IV. Environmental Impact Analysis

M. Utility and Service Systems

2. Wastewater

1. Introduction

This section analyzes potential Project impacts on wastewater collection and treatment facilities and infrastructure, including whether such existing infrastructure has sufficient capacity to serve the Project. This analysis utilizes a *1100 East 5th Street Mixed-Use Project Utility Infrastructure Technical Report: Wastewater* (Infrastructure Technical Report: Wastewater) and is included as **Appendix N.2** of this Draft EIR.

2. Environmental Setting

a) Regulatory Framework

There are several plans, policies, and programs regarding Wastewater at the state and local levels. Described below, these include:

- California Green Building Code
- City of Los Angeles General Plan Framework
- Los Angeles Integrated Resources Plan
- One Water LA 2040 Plan
- Los Angeles Municipal Codes
    - Los Angeles Green Building Code (Ordinance No. 181,480)
    - Water Efficiency Requirements Ordinance (Ordinance No. 180,822)
    - Sewer Capacity Availability Review (LAMC Section 64.15)
    - Sewerage Facilities Charge (LAMC Sections 64.11.2 and 64.16.1)
    - Bureau of Engineering Special Order No. SO 06-0691

(1) State

(a) California Green Building Code

The California Green Building Standards Code (CALGreen Code) is set forth in California Code of Regulations Title 24, Part 11, and establishes voluntary and mandatory standards pertaining to the planning and design of sustainable site development and water conservation, among other issues. Under the CALGreen Code, all flush toilets are limited to 1.28 gallons per flush, and urinals are limited to 0.5 gallon per flush. In addition, maximum flow rates for faucets are established at:

2.0 gallons per minute (gpm) at 80 pounds per square inch (psi) for showerheads, 1.2 gpm at 60 psi for residential lavatory faucets, and 1.8 gpm at 60 psi for kitchen faucets.

(2) Local

(a) City of Los Angeles General Plan Framework

The Citywide General Plan Framework Element (Framework Element) establishes the conceptual basis for the City's General Plan.[1] The Framework Element sets forth a comprehensive Citywide long-range growth strategy and defines Citywide policies regarding land use, housing, urban form and neighborhood design, open space and conservation, economic development, transportation, infrastructure and public services. Chapter 9, Infrastructure and Public Services, of the Framework Element identifies goals, objectives, and policies for utilities in the City including wastewater collection and treatment. Goal 9A is to provide adequate wastewater collection and treatment capacity for the City and in basins tributary to City-owned wastewater treatment facilities.[2]

(b) Los Angeles Integrated Resources Plan

The City of Los Angeles Integrated Resources Plan (IRP) was developed by multiple departments in order to address the facility needs of the City's wastewater program, recycled water, and urban runoff/stormwater management through the year 2020.

The Final IRP 5-Year Review was released in June 2012, which included 12 projects that were separated into two categories: (1) "Go Projects" for immediate implementation; and (2) "Go-If Triggered Projects" for implementation in the future once a trigger is reached.[3] Triggers for these projects include wastewater flow, population, regulations, or operational efficiency. Based on the Final IRP 5-Year Review, the Go Projects consisted of six capital improvement projects for which triggers were considered to have been met at the time the IRP EIR was certified. The Go-If Triggered Projects consisted of six capital improvement projects for which triggers were not considered to have been met at the time the IRP EIR was certified.

Since the implementation of the IRP, new programs and projects, which have resulted in a substantial decrease in wastewater flows, have affected the Go Projects and Go-If Triggered Projects. Based on the Final IRP 5-Year Review, two of the Go Projects have been moved to the Go-If Triggered category (Go Project 2 and Go Project 3) and two have been deferred beyond the 2020 planning window of the IRP (Go Project 4 and Go Project 5). Construction of wastewater storage facilities at the Donald C. Tillman Water Reclamation Plant (Go Project 1) has been

1 City of Los Angeles Department of City Planning, Citywide General Plan Framework, An Element of the Los Angeles General Plan, 1995.

2 City of Los Angeles Department of City Planning, Citywide General Plan Framework Element, Chapter 9: Infrastructure and Public Services – Wastewater, originally adopted by City Council on December 11, 1996 and re-adopted on August 8, 2001.

3 City of Los Angeles Department of Public Works Bureau of Sanitation and Department of Water and Power, Water Integrated Resources Plan 5-Year Review FINAL Documents, June 2012.

completed. In addition, Go Project 6, involving the design of the North East Interceptor Sewer Phase II, is no longer being pursued.[4]

(c) One Water LA 2040 Plan

In April 2018, the City prepared the *One Water LA 2040 Plan* (*One Water LA Plan*), an integrated approach to Citywide recycled water supply, wastewater treatment, and stormwater management.[5] The new plan builds upon the City's Water IRP, which projected needs and set forth improvements and upgrades to wastewater conveyance systems, recycled water systems, and runoff management programs through the year 2020, and extends its planning horizon to 2040. The One Water LA Plan proposes a collaborative approach to managing the City's future water, wastewater treatment, and stormwater needs with the goal of yielding sustainable, long-term water supplies for Los Angeles to ensure greater resilience to drought conditions and climate change. The One Water LA Plan is also intended as a step toward meeting the Mayor's Executive Directive to reduce the City's purchase of imported water by 50 percent by 2024.[6] Major challenges addressed in the One Water LA Plan include recurring drought, climate change, and the availability of recycled water in the future in light of declining wastewater volumes.

(d) City of Los Angeles Municipal Code

(i) Los Angeles Green Building Code

The City has been pursuing a number of green development initiatives intended to promote energy conservation and reductions in the amount of greenhouse gas emissions generated within the City. While these ordinances do not focus on the provision of sewer services, they do mandate the use of water conservation features in new developments. Examples of such water conservation features include, but are not limited to, low water shower heads, toilets, clothes washers and dishwashers. Because the flow through these fixtures is reduced, residual wastewater passing through is reduced, in turn reducing the demand for sewage conveyance and treatment.

LAMC Chapter IX, Article 9, the Los Angeles Green Building Code (LA Green Building Code, Ordinance No. 181,480),[7] was adopted in April 2008 and provides standards and a mechanism for evaluating projects for their water conservation features during site plan review. The LA Green Building Code has been subsequently amended to incorporate various provisions of the CALGreen Code. The LA Green Building Code includes mandatory requirements and elective measures pertaining to wastewater for three categories of buildings, the first of which applies to

4 City of Los Angeles Department of Public Works, Bureau of Engineering, Project Information Report, North East Interceptor Sewer (NEIS) Phase 2A.

5 City of Los Angeles, One Water LA 2040 Plan, Volume 1, Summary Report, April 2018.

6 City of Los Angeles, Office of the Mayor, Executive Directive No. 5, Emergency Drought Response - Creating a Water Wise City, October 14, 2014, https://www.lamayor.org/sites/g/files/wph1781/files/page/file/ED_5_-_Emergency_Drought__Response_-_Creating_a_Water_Wise_City.pdf?1426620015. Accessed August 22, 2022.

7 City of Los Angeles, Ordinance No. 181480.

this Project: (1) low-rise residential buildings; (2) non-residential and high-rise residential buildings; and (3) additions and alterations to residential and non-residential buildings.

(ii) Water Efficiency Requirements Ordinance

LAMC Chapter XII, Article 5, the Water Efficiency Requirements Ordinance (Ordinance No. 180,822),[8] effective December 1, 2009, requires the installation of efficient water fixtures, appliances, and cooling towers in new buildings and renovation of plumbing in existing buildings, to minimize the effect of water shortages for City customers and enhance water supply sustainability.

(iii) Sewer Capacity Availability Review

The LAMC includes regulations that require the City to assure available sewer capacity for new projects and to collect fees for improvements to the infrastructure system. LAMC Section 64.15 requires that the City perform a Sewer Capacity Availability Review (SCAR) when an applicant seeks a sewer permit to connect a property to the City's sewer system, proposes additional discharge through their existing public sewer connection, or proposes a future sewer connection or future development that is anticipated to generate 10,000 gallons or more of sewage per day. A SCAR provides a preliminary assessment of the capacity of the existing municipal sewer system to safely convey a project's newly generated wastewater to the appropriate sewage treatment plant.

(iv) Sewerage Facilities Charge

LAMC Sections 64.11 and 64.12 require approval of a sewer permit, also called an "S" Permit, prior to connection to the wastewater system. LAMC Sections 64.11.2 and 64.16.1 require the payment of fees for new connections to the City's sewer system to assure the sufficiency of sewer infrastructure. New connections to the sewer system are assessed a Sewerage Facilities Charge. The rate structure for the Sewerage Facilities Charge is based upon wastewater flow strength as well as volume. The determination of wastewater flow strength for each applicable project is based on City guidelines for the average wastewater concentrations of two parameters, biological oxygen demand and suspended solids, for each type of land use. Sewerage Facilities Charge fees are deposited in the City's Sewer Construction and Maintenance Fund for sewer and sewage-related purposes, including, but not limited to, industrial waste control and water reclamation purposes.

(v) Bureau of Engineering Special Order

The City establishes design criteria for sewer systems to assure that new infrastructure provides sewer capacity and operating characteristics to meet City standards (Bureau of Engineering Special Order No. SO 06-0691). Per the Special Order, lateral sewers, which are sewers 18 inches or less in diameter, must be designed for a planning period of 100 years. The Special Order also requires that sewers be designed so that the peak dry weather flow depth during their

[8] City of Los Angeles, Ordinance No. 180822.

planning period does not exceed one-half of the pipe diameter (D) (i.e., depth-to-diameter ratio or d/D).[9]

b) Existing Conditions

(1) Wastewater Generation

The Project Site is currently developed with two single-story vacant warehouses that occupy 31,600 square feet of floor area, two covered shelters, and an at grade concrete parking lot totaling 22,409 square feet. As the existing uses are currently vacant there is no on-site generation of wastewater.

(2) Wastewater Infrastructure

Sanitary sewer service to and from the Project are is owned and operated by the City of Los Angeles. The existing wastewater collection system includes more than 6,700 miles of public sewers, which serve a population of more than four million people and conveys approximately 400 million gallons per day (gpd) to the City's four wastewater treatment and water reclamation plants.[10] Sewer flows originating from the Project Site are collected and conveyed through a network of sewer lines for treatment at the Hyperion Water Reclamation Plant (HWRP).

Based on available record data provided by the City, there is an 8-inch vitrified clay pipe (VCP) sewer line in Seaton Street flowing south. Based upon the City of Los Angeles Bureau of Engineering's online Navigate LA database, the capacity of this line is 0.79 cubic feet per second (cfs) (510,555 gpd).[11] Available records indicate that Seaton Street has five sewer wyes[12] and two laterals allocated to the Project Site.[13]

Based on available record data provided by the City, there is a 6-inch VCP sewer line in 5th Street flowing east. Based upon the Navigate LA database, the capacity of the 6-inch line is 0.23 cfs (148,642 gpd) Available records indicate the 6-inch main in 5th Street has three sewer wyes allocated to the Project Site.[14]

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9 City of Los Angeles Department of Public Works, Bureau of Engineering, Special Order No. 006-0691, Planning Period, Flow, and Design Criteria for Gravity Sanitary Sewers and Pumping Plants, effective June 6, 1991.

10 LASAN, Sewers Website, available at: https://www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-cw/s-lsh-wwd-cw-s. Accessed August 22, 2022.

11 City of Los Angeles, Department of Public Works, Bureau of Engineering, Navigate LA website, available at: https://navigatela.lacity.org/navigatela/. Accessed August 22, 2022.

12 A "wye" is a fitting with three openings which allows one pipe to be joined to another.

13 1100 East 5th Street Mixed-Use Project Utility Infrastructure Technical Report: Water, Exhibit 1, prepared by KPFF, October 19, 2020, **Appendix N.1** of this Draft EIR.

14 1100 East 5th Street Mixed-Use Project Utility Infrastructure Technical Report: Water, Exhibit 1, prepared by KPFF, October 19, 2020, **Appendix N.1** of this Draft EIR.

(3) Wastewater Treatment

The City of Los Angeles, Bureau of Sanitation & Environment (LASAN) is responsible for the operation of wastewater treatment facilities in the City. The main purpose of these treatment facilities is to remove potential pollutants from sewage in order to protect river and marine environments and public health. LASAN divides the wastewater treatment system of the City into two major service areas: the Hyperion Sanitary Service Area and the Terminal Island Service Area.[15] The Hyperion Service Area is serviced by the Hyperion Sanitary Sewer System, which consists of the HWRP, the Donald C. Tillman Water Reclamation Plant, and the Los Angeles—Glendale Water Reclamation Plant.[16] The Terminal Island Service Area is served by the Terminal Island Treatment Plans.[17] The Project Site lies within the Hyperion Service Area. The existing treatment capacity of the Hyperion Sanitary Sewer System is presented in **Table IV.M.2-1, Existing Capacity of Hyperion Sanitary Sewer System,** and discussed further below.

Table IV.M.2-1
Existing Capacity of Hyperion Sanitary Sewer System

	Design Capacity (mgd)
Hyperion Water Reclamation Plant [a]	450
Donald C. Tillman Water Reclamation Plant [b]	80
Los Angeles—Glendale Water Reclamation Plant [c]	20
Total	**550**

mgd = million gallons per day

a Source: City of Los Angeles, LASAN, Hyperion Water Reclamation Plan Website, available at: https://www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-cw/s-lsh-wwd-cw-p/s-lsh-wwd-cw-p-hwrp, accessed May 4, 2021.

b Source: City of Los Angeles, LASAN, Donald C. Tillman Water Reclamation Plant Website, available at: https://www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-cw/s-lsh-wwd-cw-p/s-lsh-wwd-cw-p-dctwrp, accessed May 4, 2021.

c Source City of Los Angeles, LASAN, Los Angeles—Glendale Water Reclamation Plant Website, available at: https://www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-cw/s-lsh-wwd-cw-p/s-lsh-wwd-cw-p-lagwrp. Accessed August 22, 2022.

(a) Hyperion Sanitary Sewer System

As shown in **Table IV.M.2-1,** the existing design capacity of the Hyperion Sanitary Sewer System is approximately 550 mgd (consisting of 450 mgd at the Hyperion Treatment Plant, 80 mgd at the Donald C. Tillman Water Reclamation Plant, and 20 mgd at the Los Angeles–Glendale Water Reclamation Plant). Based on the One Water LA 2040 Plan—Wastewater Facilities Plan, the average wastewater flow rate in the Hyperion Sanitary Sewer System was 314 mgd in 2016 (consisting of 250 mgd at the HWRP, 47 mgd at the Donald C. Tillman Water Reclamation Plant,

[15] City of Los Angeles, LASAN, Clean Water Website, available at: https://www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-cw. Accessed August 22, 2022.
[16] City of Los Angeles, LASAN, Clean Water Website, available at: https://www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-cw. Accessed August 22, 2022.
[17] City of Los Angeles, LASAN, Clean Water Website, available at: https://www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-cw. Accessed August 22, 2022.

and 17 mgd at the Los Angeles—Glendale Water Reclamation Plant).[18] As such, current flows are below the design capacity of approximately 550 mgd for the Hyperion Sanitary Sewer System.

(b) Hyperion Water Reclamation Plant

As discussed above, wastewater generated from the Project Site is conveyed via the local collector sanitary sewer system directly to the HWRP for treatment. As shown in **Table IV.M.2-1,** the HWRP has the capacity to treat approximately 450 mgd of wastewater for full secondary treatment level and currently treats 275 mgd.[19] As such, the remaining capacity at the HWRP is approximately 175 million gpd or approximately 39 percent of its total capacity.

Wastewater conveyed into the HWRP initially passes through screens and basins to remove coarse debris and grit. Primary treatment consisting of a physical separation process is then conducted where solids settle to the bottom of tanks while oil and grease float to the surface. These solids (called sludge) are collected, treated, and recycled. The liquid portion that remains (called primary effluent) is treated through a secondary treatment using a natural biological process. Living microorganisms are added to the primary effluent to consume organic constituents. These microorganisms are later harvested and removed as sludge.[20] After secondary treatment is completed, the treated effluent is conveyed approximately five miles offshore at a depth of 190 feet into the Santa Monica Bay and Pacific Ocean.[21] The discharge from the Hyperion Treatment Plant into Santa Monica Bay is regulated by the HWRP's National Pollutant Discharge Elimination System Permit issued under the Clean Water Act and is required to meet the Regional Water Quality Control Board's requirements for a recreational beneficial use.[22] Accordingly, the HWRP's effluent that is released to Santa Monica Bay is continually monitored to ensure that it meets or exceeds prescribed water quality standards. The City's Environmental Monitoring Division also monitors flows into the Santa Monica Bay.[23]

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18 City of Los Angeles, LASAN, One Water LA 2040 Plan, Volume 2, Wastewater Facilities Plan, April 2018, page 59.

19 City of Los Angeles, LASAN, Hyperion Water Reclamation Plant Website, available at: https://www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-cw/s-lsh-wwd-cw-p/s-lsh-wwd-cw-p-hwrp. Accessed August 22, 2022.

20 City of Los Angeles, LASAN, Treatment Process Website, available at: https://www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-cw/s-lsh-wwd-cw-p/s-lsh-wwd-cw-p-tp. Accessed August 22, 2022.

21 City of Los Angeles, LASAN Hyperion Virtual Tour Website, available at: https://www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-cw/s-lsh-wwd-cw-p/s-lsh-wwd-cw-p-hwrp. Accessed August 22, 2022.

22 California Regional Water Quality Control Board, Los Angeles Region, Order No. R4-2017-0045, NPDES No. CA0109991, Waste Discharge Requirements and National Pollutant Discharge Elimination System Permit for the City of Los Angeles, Hyperion Treatment Plant Discharge to the Pacific Ocean, effective April 1, 2017 through March 31, 2022.

23 City of Los Angeles, LASAN, Environmental Monitoring www.lacitysan.org/san/faces/wcnav_externalId/s-lsh-wwd-wp-ec-em. Accessed August 22, 2022.

3. Project Impacts

a) Thresholds of Significance

In accordance with guidance provided in Appendix G to the *State CEQA Guidelines*, the Project could have a significant impact if it were to:

Threshold (a): ***Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects; or***

Threshold (b): ***Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.***

The *L.A. CEQA Thresholds Guide* identifies the following criteria to evaluate wastewater impacts:

(1) Wastewater

- *Cause a measurable increase in wastewater flows at a point where, and a time when, a sewer's capacity is already constrained or that would cause a sewer's capacity to become constrained; or*

- *The project's additional wastewater flows would substantially or incrementally exceed the future scheduled capacity of any one treatment plant by generating flows greater than those anticipated in the Wastewater Facilities Plan and builds upon the IRP.*[24]

The potential for the Project to result in impacts to wastewater is based on the *State CEQA Guidelines* Appendix G thresholds and criteria identified in the *L.A. CEQA Thresholds Guide* that provide supplemental analysis to the Appendix G thresholds, where applicable. The City's threshold criteria above are considerations that were made as part of the analysis of the Appendix G thresholds for wastewater.

b) Methodology

The environmental impacts of the Project with respect to wastewater infrastructure and treatment capacity are determined based on the Infrastructure Technical Report: Wastewater (**Appendix N.2** of this Draft EIR) and the Wastewater Service Information (WWSI) included as Exhibit 1 to the Infrastructure Technical Report: Wastewater. The anticipated wastewater flows to be generated by the Project are based on LASAN's wastewater generation rates. Given the Project Site's future wastewater generation and the existing capacity of the sanitary sewer system in the

[24] The One Water LA 2040 Plan includes a Wastewater Facilities Plan and builds upon the IRP.

vicinity of the Project Site, an assessment was made of the impacts to the sanitary sewers and the City's downstream sewers and treatment plants.

Pursuant to LAMC Section 64.15, BOS Wastewater Engineering Division made a preliminary analysis of the local and regional sewer conditions to determine if available wastewater conveyance and treatment capacity exists for future development of the Project Site. LASAN's approach in the WWSI consisted of the study of a worst-case scenario envisioning peak demands from the relevant facilities occurring simultaneously on the wastewater system. A combination of flow gauging data and computed results from the City's hydrodynamic model were used to project current and future impacts due to additional sewer discharge from the Project.

To evaluate potential impacts relative to wastewater treatment capacity, the analysis evaluates whether adequate treatment capacity at the HWRP would be available to accommodate the Project based on the estimate of the Project's wastewater generation and data from LASAN.

c) Project Design Features

Construction and operation of the Project would be implemented in accordance with applicable regulatory and code requirements related to wastewater generation. The Project would include water conservation features that would result in a reduction in wastewater generation. Such conservation features are listed in **Section IV.M.1, Utilities and Service System—Water**, of this Draft EIR (see project design feature PDF WAT-1).

d) Analysis of Project Impacts

As compared to the Project, the Flexibility Option would change the use of the second floor from residential to commercial, and would not otherwise change the Project's land uses or size. The overall commercial square footage provided would be increased by 17,765 square feet to 64,313 square feet and, in turn, there would be a reduction in the number of live/work units from 220 to 200 units. The overall building parameters would remain unchanged and the design, configuration, and operation of the Flexibility Option would be comparable to the Project. In the analysis of Project impacts presented below, where similarity in land uses, operational characteristics and project design features between the Project and the Flexibility Option would be essentially the same, the conclusions regarding the impact analysis and impact significance determination presented below for the Project would be the same under the Flexibility Option. For those thresholds where numerical differences exist because of the differences in project parameters between the Project and Flexibility Option, the analysis is presented separately.

Threshold (a): Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunication facilities, the construction of or relocation of which could cause significant environmental effects?

Numerical differences exist for this threshold because of the differences in project parameters between the Project and Flexibility Option, therefore these analyses are presented separately.

(1) Impact Analysis

(a) Project

(i) Construction

Construction activities for the Project would result in a temporary increase in wastewater generation as a result of construction activities at the Project Site. Wastewater generation would occur incrementally throughout construction of the Project as a result of construction workers on-site. Construction workers would utilize portable restrooms, which would not contribute to wastewater flows to the adjacent sewer infrastructure; however, it is assumed that the waste removed from the portable restrooms would ultimately be emptied within the service boundaries of the Hyperion Sanitary Sewer System and the HWRP, which is shown below under the analysis of operational impacts to have adequate capacity to treat the amount of wastewater projected to be produced by operation of the Project. Given that the amount of wastewater that would be produced by construction of the Project would be less than that produced by operation, which as discussed below can be adequately handled by existing wastewater facilities, the Hyperion Sanitary Sewer System and the HWRP would have adequate capacity to treat the waste removed from the portable restrooms as well.

Therefore, construction of the Project would not require or result in the relocation or construction of new or expanded wastewater treatment facilities, the construction or relocation of which could cause significant environmental effects and the impact would be less than significant.

(ii) Operation

Implementation of the Project would increase the average and peak daily wastewater flows from the Project Site. As shown in **Table IV.M.2-2, Project Average Daily Wastewater Generation**, the Project is estimated to generate an increase of approximately 46,483 gpd. It should be noted that the Project's wastewater generation estimate is conservative and does not factor in water conservation efforts that would result from the Project's mandatory compliance with the LA Green Building Code and implementation of project design feature PDF WAT-1.

Table IV.M.2-2
Project Average Daily Wastewater Generation

Type of Use	Size	Sewage Generation Rate (gpd) [a]	Total Sewage Generated (gpd)
Apartment: 1 Bedroom	191 du	185/du [b]	35,335
Apartment: 3 Bedroom	29 du	265/du [b]	7,685
Commercial and Art Production Space	46,548 sf	50/1,000 sf	2,327
Open Space	22,725 sf	50/1,000 sf [c]	1,136
Total Project Wastewater Generation			46,483
Existing Wastewater Generation			***0***
Total Wastewater Generation			**46,483**[d]

Notes: gpd = gallons per day
[a] *The average daily flow based on 100 percent of City of Los Angeles BOS sewerage generation factors.*
[b] *The consumption rates are comprised of an artist space in addition to living space.*
[c] *Letter from City of Los Angeles LASAN, Wastewater Engineering Services Division, Ali Poosti, Division Manager, August 30, 2017.*
[d] *Bureau of Sanitation provided an updated calculation on December 22, 2022 that estimates Project wastewater generation to be 44,139 gpd. Since the original estimate of 46,483 gpd is higher than the updated calculation, the original estimate is more conservative and has therefore been used as the basis for the analysis presented in this EIR.*
Source (table): KPFF, 1100 East 5th Street Mixed-Use Project Utility Infrastructure Technical Report: Wastewater, October 19, 2020, Table 2, page 7. ***Appendix N.2*** *of this Draft EIR.*

LASAN prepared a WWSI for the Project,[25] which evaluates the ability of the wastewater system to serve the Project. LASAN evaluated a wastewater generation of 41,985 gpd in the WWSI. The WWSI identified the current approximate flow level and design capacities of 50 percent in the applicable existing sewer mains. As indicated therein, the LASAN stated that "[b]ased on estimated flows, it appears the sewer system might be able to accommodate the total flow for your proposed project.[26] As is typical with development projects, the WSSI also notes that a final approval for sewer capacity will be made in conjunction with the issuance of connection permits through detailed gauging and evaluation to identify a specific sewer connection point that would be based on capacity at the time of construction. Further gauging and evaluation are also required by LAMC Section 64.14 and would be conducted to obtain final approval of sewer capacity and a connection permit for the Project during the Project's permitting process. Sanitary sewer connections and on-site infrastructure must be designed and constructed in accordance with applicable LASAN and California Plumbing Code standards. Accordingly, based on existing conditions, expected sewer flows from the Project, and applicable required regulatory compliance, the existing sewer mains that would serve the Project would be able to accommodate the projected wastewater generated by operation of the Project.

Wastewater generated by the Project would be conveyed via LASAN's wastewater conveyance system within the Hyperion Sanitary Sewer System to the HWRP for treatment. The Hyperion Sanitary Sewer System has an existing design capacity of 550 mgd and currently treats approximately 314 mgd, while the HWRP has an existing design capacity of 450 mgd and

[25] KPFF, 1100 East 5th Street Mixed-Use Project Utility Infrastructure Technical Report: Wastewater, October 19, 2020, Exhibit 1, 1st Option of "Projected Wastewater Discharges for the Proposed Project" Table. **Appendix N.2** of this Draft EIR.
[26] KPFF, 1100 East 5th Street Mixed-Use Project Utility Infrastructure Technical Report: Wastewater, October 19, 2020, Exhibit 1. **Appendix N.2** of this Draft EIR.

currently treats approximately 275 mgd. Accordingly, the remaining available capacities within the Hyperion Sanitary Sewer System and at the HWRP are approximately 236 mgd and 175 mgd, respectively. The Project's wastewater flow of 46,483 gpd (0.046 mgd) would represent approximately 0.02 percent of the current remaining capacities of the Hyperion Sanitary Sewer System and approximately 0.03 percent of the current remaining capacity of the HWRP.

Various factors, including future development of new treatment plants, upgrades and improvements to existing treatment capacity, development of new technologies, etc., will ultimately determine the available capacity of the Hyperion Service Area in 2025, the year by which construction of the Project is expected to be completed. Future updates to the One Water LA 2040 Plan discussed above would provide for improvements beyond 2040 to serve future population needs. It is conservatively assumed that no new improvements to the wastewater treatment plants would occur prior to 2025. Thus, based on this conservative assumption, the 2025 effective capacity of the Hyperion Sanitary Sewer System would continue to be approximately 550 mgd. Similarly, the capacity of the HWRP in 2025 would continue to be 450 mgd. The One Water LA 2040 Plan—Wastewater Facilities Plan projects that average wastewater flows in the Hyperion Sanitary Sewer System would increase to 323 mgd in 2020, 348 mgd in 2030, and 358 mgd in 2040, while the average wastewater flow to the HWRP would increase to 256 mgd in 2020, 275 mgd in 2030, and 283 mgd in 2040.[27] Based on these projections, it is estimated that average flows within the Hyperion Sanitary Sewer System and to the HWRP in 2025 would be approximately 335.5 mgd[28] and 265.5 mgd,[29] respectively. Accordingly, the remaining available capacities within the Hyperion Sanitary Sewer System and at the HWRP in 2025 will be approximately 214.5 mgd and 184.5 mgd, respectively. The Project's wastewater flow of 46,483 gpd (0.046 mgd) would represent approximately 0.02 percent of the future capacity of both the Hyperion Sanitary Sewer System and the HWRP in 2025, the Project's buildout year.

Therefore, operation of the Project would not require or result in the relocation or construction of new or expanded wastewater treatment facilities, the construction or relocation of which could cause significant environmental effects and the impact would be less than significant.

(b) Flexibility Option

Under the Flexibility Option, the commercial square footage provided would be increased to 64,313 square feet within the same building parameters and, in turn, there would be a reduction in the overall number of live/work units for a total of 200 units (Flexibility Option). Overall, the design, configuration, and operation of the Flexibility Option would be comparable to the Project.

[27] City of Los Angeles, LASAN, One Water LA 2040 Plan, Volume 2, Wastewater Facilities Plan, April 2018, Table ES-1, page ES-8.

[28] Based on a straight-line interpolation of the projected flows for the Hyperion Sanitary Sewer System for 2020 and 2030 as follows: [(348 mgd – 323 mgd) / 10) x 5] + 323 = 335.5 mgd.

[29] Based on a straight-line interpolation of the projected flows for the HWRP for 2020 and 2030 as follows: [(275 mgd – 256 mgd) / 10) x 5] + 256 = 265.5 mgd.

(i) Construction

Similar to the Project, wastewater generated by construction workers would not be discharged to the adjacent sewer system; however, it is assumed that it would ultimately be discharged by the portable bathroom rental company within the service area of the Hyperion Sanitary Sewer System and the HWRP. As with the Project, because the amount of wastewater generated by construction of the Flexibility Option would be less than that generated by operation, which the Hyperion Sanitary Sewer System and the HWRP are shown below to have adequate capacity to treat, wastewater generated during construction would also not exceed the available treatment capacity.

Therefore, construction of the Flexibility Option would not require or result in the relocation or construction of new or expanded wastewater treatment facilities, the construction or relocation of which could cause significant environmental effects and the would be less than significant.

(ii) Operation

Implementation of the Flexibility Option would increase the average and peak daily wastewater flows from the Project Site. As shown in **Table IV.M.2-3, Flexibility Option Average Daily Wastewater Generation,** the Flexibility Option is estimated to generate an increase of approximately 43,512 gpd. As with the Project, The Flexibility Option's wastewater generation estimate is conservative and does not factor in water conservation efforts that would result from mandatory compliance with the LA Green Building Code and implementation of project design feature PDF WAT-1.

Table IV.M.2-3
Flexibility Option Average Daily Wastewater Generation

Type of Use	Size	Sewage Generation Rate (gpd)[a]	Total Sewage Generated (gpd)
Apartment: 1 Bedroom	173 du	185/du [b]	32,005
Apartment: 3 Bedroom	27 du	265/du [b]	7,155
Commercial and Art Production Space	64,313 sf	50/1,000 sf	3,216
Open Space	22,725 sf	50/1,000 sf [c]	1,136
Total Flexibility Option Wastewater Generation			*43,512*
Existing Wastewater Generation			***0***
Total Wastewater Generation			**43,512**

Notes: gpd = gallons per day

[a] *The average daily flow based on 100 percent of City of Los Angeles LASAN sewerage generation factors.*

[b] *The consumption rates are comprised of an artist space in addition to living space.*

[c] *Letter from City of Los Angeles LASAN, Wastewater Engineering Services Division, Ali Poosti, Division Manager, August 30, 2017.*

Source KPFF, 1100 East 5th Street Mixed-Use Project Utility Infrastructure Technical Report: Wastewater, October 19, 2020, Table 2, page 7. ***Appendix N.2*** *of this Draft EIR.*

As for the Project, LASAN prepared a WWSI for the Flexibility Option,[30] which evaluates the ability of the wastewater system to serve the Flexibility Option. As indicated therein, the LASAN stated that "[b]ased on estimated flows, it appears the sewer system might be able to accommodate the total flow for your proposed project.[31] As with the Project, further gauging and evaluation required by LAMC Section 64.14 capacity at the time of construction and to identify a specific sewer connection point will be made in conjunction with the issuance of connection permits during the Flexibility Option's permitting process. Sanitary sewer connections and on-site infrastructure must be designed and constructed in accordance with applicable LASAN and California Plumbing Code standards. Accordingly, based on existing conditions, expected sewer flows from the Flexibility Option, and applicable required regulatory compliance, the existing sewer mains that would serve the Flexibility Option would be able to accommodate the projected wastewater generated by operation of the Flexibility Option.

Based on the existing[32] and projected future[33] capacity conditions detailed above for the Project, the Flexibility Option's wastewater flow of 43,512 gpd (0.043 mgd) would represent approximately 0.02 percent of the current remaining capacities of both the Hyperion Sanitary Sewer System and the HWRP. The Flexibility Option's wastewater flows would also represent approximately 0.02 percent of the future capacity of both the Hyperion Sanitary Sewer System and the HWRP in 2025, the Flexibility Option's buildout year.

Therefore, as with the Project, operation of the Flexibility Option would not require or result in the relocation or construction of new or expanded wastewater treatment facilities, the construction or relocation of which could cause significant environmental effects and the impact would be less than significant.

(2) Mitigation Measures

Project-level impacts for the Project and the Flexibility Option, with regard to wastewater treatment facilities, would be less than significant; no mitigation measures would be required.

(3) Level of Significance After Mitigation

Project-level impacts for the Project and the Flexibility Option, with regard to wastewater treatment facilities, would be less than significant without mitigation.

Threshold (b): Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it

30 KPFF, 1100 East 5th Street Mixed-Use Project Utility Infrastructure Technical Report: Wastewater, October 19, 2020, Exhibit 1, 2nd Option of "Projected Wastewater Discharges for the Proposed Project" Table. **Appendix N.2** of this Draft EIR.

31 KPFF, 1100 East 5th Street Mixed-Use Project Utility Infrastructure Technical Report: Wastewater, October 19, 2020, Exhibit 1. **Appendix N.2** of this Draft EIR.

32 The remaining available capacities within the Hyperion Sanitary Sewer System and at the HWRP are approximately 236 mgd and 190 mgd, respectively.

33 The remaining available capacities within the Hyperion Sanitary Sewer System and at the HWRP in 2025 will be approximately 214.5 mgd and 184.5 mgd, respectively.

has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Due to the similarity in land uses, operational characteristics and project design features between the Project and the Flexibility Option the conclusions regarding the impact analysis and impact significance determination presented below for the Project would be the same under the Flexibility Option.

(1) Impact Analysis

(a) Construction

As discussed in **Threshold a)** above, during construction, a minimal amount of wastewater would be generated by the construction employees. Because the amount of wastewater that would be produced by construction would be less than that which would be produced by operation and because the Hyperion Sanitary Sewer System would have adequate capacity to treat the wastewater that would be produced by operation, the Hyperion Sanitary Sewer System would also have adequate capacity to treat the wastewater that would be produced by construction. Accordingly, there would be adequate treatment capacity to serve the projected demand during construction in addition to existing LASAN commitments. **Therefore, the Project or the Flexibility Option would result in a determination by the wastewater treatment provider that it has adequate capacity to serve the Project's or the Flexibility Option's projected demand in addition to the provider's existing commitments and impacts would be less than significant.**

(b) Operation

As discussed in **Threshold a)** above, the WWSI shows sufficient existing capacity within the sewer mains that serve the Project Site to accommodate wastewater generated during operation without constraining the sewer capacity. In addition, as indicated previously, the Project and the Flexibility Option would represent similarly nominal percentages of remaining existing and projected 2025 (the development buildout year) capacities of the Hyperion Sanitary Sewer System and the HWRP. Therefore, there is also ample existing and would be ample future capacity within the Hyperion Sanitary Sewer System and the HWRP to treat the wastewater projected to be generated during operation. Accordingly, there would be adequate treatment capacity to serve the projected demand during operation in addition to existing LASAN commitments. **Therefore, the Project would not result in a determination by the wastewater treatment provider which serves or may serve the Project that it has inadequate capacity to serve the Project's demand in addition to the provider's existing commitments, and, as such, impacts would be less than significant.**

(2) Mitigation Measures

Project-level impacts for the Project and the Flexibility Option, with regard to wastewater treatment capacity, would be less than significant; no mitigation measures would be required.

(3) Level of Significance After Mitigation

Project-level impacts for the Project and the Flexibility Option, with regard to wastewater treatment capacity, would be less than significant without mitigation.

4. Cumulative Impacts

Numerical differences exist regarding the impact analysis and impact significance determination presented below because of the differences in project parameters between the Project and Flexibility Option, therefore these analyses are presented separately.

a) Impact Analysis

(1) Project

The Project would result in the additional generation of sewer flow. There are 17 Related Projects, which consist of residential, commercial, schools, retail, restaurants, museums, hotels, jails, offices, industrial, gyms, cinemas, bars, coffee bars, and bus facilities. As shown in **Table IV.M.2-3, Estimated Daily Wastewater Generation for the Related Projects**, the total increase in wastewater generation for the Related Projects is approximately 1.07 million gallons per day (mgd). Combined with the Project, the increase in wastewater generation is approximately 1.12 mgd.

As discussed above, LASAN has conducted an analysis of existing and planned capacity and determined that adequate capacity exists to serve the Project. Similarly, new development projects occurring in the vicinity of the Project Site would be required to coordinate with LASAN via a WWSI (and eventually a SCAR) to determine adequate sewer capacity. As part of their coordination with development projects, LASAN takes into consideration previously approved SCARs as part of their review. If system upgrades are required as a result of a given project's additional flow, arrangements would be made between the future project and LASAN to construct the necessary improvements. In addition, new development projects would be subject to LAMC Sections 64.11 and 64.12, which require approval of a sewer connection permit prior to connection to the sewer system. In order to connect to the sewer system, Related Projects in the City of Los Angeles would also be subject to payment of the City's Sewerage Facilities Charge. Payment of such fees would help offset the costs associated with infrastructure improvements that would be needed to accommodate wastewater generated by overall future growth. Furthermore, similar to the Project, each Related Project would be required to comply with applicable water conservation programs, including the City of Los Angeles Green Building Code, which would reduce wastewater generation.

Table IV.M.2-3
Estimated Daily Wastewater Generation for the Related Projects

Land Use	Units	Generation Rate [1]	Total Generation (gpd)
Residential	4,967 DU	150 gpd/unit [4]	745,050
Retail [2]	264,627 SF	25 gpd/1,000 SF	6,616
School	300 students	11 gpd/student	3,300
Restaurant [6]	4,541 seats [5]	30 gpd/seat	136,230
Bar	13,831 SF	720 gpd/1,000 SF	9,958
Hotel	693 rooms	120 gpd/room	83,160
Office	587,281 SF	120 gpd/1,000 SF	70,474
Museum [3]	42,770 SF	30 gpd/1,000 SF	1,283
Warehouse	316,632 SF	30 gpd/1,000 SF	9,499
Health Club	6,378	650 gpd/1,000 SF	4,146
Theater: Cinema	49 seats	3 gpd/seat	147
Event Space	8,157 SF	350 gpd/1,000 SF [7]	2,855
		Subtotal Generation (Related Projects)	*1,072,718*
		Subtotal Generation (Project)	*46,483*
		Total Cumulative Generation (Project)	**1,119,201**
		Subtotal Generation (Flexibility Option)	*43,512*
		Total Cumulative Generation (Flexibility Option)	**1,116,230**

Notes: SF = square feet; gpd = gallons per day; DU = dwelling unit
1 Source: City of Los Angeles, LASAN, SFC, Sewage Generation Factor for Residential and Commercial Categories, April 16, 2012.
2 Includes "Production Space" "Design Incubator" "Supermarket" and "Flexible Space."
3 Includes "Art Gallery."
4 Assumes all units as 2-bedroom units.
5 Calculated at 30 SF/seat.
6 Assumes all restaurants are full-service.
7 "Banquet Room" rate used.
Source: EcoTierra Consulting, Inc., 2022.

Wastewater generated by the Project, and Related Projects, would be conveyed via the existing wastewater conveyance systems of the Hyperion Sanitary Sewer System for treatment at the HWRP system. As previously stated, based on information from LASAN, the existing design capacity of the Hyperion Sanitary Sewer System is approximately 550 mgd and the existing average daily flow for the system is approximately 314 mgd.[34] In addition, the HWRP has an existing design capacity of 450 mgd and currently treats approximately 275 mgd.[35] Therefore, the remaining capacity within the Hyperion Sanitary Sewer System is approximately 236 million gpd while the remaining capacity at the HWRP is 175 mgd. The estimated wastewater generation increase of the Project and Related Projects combined would be 1.12 mgd, which represents approximately 0.5 percent of the current remaining capacity in the Hyperion Sanitary Sewer System and 0.6 percent of the current remaining capacity of the HWRP. Furthermore, based on

[34] City of Los Angeles, LASAN, One Water LA 2040 Plan, Volume 2, Wastewater Facilities Plan, April 2018, page 59.

[35] City of Los Angeles, LASAN, Hyperion Water Reclamation Plant Website, available at: https://www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-cw/s-lsh-wwd-cw-p/s-lsh-wwd-cw-p-hwrp. Accessed August 22, 2022.

projections of future wastewater flow within the Hyperion Sanitary Sewer System and to the HWRP, it is estimated that average flows within the Hyperion Sanitary Sewer System and to the HWRP in 2025 would be approximately 335.5 mgd[36] and 265.5 mgd,[37] respectively. Accordingly, the remaining available capacities within the Hyperion Sanitary Sewer System and at the HWRP in 2025 will be approximately 214.5 mgd and 184.5 mgd, respectively. The estimated cumulative wastewater generation of 1.12 mgd would represent approximately 0.5 percent of the future capacity of the Hyperion Sanitary Sewer System and 0.6 percent of the future capacity of the HWRP in 2025, the Project's buildout year. The Related Projects would also be required to adhere to LASAN's annual wastewater flow increase allotment.

Based on these forecasts the Project's increase in wastewater generation would be adequately accommodated within the Hyperion Service Area. In addition, LASAN analysis confirms that the HWRP has sufficient capacity and regulatory allotment for the Project, combined with all Related Projects. **Therefore, Project impacts on the City's wastewater conveyance infrastructure would not be cumulatively considerable, and cumulative impacts would be less than significant.**

(2) Flexibility Option

Similar to the Project, the Flexibility Option would result in the additional generation of sewer flow. As shown in **Table IV.M.2-3, Estimated Daily Wastewater Generation for the Related Project,** the total increase in wastewater generation for the Related Projects is approximately 1.07 mgd. Combined with the Flexibility Option, the increase in wastewater generation is approximately 1.12 mgd.

As discussed above, LASAN has conducted an analysis of existing and planned capacity and determined that adequate capacity exists to serve the Project Site. Similarly, new development projects occurring in the vicinity of the Project Site would be required to coordinate with LASAN via a WWSI (and eventually a SCAR) to determine adequate sewer capacity. As part of their coordination with development projects, LASAN takes into consideration previously approved SCARs as part of their review. If system upgrades are required as a result of a given project's additional flow, arrangements would be made between the related project and LASAN to construct the necessary improvements. In addition, new development projects would be subject to LAMC Sections 64.11 and 64.12, which require approval of a sewer connection permit prior to connection to the sewer system. In order to connect to the sewer system, Related Projects in the City of Los Angeles would also be subject to payment of the City's Sewerage Facilities Charge. Payment of such fees would help offset the costs associated with infrastructure improvements that would be needed to accommodate wastewater generated by overall future growth. Furthermore, similar to the Flexibility Option, each Related Project would be required to comply

[36] Based on a straight-line interpolation of the projected flows for the Hyperion Sanitary Sewer System for 2020 and 2030 as follows: [(348 mgd – 323 mgd) / 10) x 5] + 323 = 335.5 mgd.

[37] Based on a straight-line interpolation of the projected flows for the HWRP for 2020 and 2030 as follows: [(275 mgd – 256 mgd) / 10) x 5] + 256 = 265.5 mgd.

with applicable water conservation programs, including the City of Los Angeles Green Building Code, which would reduce wastewater generation.

Similar to the Project, wastewater generated by the Flexibility Option would be conveyed via the existing wastewater conveyance systems within the Hyperion Sanitary Sewer System for treatment at the HWRP. As detailed for the Project, based on information from LASAN, the remaining capacity within the Hyperion Sanitary Sewer System is approximately 236 million gpd while the remaining capacity at the HWRP is 175 mgd. The estimated wastewater generation increase of the Flexibility Option and Related Projects combined would be 1.12 mgd, which represents approximately 0.5 percent of the current remaining capacity in the Hyperion Sanitary Sewer System and 0.6 percent of the current remaining capacity of the HWRP. The Related Projects would also be required to adhere to LASAN's annual wastewater flow increase allotment.

Based on these forecasts the Flexibility Option's increase in wastewater generation would be adequately accommodated within the Hyperion Service Area. In addition, LASAN analysis confirms that the Hyperion Treatment Plant has sufficient capacity and regulatory allotment for the Flexibility Option, combined with all Related Projects. **Therefore, impacts on the City's wastewater conveyance infrastructure would not be cumulatively considerable, and cumulative impacts would be less than significant.**

b) Mitigation Measures

Cumulative impacts related to wastewater for both the Project and Flexibility Option would be less than significant; no mitigation measures would be required.

c) Level of Significance After Mitigation

Cumulative impacts related to wastewater for both the Project and Flexibility Option were determined to be less than significant without mitigation.