11 Water and Sewer Infrastructure

Introduction

This chapter evaluates the potential effects of the Proposed Actions on the City's water supply, wastewater treatment, and stormwater management infrastructure, in accordance with the 2014 *CEQR Technical Manual*. New York City's water and sewer network is fundamental to the operation, health, safety, and quality of life of the City and its surrounding environment, and it must be sized to fit the users and surface conditions to function adequately. Ensuring these systems have adequate capacity to accommodate land use or density changes and new development is critical to avoid environmental and health problems, such as sewer back-ups, street flooding, or pressure reductions.

As described in **Chapter 1**, *Project Description*, under the RWCDS, the Proposed Actions are analyzed as a generic action. Given their broad applicability, it is difficult to predict the sites where the Proposed Actions would facilitate development. Additionally, the proposed zoning text and map amendments are not expected to induce development or cause a significant change in the overall amount, type, or location of development. However, because the land use actions necessary to facilitate development on a site (i.e., certifications, authorizations and special permits) may be changed or eliminated by the proposed regulations, the Proposed Actions have the potential to increase the proportion of development sites proceeding as-of-right.

Therefore, a water and sewer infrastructure screening assessment was performed following 2014 *CEQR Technical Manual* guidelines to determine the potential for adverse impacts with respect to water and sewer infrastructure. The assessment is based on a comparison of the development of the four prototypical analysis sites under the future No Action scenario with the future With Action scenario, as described in **Chapter 1**, *Project Description*.

Principal Conclusions

The Proposed Actions would not result in significant, adverse impacts on water and sewer infrastructure. To determine the need for water and

sewer impact assessments, a screening analysis was performed for the Proposed Actions that compares the development of prototypical analysis sites under the With Action scenario with prototypical analysis site development in the No Action scenario. The results indicate that the Proposed Actions do not trigger the need for a preliminary assessment and would not result in significant, adverse impacts on water and sewer infrastructure.

Water Supply

The Proposed Actions would not result in significant, adverse impacts on water supply. The screening-level analysis concludes that the effects of the Proposed Actions would not be great enough to warrant a preliminary analysis of water supply.

Wastewater and Stormwater Conveyance and Treatment

The Proposed Actions would not result in significant, adverse impacts on wastewater and stormwater conveyance and treatment. The preliminary assessment shows that the incremental development that may occur at any one prototypical analysis site would fall below the CEQR guidance thresholds.

Screening Analysis

The Proposed Actions are generic, and there are no known projected or potential development sites at this time. To produce a reasonable analysis of the likely effects of the Proposed Actions, four prototypical analysis sites were established as described in **Chapter 1**, *Project Description*. These sites are not necessarily representative of a specific lot, but rather reflect prevalent conditions as a basis for analysis. For the No Action scenario, it is assumed that each prototypical analysis site would develop the largest as-of-right building permitted under existing zoning. Similarly, the With Action scenario assumes that each prototype would be developed with the largest as-of-right building permitted under the proposed zoning regulations.

While certain prototypical analysis sties would allow a change in built FAR between the No Action and With Action scenarios, the Proposed Actions would not change the underlying zoning or permitted FAR. Sites that show a change in FAR from the No Action scenario would likely pursue CPC land use actions to facilitate development under existing regulations. While this is a discretionary process, nearly all the applications for prototypical analysis site development would be Type II for SEQRA purposes because the sites are one- and two-family homes.

In accordance with the methodology outlined in the *CEQR Technical Manual*, a screening analysis of the potential for the prototypical analysis

sites to affect the adequacy of the City's infrastructure systems was performed.

Water Supply

A preliminary water supply assessment would be required if a project results in an exceptionally large demand of more than one million gallons of water per day, including power plants, large cooling systems, or large developments. A preliminary water supply assessment would also be necessary if the project is in an area that experiences low water pressure.

The Proposed Actions are not expected to result in an exceptionally large demand of more than one million gallons of water per day and would not involve the development of a power plant, large cooling system, or other large developments. As discussed in the description of the Proposed Actions, most components of this proposal are not expected to induce development on a lot where development would not also be expected to occur as part of the No Action scenario. While the individual sites to which the Proposed Actions would apply would be located in a portion of the Bronx and may potentially include areas that experience low water pressure, any incremental density is expected to fall well below the threshold. Therefore, the Proposed Actions would not result in significant, adverse impacts on water supply, and a preliminary assessment is not warranted.

Wastewater and Stormwater Conveyance and Treatment

Because the City's sewers are sized and designed based on designated zoning for an area, related population density, and surface coverage characteristics, projects that greatly increase density or would substantially increase hard surfaces would require further analysis for potential impacts on the City's wastewater and stormwater infrastructure. Although most projects would not require a preliminary assessment on wastewater and stormwater conveyance and treatment, the 2014 *CEQR Technical Manual* indicates that a preliminary assessment would be needed if a project is in a combined sewer area and would exceed the following incremental development of residential units or commercial space above the predicted No Action scenario:

- 400 residential units or 150,000 square feet of commercial space or more in the Bronx, Brooklyn, Staten Island, or Queens.

A preliminary assessment would also be needed if a project located in a separately sewered area would exceed:

- 25 residential units or 50,000 square feet of commercial, public and institution/community facility use in the residential R1, R2, or R3 zoning districts;

- 50 residential units or 100,000 square feet of commercial, public and institution/community facility use in residential R4 and R5 zoning districts; or

- 100 residential units or 100,000 square feet of commercial, public and institution/community facility use in all remaining zoning designations, including commercial, manufacturing, and mixed-use districts.

As mentioned above, the Proposed Actions are generic, and no known potential or projected as-of-right development sites have been identified. Because of the Proposed Actions' broad applicability, it is difficult to predict the sites where development would be facilitated. To produce a reasonable analysis of likely effect of the Proposed Actions, four prototypical analysis sites (of less than 1 acre) have been identified for analysis. The analysis in **Table 11-1** shows that the development that may occur at any one prototypical analysis site would fall below the thresholds described above.

Table 11-1. Prototypical Analysis Sites and Thresholds Needed to Require Preliminary Analysis

Prototypical Analysis Site ID	Zoning District	Typology[a]	Lot Area (Square Feet)	Threshold	Meets the Threshold to Require Preliminary Assessment?
1	R1-2	1-F Detached (enlarge)	6,000	25 residential units or 50,000 square feet of commercial/public and institution/community facility use	No
2	R2	1-F Detached	4,500	25 residential units or 50,000 square feet of commercial/public and institution/community facility use	No
3	R1-1	1-F Detached	12,000	25 residential units or 50,000 square feet of commercial/public and institution/community facility use	No
4	R1-2	1-F Detached	8,000	25 residential units or 50,000 square feet of commercial/public and institution/community facility use	No

Source: 2014 *CEQR Technical Manual*

[a] 1F = one family

*** This table has been modified for the FEIS.**

Analysis may also be warranted if a project is partially sewered or currently unsewered; or involves development on a site of 5 acres or larger where the amount of hard surface would increase; or involves development on a site 1 acre or larger where the amount of hard surface would increase, and located in either Jamaica Bay watershed, or in certain specific drainage areas including: Bronx River, Coney Island Creek, Flushing Bay and Creek, Gowanus Canal, Hutchinson River, Newtown Creek and Westchester Creek; or involves construction of a new stormwater outfall that requires federal and/or state permits.

The NYC Department of Environmental Protection provided correspondence on the EIS analysis dated February 27, 2019, provided in Appendix 7. However, the proposal would not increase allowable FAR within the rezoned area and that, as such, a maximum dwelling unit analysis was determined to be not warranted. Moreover, the proposal is anticipated to improve onsite water retention because it would more consistently regulate the amount of hard surface area on a site within the affected area. Lastly, like other development projects, a determination regarding the need to perform a hydraulic analysis would be made when the NYC Department of Environmental Protection receives a formal application to connect to an existing sewer line.

The Proposed Actions would require sites larger than 1 acre to go through a discretionary approval process, which would establish guidelines for hard surface area and require a future environmental review, as further analyzed in **Chapter 23**, *Conceptual Analysis*. If those environmental analyses indicate the project would increase flows of sanitary and stormwater, overburden the wastewater or stormwater infrastructure, or create the potential to result in additional combined sewer overflow volumes or events, changes to those development plans, the affected sewer system, and/or the preparation of an amended drainage plan to address such modifications may be recommended.

Conclusion

Screening analyses were conducted to assess potential impacts on water and sewer infrastructure that could result from the zoning text and map amendments. The water supply screening analysis concludes that the effects of the Proposed Actions would not warrant a preliminary analysis of water supply. Furthermore, the preliminary assessment of wastewater and stormwater conveyance and treatment showed that the incremental development that may occur at any one prototypical analysis site would fall below the CEQR guidance thresholds therefore, no further analysis is needed.

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