4. ENVIRONMENTAL IMPACT ANALYSIS
K. UTILITIES AND SERVICE SYSTEMS
2. WASTEWATER

1. INTRODUCTION

This section addresses potential impacts on existing wastewater infrastructure and treatment facilities and analyzes whether sufficient capacity is available to serve Project demand. Consistency with relevant plans and regulations is also discussed. Information regarding sewer capacity and local infrastructure was provided in the Psomas Technical Report (Civil Engineering Report) for the Project, included as Appendix I-2 of this Draft EIR.[1]

2. ENVIRONMENTAL SETTING

a. Existing Conditions

(1) Wastewater Treatment and Infrastructure Serving the Project Site

Wastewater in the City of Los Angeles (City) is collected and conveyed via the Hyperion Treatment Conveyance System, described in further detail below, which is owned and operated by the Los Angeles Department of Public Works (LADPW).

The LADPW maintains the sewer collection and distribution system located throughout the City with sewer facilities that serve the uses at the Project Site. The Project Site is served by a City 20-inch vitrified clay pipe (VCP) main line along Flower Street and an existing 10-inch VCP main line along Figueroa Street. The City of Los Angeles' sewer wye maps indicate that the 10-inch sewer wye connections are available along Figueroa Street. The existing 112,748 sf of hotel development generates approximately 30,066 gallons per day (gpd) of wastewater (see Table 4.K.2-2, below, for a detailed breakdown including specific factors used).

(2) Wastewater Treatment

All wastewater generated within the City and LADPW's service area is transported through the Hyperion Treatment Conveyance System to one of four wastewater treatment plants owned and operated by LADPW: the Hyperion Treatment Plant (HTP) in Playa del Rey, Donald Tillman Water Reclamation Plant (DTWRP) in Van Nuys, Los Angeles-Glendale Water Reclamation Plant (LAGWRP) in Los Angeles, and Terminal Island Treatment Plant (TTP)in Los Angeles.[2]

The Hyperion Treatment Conveyance System includes treatment plants, outfalls, and numerous sewer connections and major interceptors. The current treatment capacity of the entire Hyperion Treatment Conveyance System is approximately 550 million gallons per day (mgd), which consists of 450 mgd at HTP,

[1] *Psomas, 1020 S. Figueroa Street Project, Environmental Impact Report – Grading & Drainage and Utilities, May 16 2016, included as Appendix I-2 of this Draft EIR.*

[2] *Since TTP only provides wastewater treatment to Terminal Island, in the Los Angeles Harbor area, further discussion of TTP is not provided.*

80 mgd at DTWRP, and 20 mgd at LAGWRP).[3] Hyperion Treatment Conveyance System has a current average dry weather flow of approximately 449 mgd (consisting of 362 mgd at HTP, 67 mgd at DTWRP, and 20 mgd at LAGWRP), leaving approximately 101 mgd of available treatment capacity.[4]

Wastewater generated within Downtown and central Los Angeles is conveyed to and treated at HTP. HTP serves a total of 600 square miles in the City and within other jurisdictions outside the City boundaries. HTP is the City's largest wastewater treatment facility and provides preliminary, primary, and secondary treatment processes, and also treats flows bypassed from the DTWRP and LAGWRP. As stated above, HTP has an existing treatment capacity of 450 mgd and an average dry weather flow of approximately 362 mgd, leaving approximately 88 mgd of treatment capacity available.[5]

Following the secondary treatment of wastewater, the majority of effluent from HTP is discharged into Santa Monica Bay while the remaining flows are conveyed to the West Basin Water Reclamation Plant for tertiary treatment and reuse as reclaimed water. HTP has two outfalls that presently discharge into the Santa Monica Bay (a one-mile outfall pipeline and five-mile outfall pipeline). Both outfalls are 12 feet in diameter. The one-mile outfall pipeline is 50 feet deep and is only used on an emergency basis. The five-mile outfall pipeline is 187 feet deep and is used to discharge secondary treated effluent on a daily basis. It was last inspected in November 2006.[6] Effluent to Santa Monica Bay from HTP has historically had effects on water quality. However, according to the City of Los Angeles Environmental Monitoring Division (EMD), since HTP's full secondary effluent discharge began in 1999 with a reduction in biosolids to Santa Monica Bay, water quality has improved with an increase in the number of species and the biodiversity in Santa Monica Bay. HTP effluent is required to meet the Regional Water Quality Control Board's (RWQCB) requirements for a recreational beneficial use, which imposes performance standards on water quality that are more stringent than the standards required under the Clean Water Act permit administered under the system's National Pollution Discharge Elimination System (NPDES) permit. Accordingly, HTP effluent to Santa Monica Bay is continually monitored by the EMD to ensure that it meets or exceeds prescribed standards. The Los Angeles County Department of Health Services also monitors flows into the Santa Monica Bay.

(a) Integrated Resources Plan Improvements

In November 2006, the City of Los Angeles Integrated Resources Plan (IRP), developed by the LADPW, and its corresponding Final EIR, were approved by the Los Angeles City Council.[7] The IRP was developed to incorporate greater efficiency for future, water, wastewater, and runoff management in the City and surrounding service areas. It is a multi-phase program that will result in the establishment of Citywide, regional, departmental and public and private partnerships. The IRP accounts for projected needs and sets forth improvements and upgrades to wastewater systems, recycled water systems, and runoff management programs in the City through the year 2020. The IRP includes wastewater flow projections based on

[3] *City of Los Angeles Department of Public Works Bureau of Sanitation, "Customer Care Center Wastewater Facts and Figures, https://www.lacitysan.org/wastewater/factsfigures accessed March 21. 2016.*

[4] *City of Los Angeles Department of Public Works Bureau of Sanitation, "Customer Care Center Wastewater Facts and Figures, https://www.lacitysan.orgwastewater/factsfigures.htm, accessed March 21. 2016.*

[5] *Ibid.*

[6] *City of Los Angeles Department of Public Works. "Hyperion Treatment Plant 5-Mile Outfall Inspection and Diversion to 1-Mile Outfall Fact Sheet, November 2006";http://www.lasewers.org/treatment_plants/hyperion/5-mile-outfall/hyperion_outfall_inspection_facts.pdf, accessed March 21, 2016.*

[7] *City of Los Angeles Department of Public Works Bureau of Sanitation, IRP, Integrated Resources Program, City of Los Angeles, 2006.*

population projections from the Southern California Association of Governments (SCAG). As shown in **Table 4.K.2-1**, *Population and Average Dry Weather Flow Projections for Hyperion Treatment Conveyance System Service Area*, the forecasted population for the Hyperion Treatment Conveyance System service area in 2010 was approximately 4,485,054 residents, approximately 4,641,928 residents in 2015, and approximately 4,854,483 residents in 2020. The wastewater flow projections account for planned levels of water conservation and assumed levels of collection system maintenance and rehabilitation. The average dry weather flow in 2010 was estimated to be approximately 477.3 mgd, in 2015 approximately 492.3 mgd, and in 2020 approximately 511.5 mgd, with each amount falling within the current system-wide treatment capacity of 550 mgd. It is important to note that the projections used for 2015 and 2020 are from 2006. As mentioned previously, the Hyperion Treatment Conveyance System received a dry weather flow of 449 mgd in 2015, which allows the Hyperion Treatment Conveyance System to have a much larger remaining capacity than anticipated in 2006.

Table 4.K.2-1

Population and Average Dry Weather Flow Projections for Hyperion Treatment Conveyance System Service Area

	2000	2005	2010	2015	2020
SCAG Population	4,138,567	4,331,109	4,485,054	4,641,928	4,854,483
Average Dry Weather Flow (in mgd)	443.1	461.8	477.3	492.3	511.5

Source: City of Los Angeles Department of Public Works Bureau of Sanitation. "City of Los Angeles Integrated Resources Plan", December 2006.

Despite the current and projected availability of system-wide treatment capacity, the IRP includes several proposals for improvements, additions, and expansions within the Hyperion Treatment Conveyance System to maintain adequate service over time. As HTP is connected with the Hyperion Treatment Conveyance System and its components including other treatment plants (DTWRP, LAGWRP, and TTP), connecting outfalls, and numerous sewer connections and major interceptors, current and future implementation of the IRP and its corresponding expansion projects will support continued availability of capacity at HTP.

Certification of the Final EIR for the IRP included adoption of the "Approved Alternative" (Alternative 4). Alternative 4 is intended to increase wastewater collection and treatment capacity, water reclamation storage and beneficial use, water conservation, and runoff management opportunities. As part of the adopted IRP, proposed improvements include the following:[8]

- Expansion of HTP biosolids handling capacity (e.g., new digesters and truck loading facility);
- Addition of secondary clarifiers at HTP to meet existing treatment requirements;
- Expansion and upgrade of DTWRP capacity to 100 mgd with advanced treatment;
- Addition of 60 million gallon wastewater storage at DTWRP;

[8] *City of Los Angeles Department of Public Works Bureau of Sanitation and Department of Water and Power, "City of Los Angeles Integrated Resources Plan, Facilities Plan, Volume 5: Adaptive Capital Improvement Program," December 2006.*

- Construction of a five million gallon diurnal storage for wastewater and a five million gallon recycled water storage at LAGWRP, and maintain the option to upgrade LAGWRP to advance treatment;
- Construction of new Glendale Burbank Interceptor Sewer (GBIS);[9]
- Construction of new North East Interceptor Sewer (NEIS) Phase 2; and
- Construction Valley Spring Lane Interceptor Sewer (VSLIS).

Implementation of the IRP would increase treatment capacity in the Hyperion Treatment Conveyance System by 20 mgd, for a total of 570 mgd (DTWRP would have a new capacity of 100 mgd, while HTP's capacity of 450 mgd and LAGWRP's capacity of 20 mgd would stay the same). Adoption of the IRP also includes the Adaptive Capital Improvement Program (CIP) which includes the anticipated capital, operation and maintenance, project timing, and implementation strategy for tracking and monitoring triggers. As discussed in the IRP and CIP and based on LADPW information, projects have been completed within all the treatment plants and sewer lines and additional on-going improvements have been proposed to continually provide services and meet the wastewater needs of the City.

With implementation of the IRP, LADPW and Bureau of Sanitation expects to provide ample wastewater treatment services to the City of Los Angeles and contracting cities through 2020. Furthermore, projections show that adequate wastewater treatment services are expected to be available through 2025.[10]

b. Regulatory Framework

(1) City of Los Angeles General Plan Framework

Chapter 9, Infrastructure and Public Services, of the City's General Plan Framework 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.[11]

(2) City of Los Angeles Municipal Code

The City of Los Angeles Municipal Code (LAMC) includes regulations that allow the City to assure available sewer capacity for new projects and fees for improvements to the infrastructure system. LAMC Section 64.15 requires that the City perform a Sewer Capacity Availability Review (SCAR) when any person seeks a sewer permit to connect a property to the City's sewer collection 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 an analysis of the existing sewer collection system to determine if there is adequate capacity existing in the sewer collection system to safely convey the newly generated sewage to the appropriate sewage treatment plant.

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[9] *The GBIS development process had been delayed due to decertification of its EIR. The Los Angeles City Council certified a new EIR and reapproved the project on November 9, 2010. Council File # 10-2389*

[10] *City of Los Angeles Department of Public Works Bureau of Sanitation and Department of Water and Power, "City of Los Angeles Integrated Resources Plan, Planning for Wastewater, Recycled Water and Stormwater Management, A Visionary Strategy for the Right Facilities, in the Right Places, at the Right Time - Executive Summary", December 2006.*

[11] *City of Los Angeles, General Plan Framework Element, Chapter 9: Infrastructure and Public Services – Wastewater; Re-Adopted by Los Angeles City Council on August 8, 2001.*

LAMC Sections 64.11 and 64.12 require the payment of fees for new connections to the 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 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.

In addition, 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. SO06-0691). 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 planning period shall not exceed one-half the pipe diameter.[12] (D), i.e. depth to diameter ratio of d/D.

(3) City of Los Angeles Sewer System Management Plan

The City's Sewer System Management Plan (SSMP) is intended to provide a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer system.[13] It is intended to help reduce and prevent Sanitary Sewer Overflows (SSOs), as well as mitigate any SSOs that do occur. The SSMP establishes design and performance standards for the City's sewer system. It also provides procedures for evaluating the system and providing capacity assurance. It establishes a standard of d/D of 0.75 or greater for identifying sewers in need of replacement or relief.

The three sanitary sewer systems in the City are divided into 220 secondary sewer basins. The basin plans identify deficiencies in the system, and recommended renewal projects are prioritized and included in the City's Wastewater Capital Improvement Program (WCIP). Capacity enhancement projects have been completed to provide additional sewer capacity in locations that overflowed during heavy storm events. Over $3 billion in wastewater capital expenditures are planned for Fiscal Years 2008/09 through 2017/18 including approximately $2 billion for the collection system.

(4) Green Building Code and Water Efficiency Requirements Ordinance

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 require the use of water conservation features in new developments. By using less water for the performance of population activities, residual after-use wastewater is reduced thus lowering the requirements for sewage conveyance and treatment. The Green Building Code, Ordinance No. 181480, is implemented during site plan review and provides standards and a mechanism for evaluating projects for their water conservation features. The Water Efficiency Requirements Ordinance, City Ordinance No. 180822, effective Dec. 1, 2009, requires the

[12] *City of Los Angeles 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.*

[13] *City of Los Angeles LA Sanitation (LASAN), Sewer System Management Plan, Hyperion Sanitary Sewer System, February 2015.*

use of efficient water fixtures, appliances and cooling towers. Please refer to Section 4.K.1, *Water Supply*, for a discussion of the recent drought-related orders that promote water conservation.

3. ENVIRONMENTAL IMPACTS

a. Methodology

The wastewater generation of the Project was estimated by the Los Angeles Bureau of Sanitation as part of the preparation of their Sewer Capacity Availability Review (SCAR) report. The Project's estimated increase in wastewater flow was then compared to the existing conditions to assess the capacity of the existing sewer system and the ability of the system to accommodate the additional flows. The preparation of a SCAR report that evaluates the capacity of the wastewater conveyance system includes, but is not limited to, the following steps: (1) Research and trace sewer flow levels upstream and downstream of the point of connection; (2) Conduct field surveys to observe and record flow levels. Coordinate with maintenance staff to inspect sewer maintenance holes and conduct smoke and dye testing if necessary; (3) Review recent gauging data and in some cases closed circuit TV inspection (CCTV) videos; (4) Perform gauging and CCTV inspection if recent data is not available; (5) Research the project location area for other recently approved SCARs to evaluate the cumulative impact of all known SCARs on the sewer system; and (6) Calculate the impact of the proposed additional sewage discharge on the existing sewer system as it will be impacted from the approved SCARs. This includes tracing the cumulative impacts of all known SCARs, along with the subject SCAR, downstream to ensure sufficient capacity exist throughout the system.

In order to evaluate treatment capacity, the Project's estimated wastewater generation and projected average dry weather flow is compared with the available treatment capacity within the Hyperion Treatment Conveyance System for 2015 and 2020. Cumulative wastewater generation is also compared with the available capacity of the Hyperion Treatment Conveyance System using the average dry weather flow. In addition, in response to the SCAR application, the applicant received letters from the Bureau of Engineering, dated January 15, 2016, March 11, 2016, and updated March 22, 2016, indicating that hydraulic capacity exists in the system to accommodate the Project.[14] The Project-related wastewater generation is based on the Bureau's generation factors, which are lower than those provided in the *Los Angeles CEQA Thresholds Guide*. As such, the estimated Project-related wastewater generation presented in this section is considered conservative.

b. Thresholds of Significance

Appendix G of the CEQA Guidelines provides a set of screening questions that address impacts with regard to wastewater. These questions are as follows:

Would the project:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?
- Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which would cause significant environmental effects?

[14] *Refer to Appendix 1 of the Civil Engineering Report, included in Appendix I-2 of this Draft EIR.*

- 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?

In the context of these questions from the CEQA Guidelines, the *City of L.A. CEQA Thresholds Guide (2006)* states that a project would result in a significant wastewater impact if:

WW-1 The project would 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

WW-2 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 or General Plan and its elements.

c. Project Characteristics

Under current schematic drawings, the Project would provide a 10-inch sewer connection from the Hotel Tower in Phase 1 and Residential Tower in Phase 2. This line would connect to the existing 10-inch sewer main line along Figueroa Street. Similarly, a 10-inch sewer connection from the Residential Tower in Phase 1 is proposed to connect to the existing 20-inch sewer main line along Flower Street.

d. Project Impacts

(1) Construction

Threshold WW-1: The project would result in a significant wastewater impact if the project would 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.

Impact Statement WW-1A: *The Project would generate a negligible amount of wastewater during construction. Therefore, construction impacts on wastewater would be less than significant.*

Construction of the proposed Project would include all necessary on- and off-site sewer pipe improvements and connections to adequately connect to the City's existing sewer system. Construction relative to the wastewater system for the Project would occur at the Project site and immediate vicinity. The design of these connections would be developed by a registered engineer and approved by the City of Los Angeles Bureau of Engineering. In the event that, during development, City wastewater lines were found to be substandard or in deteriorated condition, the applicant would be required to make necessary improvements to achieve adequate service, under City of Los Angeles Building and Safety Code and LADPW requirements. All necessary improvements would be verified through the permit approval process of obtaining a sewer capacity and connection permit from the City.

During construction of the proposed Project, a negligible amount of wastewater would be generated by construction workers. It is anticipated that portable toilets would be provided by a private company and the waste disposed of off-site. Wastewater generation from construction activities is not anticipated to cause a

measurable increase in wastewater flows at a point where, and at a time when, a sewer's capacity is already constrained or that would cause a sewer's capacity to become constrained. In addition, construction is not anticipated to generate wastewater flows that 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 or General Plan. Therefore, construction impacts to the local wastewater conveyance and treatment system would be less than significant.

(2) Operation

Impact Statement WW-1B: *The Project would generate an increase in wastewater that could be accommodated in the existing system. The existing wastewater system is not constrained or at capacity and there is sufficient capacity to accommodate the Project. Therefore, impacts on wastewater during operation would be less than significant.*

The Project Site would continue to be served by existing City water and utility lines, including the 20-inch VCP main line in Flower Street and the 10-inch VCP main line in Figueroa Street. As indicated in **Table 4.K.2-2,** *Wastewater Generated During Operation*, the Project would result in an estimated average daily wastewater generation of approximately 217,534 gpd. However, subtracting the existing generation of 19,287 gpd, the Project would result in a net increase of 198,247 gpd of wastewater generation over existing conditions.[15]

The proposed increase of 198,247 gpd that would result from Project implementation would represent 0.2 percent of HTP's total remaining capacity of 88 mgd. Thus, given the amount of wastewater generated by the proposed Project, existing wastewater treatment capacity, and future wastewater treatment capacity set forth by the IRP, adequate wastewater capacity would be available to serve the proposed Project.

Although recent growth in Downtown Los Angeles area has concentrated demand on local lines, the demand for wastewater conveyance and treatment has declined in recent years throughout the HTP Conveyance System. The capacity of sewer lines to serve the Project, specifically the 10-inch sewer along Figueroa Street and the 20-inch sewer along Flower Street, was validated through letters responding to a SCAR application that were received from the Bureau of Engineering, January 15, 2016, March 11, 2016, and March 22, 2016. The letters each indicate that hydraulic capacity exists in the system to accommodate the Project.[16] The adequacy of capacity will need to be verified with the Bureau of Engineering prior to issuance of a sewer connection permit. Furthermore, a sewer facilities charge will be required when the building permit application for the Project is filed. Based on the above, the Project would not result in 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. Therefore, impacts related to wastewater treatment and infrastructure would be less than significant.

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[15] *The Applicant received a letter from the Bureau of Engineering dated January 15, 2016, March 11, 2016, and updated March 22, 2016, indicating that hydraulic capacity exists in the system to accommodate the Project. The numbers used in the SCAR resulted in an estimated generation of 217,534 gpd. However, the SCAR is valid for 180 days, until July 13, 2016, September 7, 2016, and September 18, 2016, respectively. Thus, a revised SCAR will be submitted to the City at the appropriate time.*

[16] *Refer to Appendix 1 of the Civil Engineering Report, included in Appendix I-2 of this Draft EIR.*

Table 4.K.2-2

Wastewater Generated During Operation

Land Use	Quantity (units/sf/ seats/room)	Generation Factor[a]		Wastewater Generated (gpd)
Proposed Uses				
Residential Studio	308	75	gpd/unit	23,100
Residential One Bedroom	167	110	gpd/unit	18,370
Residential Two Bedroom	159	150	gpd/unit	23,850
Residential Three Bedroom and Larger	16	200	gpd/unit	3,200
Retail	40,000	25	gpd/1,000 sf	1,000
Restaurant (Full Service Indoor Seat)	450	30	gpd/seat	13,500
Hotel (Guest Rooms Only)	300	120	gpd/room	36,000
Banquet Room/Ballroom	16,000	350	gpd/1,000 sf	5,600
Swimming Pools[c]	91,413	1	gpd	91,413
Industrial Discharge[d]	1,500	100	gpd	1,500
Total				**217,534**
Existing Uses				
Hotel, hotel amenities, surrounding parking and landscaping[e]				19,287
Net Increase (Proposed – Existing)				**198,247**

Notes: units = dwelling units; sf = square feet; gpd = gallons per day

[a] *Generation factors are obtained from the Sewer Capacity Availability Request (SCAR), processed on January 15, 2016, March 11, 2016, and March 22, 2016 (see Appendix I-2, Civil Engineering Report, Appendix 1). The calculations in the SCAR reports were based on information regarding the Project that were refined during preparation of the Water Supply Assessment (WSA). The WSAs calculation of water demand pursuant to the Bureau of Sanitation's wastewater generation factors as reported in Section 4.K.1, Water Supply, vary slightly from the values reported here. Most notably, the SCARs treat the Project's 1-bedroom loft units as bachelor units, and the SCARs include a large wastewater generation for swimming pools, whereas the WSA uses a refined characterization of open space and amenity areas, inclusive of the pools. The SCAR methodology results in a higher estimate of water demand/wastewater generation than the WSA, and is therefore more conservative than the more refined WSA analysis. The SCAR reports included are for EIR purposes; and will be recalculated at the time of permitting and construction.*

[b] *The SCAR was based on 16 3-Bedroom units with a calculation of 4 extra Bedrooms at 40 gpd per day. The weighted average for the 3 Bedroom units with the extra Bedroom is 200 gpd per day*

c *Swimming pool discharge is based on a total draining of the pools for purposes of identifying maximum load on the sewerage system. On a prorated basis the daily wastewater sent to the Hyperion treatment plant would be less.*

[d] *The generation rate for Industrial Discharge is marked as 100 gpd, as this is how the SCAR model inputs industrial discharge for pools. The wastewater generated provided by the SCAR model and by manual calculation is 1,500 gpd.*

[e] *Information provided by the LADWP WSA, April 2016. The existing water demand is based on the LADWP billing data (average of August 2014-January 2016) and includes water use for the existing hotel, hotel amenities, parking and landscaping. Credit for existing uses has been incorporated into the analysis to reflect the increase in sewage generation that is associated with the Project. The total amount without the discount would be considered in evaluating impacts on local infrastructure, per the presentation in the SCAR reports.*

Source: PCR Services Corporation, 2016.

Threshold WW-2: The Project would result in a significant wastewater impact if 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 or General Plan and its elements.

Impact Statement WW-2: *The Project would not generate wastewater flows in an amount that would substantially or incrementally exceed the future scheduled capacity of the system. Therefore, wastewater impacts during operation would be less than significant.*

As shown in Table 4.K.2-2, the proposed increase of 198,247 gpd that would result from Project implementation would represent 0.2 percent of HTP's total remaining capacity of 88 mgd. Thus, given the amount of wastewater generated by the proposed Project, existing wastewater treatment capacity, and future wastewater treatment capacity set forth by the IRP, adequate wastewater capacity would be available to serve the proposed Project. Based on the above, the Project would not result in 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. Therefore, impacts related to wastewater treatment and infrastructure would be less than significant.

The wastewater generated by the Project would ultimately be conveyed via the Hyperion Treatment Conveyance System to HTP. The average dry weather flow for the Hyperion Treatment Conveyance System service area is projected to be approximately 492.3 mgd in 2015 and 511.5 mgd in 2020, though, as previously mentioned, these 2006 projections are outdated and do not take into account water conservation measures that have taken place in the past decade. These forecasted increases in wastewater flows without the proposed Project are within the current Hyperion Treatment Conveyance System capacity of 550 mgd. According to these projections and based on existing capacity, the Hyperion Treatment Conveyance System would still have an excess capacity of 39 mgd (or seven percent) in 2020.

The Project's wastewater generation would contribute an average wastewater flow of 217,534 gpd and a peak flow of 574,290 gpd (or 2.64 times the average flow), based on the estimate shown in Table 4.K.2-2. Because the wastewater generated within Downtown and central Los Angeles is conveyed to and treated at HTP, the Project would not be served by much of the broader Hyperion Conveyance System. The average dry weather flow for HTP, as projected by IRP, would be 435 mgd.[17] The net increase in wastewater that would result from Project implementation could be accommodated within the projected available capacity of the HTP for 2020 (15 mgd). The net increase would not significantly impact the projected average dry weather flow for 2020. In addition, the wastewater generation estimate uses standard DWP generation rates and does not account for reductions in wastewater that would occur with compliance with the City's recommended water conservation measures presented in Section 4.K.1, Water Supply, of this EIR. Furthermore, development of the Project is consistent with the planned growth for the site under current zoning regulations. Therefore, development of the Project Site is within the anticipated growth projections taken into account by service providers such as LADPW. As such, the increase in wastewater flows generated by the proposed Project would have a less than significant impact on wastewater treatment facilities.

[17] *City of Los Angeles Department of Public Works Bureau of Sanitation. "City of Los Angeles Integrated Resources Plan Executive Summary, 2006."*

In addition, effluent conveyed to HTP would not have a significant effect on the Santa Monica Bay as HTP continually monitors all effluent, currently meets applicable water quality standards, and is required to comply with water quality standards established for beneficial uses.

Based on the above, the Project would not generate wastewater flows in an amount that would substantially or incrementally exceed the future scheduled capacity of the system. Therefore, wastewater impacts during operation would be less than significant.

e. Cumulative Impacts

Chapter 3, General Description of Environmental Setting, of this Draft EIR identifies 116 cumulative projects located in the City of Los Angeles in the vicinity of the Project Site that would be treated at HTP. These 116 cumulative projects would cumulatively contribute, in conjunction with the proposed Project, to the wastewater generation in the Project area.

As shown in **Table 4.K.2-3,** *Estimated Cumulative Wastewater Generation*, the estimated wastewater generation associated with cumulative projects on average is approximately 7,712,443 gpd with a peak flow of 20,365,849 gpd. The proposed Project would contribute an additional 198,247 gpd with a peak flow anticipated to be 523,372 gpd. The estimated generation for the proposed Project and the cumulative projects would be a combined total of approximately 7,910,690 gpd with a cumulative peak flow estimated to be approximately 20,884,221 gpd as shown in Table 4.K.2-3.

As discussed above, the HTP has a current treatment capacity of 450 mgd and a current average dry weather flow of approximately 362 mgd. In 2020, the average dry weather flow of the HTP is projected to be 435 mgd. For 2020, the cumulative wastewater flows would increase the projected average dry weather flow to 442.9 mgd. This is below the 450 mgd treatment capacity of the HTP. The average dry weather flow projections in conjunction with the cumulative wastewater estimate from cumulative projects represents a conservative analysis as the average dry weather flow projections already take into account future population growth, including growth such as that represented by cumulative projects. Furthermore, as with the proposed Project, these estimates do not account for reductions in wastewater generation that would occur with implementation of conservation measures. Therefore cumulative impacts associated with wastewater treatment would be less than significant.

HTP currently meets applicable water quality standards as set forth by the NPDES. As such, the cumulative Projects' wastewater effluent discharged to the Santa Monica Bay would have a less than significant impact on water quality. Implementation of the IRP, upgrades in the advanced treatment processes at HTP, and continual monitoring by the EMD would ensure that effluent discharged into Santa Monica Bay are within applicable limits. Thus, cumulative impacts on Santa Monica Bay water quality would be less than significant and the proposed Project's contribution to the impact would not be cumulatively considerable.

As with the Project, all cumulative projects in the City of Los Angeles would be subject to the provisions of the Municipal Code requiring provision of on-site infrastructure, improvements to address local capacity issues and payment of fees for future sewerage replacement and/or relief improvements. In particular, cumulative projects would be subject to LAMC Section 64.15 requiring a determination by LADPW that there is allotted sewer capacity available for each project. The City would continue to review new development

Table 4.K.2-3

Estimated Cumulative Wastewater Generation

Land Uses	Quantity (units/square feet)	Generation Factor[a]		Average Daily Wastewater Generated (gpd)	Peak Wastewater Generation (gpd)[b]
Proposed Use					
Cumulative Projects					
Residential[c]	30,417	150	gpd/unit	4,562,550	12,045,132
Retail (Less than 100,000 sf)	1,021,474	25	gpd/1,000 sf	25,537	67,418
Retail (Greater than 100,000 sf)	1,164,582	50	gpd/1,000 sf	58,229	153,725
Restaurant[d]	23,316	30	gpd/seat	699,480	1,846,627
Hotel	4,576	120	gpd/room	549,120	1,449,677
Office[e]	3,706,891	170	gpd/1,000 sf	630,171	1,663,653
School[f]	23,246	10	gpd/student	232,460	613,695
Child Care[g]	499	9	gpd/child	4,491	11,856
Theatre	2,686	3	gpd/seat	8,058	21,273
Bar[h]	13,619	720	gpd/1,000 sf	9,806	25,888
Assisted Living	55	70	gpd/bed	3,850	10,164
Museum	17,600	30	gpd/1,000 sf	528	1,394
Gym	8,000	650	gpd/1,000 sf	5,200	13,728
Event Center	72,000	3	gpd/seat	216,000	570,240
Parking[j]	35,348,132	20	gpd/1,000 sf	706,963	1,866,381
Total				**7,712,443**	**20,365,849**
Proposed Project (net increase)				**198,247**	**523,372**
Cumulative Wastewater Generation				**7,910,690**	**20,884,221**

Notes:

[a] *Wastewater generation rates are based on City of Los Angeles Department of Public Works, Sewage Facilities Charge, Sewage Generation Factor for Residential and Commercial Categories. Rates table included in Appendix K-2 of this Draft EIR.*

[b] *Peak wastewater flow is calculated by multiplying the average flow by a peak flow factor of 2.64.*

[c] *Rates for residential wastewater generation vary depending on unit type and size. It was assumed that all residential projects would be multi-family with an average size of two bedrooms.*

[d] *Restaurant wastewater generation rates vary from 25 to 30 gpd per seat. 30 gpd per seat was used here to provide a conservative assumption. It was assumed that there would be 25 sq.ft. per customer, inclusive of kitchen, wait stations etc. Project 23 of the Cumulative Projects Table contains two Retail/Restaurant uses of 275,000 sf and 27,765 sf, respectively. These uses were included in the quantity calculations for restaurant rather than retail for a more conservative estimate of the cumulative wastewater generation. Coffee shops have also been included in the calculations for restaurant for consistency with Water Calculations, found in Section 4.K.1, Water Supply, of this Draft EIR. The restaurant generation factor allows for a more conservative calculation of the wastewater generated.*

[e] *There was an additional 66 employees listed on top of the gross square footage for Office Uses. 30 sq. ft per employee was used here to provide a conservative assumption. The generation factor for offices with cooling towers was used.*

[f] *The School generation factor is an average of Junior and High School factors.*

[g] *Child Care size was provided in sf so 30 sq. ft per student was used to provide a conservative assumption.*

[h] *The Bar generation factor uses Bar: Cocktail, Public Table Area factors.*

[i] *Wastewater generation for parking associated with the various cumulative projects is subject to specific development programs of those projects and is somewhat speculative. Parking generation rates were taken from the City of Los Angeles Summary of Parking Regulations. To conservatively account for parking the following rough assumptions have been made. It is assumed that new/additional parking, beyond replacement parking and use of existing parking facilities would be as follows: 2 spaces per residential unit (as stated above, the average size of two bedrooms was used); 1 space per 250 sf of retail; 1 space per 100 sf of restaurant; 1 space per hotel room (one consistent rate is used for all hotel units for a more conservative estimation); 1 space per 500 sf of office; 1 space per 5 seats for schools. Bar and Coffee Shop are included under Restaurant Uses. Child Care is included under School Uses. 1 space per 5 seats for Theatre and Event Center. 0.2 spaces per bed for Assisted Living uses. Gym and Museum are assumed to have 1 space per 100 sf. 350 sf of space has been assumed for each parking space.*

Source: PCR Services Corporation, 2016

projects to ensure that sewer capacity is available prior to the on-set of construction. As noted in the methodology section above, the preparation of SCARs takes into account other recently approved SCARs to evaluate the cumulative impact of all known SCARs on the sewer system. Therefore, infrastructure for new development would be sufficient.

4. MITIGATION MEASURES

With the incorporation of Project characteristics and compliance with applicable City requirements regarding wastewater, potential impacts on the wastewater system would be less than significant. Therefore, no mitigation measures are required.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Potential impacts with regard to wastewater as a result of implementation of the Project would be less than significant and no mitigation measures would be required.