed project at Full Build would be 0.26 percent of the permitted average daily flow of 150 mgd at the Bowery Bay WWTP and would not result in an exceedance of the Bowery Bay WWTP’s capacity. Therefore, the proposed project would not result in a significant adverse impact on the city’s sanitary sewage treatment system. All project buildings would be required to file site connection proposals for approval to tie into the sewer system. As a part of the standard filing requirements, an Industrial Waste Approval would be submitted as part of the supporting documentation where required. The proposed project does not include laboratory uses that could potentially have hazardous discharges to the sanitary sewer system. Additionally, and as mentioned above, per the New York City Plumbing Code (Local Law 33 of 2007) and consistent with the LEED goals for the project, low-flow fixtures are required to be implemented and would help to reduce sanitary flows from the project site.

STORMWATER

Based on the proposed site plan, approximately 12.5 acres of the project site would be developed, with 6.17 acres (approximately 50 percent) of the site occupied by building roofs, 2.83 acres (approximately 23 percent) occupied by paved surfaces, and 3.46 acres (approximately 28 percent) occupied by grassed areas and landscaping. Based on the above, the weighted runoff coefficient would be 0.74 which would result in the same amount of stormwater surface runoff in comparison to the No Action and existing conditions.

The NYCDEP Volume Calculation Matrix was completed for the existing, No Action and With Action conditions (Full Build) and is summarized in **Table 11-6**.

**Table 11-6
NYCDEP Volume Calculation Matrix—Existing, No Action and With Action (Full Build) Volume Comparison**

		Existing 542,648 sf / 12.5 Acres				No Action 542,648 sf / 12.5 Acres				With Action (Full Build) 542,648 sf / 12.5 Acres			
Rainfall Volume (in.)	Rainfall Duration (hr.)	Runoff Vol. to River (MG)	Runoff Vol. to CSS (MG)	Sanitary Vol. to CSS (MG)	Total Vol. to CSS (MG)	Runoff Vol. to River (MG)	Runoff Vol. to CSS (MG)	Sanitary Vol. to CSS (MG)	Total Vol. to CSS (MG)	Runoff Vol. to River (MG)	Runoff Vol. to CSS (MG)	Sanitary Vol. to CSS (MG)	Total Vol. to CSS (MG)
0.00	3.80	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.06
0.40	3.80	0.10	0.00	0.05	0.05	0.10	0.00	0.00	0.00	0.10	0.00	0.06	0.06
1.20	11.30	0.30	0.00	0.14	0.14	0.30	0.00	0.00	0.00	0.30	0.00	0.19	0.19
2.50	19.50	0.63	0.00	0.24	0.24	0.63	0.00	0.00	0.00	0.63	0.00	0.32	0.32

Notes:
Vol. = Volume CSS = Sanitary to Combined Sewer System; MG = Million Gallons

The calculations from the volume calculation matrix determine the wastewater volumes to the downstream sewer system from existing, No Action and With Action (Full Build) conditions. Runoff volumes were calculated for four rainfall volume scenarios with varying durations; all stormwater runoff would continue to be directly discharged to the East River. The overall increase in sanitary sewer discharge from the project site for the above rainfall volume-duration scenarios, compared to the No Action condition, would be 0.06MG, 0.06MG, 0.19MG and 0.32MG, respectively. The Full Build sanitary discharge would represent a smaller increase of 0.01MG, 0.01MG, 0.05MG and 0.08MG in comparison to the existing conditions. The increase in flows from the No Action condition would be due to an increase in sanitary sewer discharge from the proposed project. As stated above, the proposed project would not result in a significant adverse impact on the city's sanitary sewage treatment system. Per the New York City Plumbing Code (Local Law 33 of 2007) and consistent with the LEED goals for the project, low-flow fixtures would be implemented and to help reduce sanitary flows from the project site.

As in Phase 1, coverage under the NYSDEC SPDES GP-0-10-001 would be required. A SWPPP would be prepared to describe the remaining portions of the project with detailed design updated for the Full Build condition and would meet State-mandated reductions in sedimentation and flow for the redevelopment of the site. Temporary erosion and sediment control measures would be installed during construction, and post-construction stormwater management measures (which could include bioswales, rain gardens or rainwater collection systems, and/or reuse of stormwater to the extent possible) also would be required.

The water and sediment quality of the lower East River due to stormwater from the project site is assessed in Chapter 9, "Natural Resources." As described above, stormwater from the project site is directly discharged to the East River and is not conveyed to the city's combined or separate sewers; therefore the proposed project would have no impact on the city's stormwater conveyance infrastructure.

The required water quality treatment measures would be reflected in a stormwater best management practice (BMP) concept plan, which would be incorporated into the project's SWPPP and subject to NYSDEC approval for water quality treatment. With the incorporation of these selected water quality treatment BMPs outlined in the BMP concept plan, the overall stormwater runoff quality would be improved as compared to No Action condition.

F. CONCLUSIONS

Phase 1 and Full Build sanitary sewage generation would increase compared to the No Action condition. The increases would be minimal and would continue to be conveyed via gravity sanitary sewers in East and West Roads. New sanitary sewer connections to the East and West Road sanitary sewers from the new buildings would be built. The sanitary pump stations and force mains located on the Island would remain in operation and would continue to convey sanitary flow to the interceptor in Vernon Boulevard in Queens. The south pump station has adequate capacity to handle the flows from Phase 1. When design begins for the final phase of the project, NYCDEP will be consulted to determine if upgrades are needed at the south pump station. ~~Based upon the design capacity information provided by NYCDEP, the pump stations and force mains would have adequate capacity to handle the full build flows. However, NYCDEP has indicated that design capacity is not necessarily reflective of operational capacity. Between publication of the DEIS and the FEIS, the potential impacts of the flow increase on the current operations of the pump station, the force mains, and the interceptor in Vernon Boulevard,~~

Cornell NYC Tech FEIS

~~will be evaluated and submitted to NYCDEP for review. The conclusions will be incorporated into the FEIS.~~

The proposed project would not significantly impact the existing WWTP infrastructure. Phase 1 and Full Build stormwater runoff volumes would decrease or remain the same as compared to the No Action condition. Stormwater runoff would continue to discharge into the East River. In addition, a SWPPP would be implemented for both phases of the project. The SWPPP would meet NYSDEC standard requirements and design guidelines for temporary erosion and sediment control and for post-construction stormwater management and would improve the quality of the stormwater prior to its discharge to the East River via the existing outfalls.

Overall, the proposed project would not result in any significant adverse impacts on the city's wastewater and stormwater conveyance or wastewater treatment infrastructure. *