4.13.3 Wastewater Generation

4.13.3.1 Introduction

The wastewater analysis addresses sanitary wastewater generation from passenger-related facilities associated with the SPAS alternatives. Water use and supply is addressed in Section 4.13.4, *Water Supply*, and storm water is addressed in Section 4.8, *Hydrology/Water Quality*.

4.13.3.2 Methodology

This analysis compares the wastewater generation projected for the SPAS alternatives to baseline (2010) wastewater generation, and addresses existing and future wastewater treatment capacity. Although the future passenger activity level associated with each of the SPAS alternatives would be the same (i.e., 78.9 million annual passengers [MAP] in 2025), wastewater generation is calculated by applying a generation factor to a building area, as described below. For purposes of this analysis, therefore, wastewater generation is estimated for passenger-related facilities (i.e., terminals, passenger processing, and passenger-serving ground access facilities) associated with each of the alternatives.

Total wastewater generation for existing and proposed passenger-related facilities was calculated for baseline conditions and all nine SPAS alternatives. The square footage of existing and proposed passenger-related facilities was used for calculating wastewater generation. Wastewater generation factors are typically provided in terms of wastewater generation (in gallons per day [gpd] or million gallons per day [mgd]) per unit (e.g., square foot of building space). For this analysis, wastewater generation was projected by multiplying the factor by the appropriate passenger-related facility square footage. The data regarding baseline wastewater generation in the region and at LAX is from the 2010 timeframe.

For purposes of this analysis, passenger-related facilities include terminals and/or concourses, and the building components of ground access facilities, such as the Consolidated Rental Car Facility (CONRAC) and Intermodal Transportation Center (ITC) customer service areas, the Intermodal Transportation Facility (ITF) passenger service area, and the Ground Transportation Center (GTC) passenger processing piers. Since passengers engage in the same types of activities as retail visitors (e.g., food service, sanitary, and cleaning) and, consequently, generate similar quantities of wastewater on average per square foot of building area, this analysis uses the retail factor for wastewater generation that is included in the *L.A. CEQA Thresholds Guide*.[776] The wastewater generation factor used in this analysis is 0.08 gpd and represents average usage for this land use type.

As described in the Chapter 2, *Project Description*, under each of the SPAS alternatives, some existing off-airport uses would be acquired to accommodate the proposed improvements (see Section 2.3.1.11, *Acquisition*, in Chapter 2, *Project Description*). With this acquisition, wastewater generation associated with these uses would be eliminated. This reduction in wastewater generation was not calculated as part of this analysis. Therefore, the projected wastewater generation associated with each SPAS alternative is a conservative estimate; wastewater generation would be lower if the methodology accounted for the reduction associated with acquisition.

The total wastewater generated by each of the SPAS alternatives was projected to the horizon year of 2025. To determine whether the increase in wastewater generation associated with the SPAS alternatives would be significant, projected wastewater flows were compared to the existing capacity at the Hyperion Treatment Plant (HTP), which treats sanitary wastewater generated by activities at LAX. Comparisons to anticipated future capacity are also provided.

776 City of Los Angeles, L.A. CEQA Thresholds Guide, Your Resource for Preparing CEQA Analysis in Los Angeles, 2006, Exhibit M.2-12.

4.13.3.3 Existing Conditions

Wastewater Treatment

The City of Los Angeles operates four wastewater treatment facilities that provide sewage treatment for most of the City's incorporated area and for several other cities and unincorporated areas in the Los Angeles region. The primary elements of the City's existing wastewater system are two wastewater treatment plants, two water reclamation plants,[777] approximately 6,500 miles of major interceptor and mainline sewers, and 46 pumping plants.[778]

The Hyperion Service Area (HSA) includes HTP, Donald C. Tillman Water Reclamation Plant (DCTWRP), and Los Angeles-Glendale Water Reclamation Plant (LAGWRP), and has a combined capacity of 550 mgd. Historical data from 2002 to June 2011 show a significant decrease in wastewater flow within the HSA (see **Figure 4.13.3-1**). This may be attributed to a number of factors, such as water conservation, the economic downturn, and Los Angeles Department of Water and Power (LADWP) rate adjustments. In 2010, the wastewater flow for the HSA was measured at 350 mgd.[779]

As noted above, the HTP treats sanitary wastewater generated by activities at LAX. HTP is located adjacent to the southwest boundary of LAX, approximately two miles southwest of the Central Terminal Area (CTA). Presently, HTP has a design capacity of 450 mgd. Currently, there are no plans to expand the design capacity of HTP before 2025.[780] In 2010, the wastewater flow at HTP was 299 mgd.[781] Therefore, under baseline conditions, there is substantial available capacity at HTP and within the HSA.

Policy 9.2.3 in the *Los Angeles General Plan Framework* calls for wastewater treatment plant capacity to be developed as necessary.[782] In response to this requirement, the City of Los Angeles developed the Integrated Resources Plan (IRP), which was adopted by the City Council in 2006. The IRP integrated a future vision of wastewater, water, and urban runoff management by addressing all of the water-related needs of the City through the year 2020. Projected needs for wastewater facilities were compared to the existing capabilities of the facilities to determine projected shortfalls. Using a public involvement process, a set of alternatives was selected that addressed the shortfall and met the City's future wastewater treatment needs. Alternatives that the City of Los Angeles evaluated for meeting its projected shortfall included combinations of expanding existing wastewater treatment facilities, installing new sewer lines, conservation of potable water and increased use of recycled water, and infiltration/inflow reduction.[783] The adopted alternative for the IRP relies upon the expansion of DCTWRP, substantial improvements to LAGWRP, and minor improvements to HTP, among other strategies. The improvements to HTP would enhance the efficiency of the facility but would not expand the wastewater treatment capacity. In January

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777 Water reclamation plants treat wastewater to a higher level so that it can be reused (as reclaimed water) for irrigation and industrial purposes.

778 City of Los Angeles, Department of Public Works, Bureau of Sanitation and Department of Water and Power, IRP 5-Year Review Draft Documents for Stakeholder Review, January 2012, Available: http://www.lacitysan.org/irp/documents/I5R_DRAFT_Documents-v2.pdf, accessed March 7, 2012.

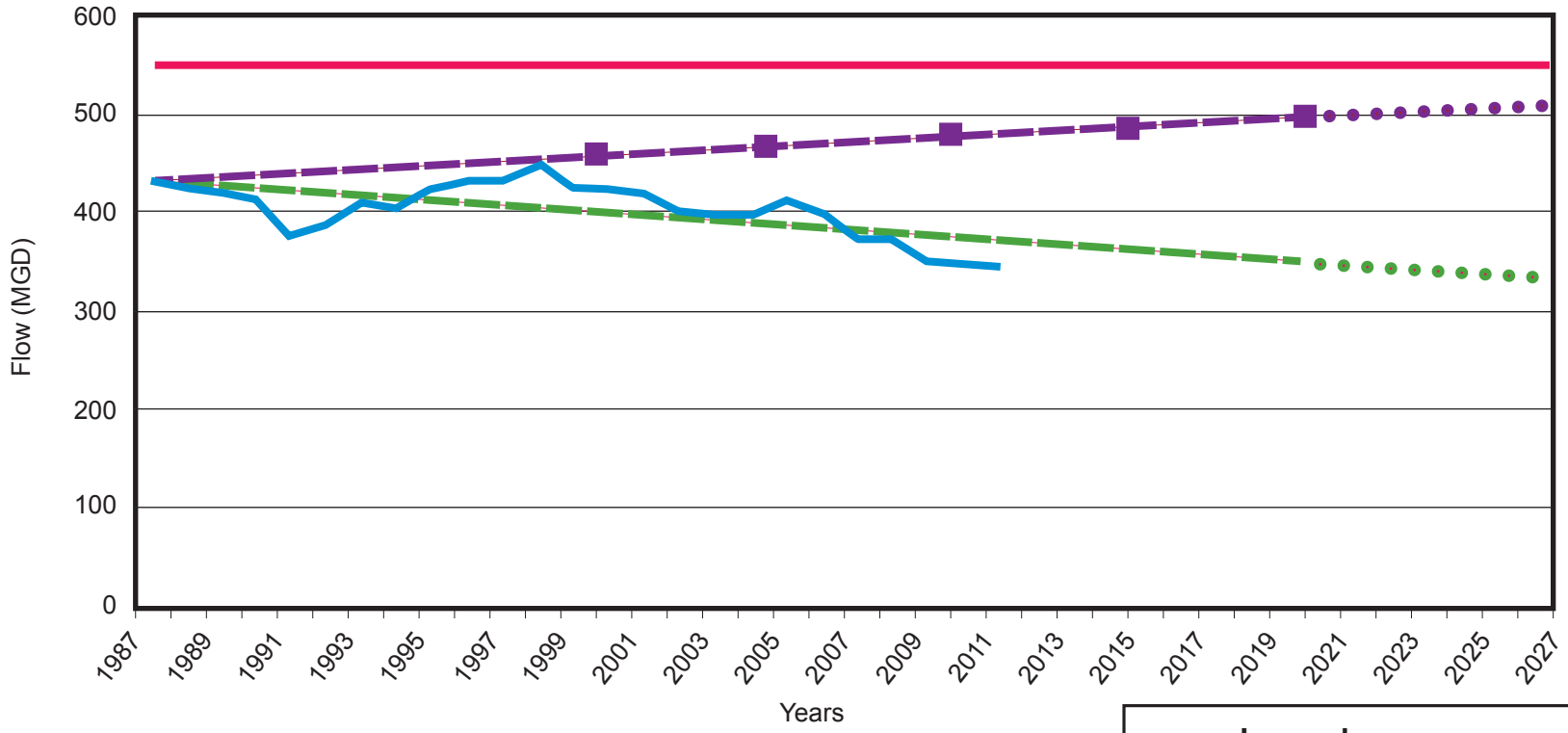
779 City of Los Angeles, Department of Public Works, Bureau of Sanitation and Department of Water and Power, IRP 5-Year Review Draft Documents for Stakeholder Review, January 2012, Available: http://www.lacitysan.org/irp/documents/I5R_DRAFT_Documents-v2.pdf, accessed March 7, 2012.

780 City of Los Angeles, Department of Public Works, Bureau of Sanitation and Department of Water and Power, IRP 5-Year Review Draft Documents for Stakeholder Review, January 2012, Available: http://www.lacitysan.org/irp/documents/I5R_DRAFT_Documents-v2.pdf, accessed March 7, 2012.

781 Patel, Dipak, Process Engineer, Hyperion Service Plant, Personal Communication, April 23, 2012.

782 City of Los Angeles, Department of City Planning, Los Angeles Citywide General Plan Framework Draft EIR, prepared by Envicom Corporation, January 19, 1995.

783 City of Los Angeles, Department of Public Works, Bureau of Sanitation and Department of Water and Power, City of Los Angeles Integrated Resources Plan Executive Summary, December 2006.



Source: 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 Review, January 2012, with 2020-2025 Projections by CDM Smith, 2012.

LAX Specific Plan Amendment Study Draft EIR	Hyperion Service Area Actual, Trendline, and Projected Flows	Figure 4.13.3-1

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2012, the Bureau of Sanitation and LADWP developed the *IRP 5-Year Review Draft Documents for Stakeholder Review* (5-Year Review),[784] which evaluated the progress of IRP recommendations and reviewed benchmarks for measuring progress until 2020. As noted above, the 5-Year Review found that wastewater flows were lower than projected in the IRP, and recommended delaying certain capital improvement projects, including all three of the HTP projects.[785] Future trendlines show continued declines in wastewater flows (see **Figure 4.13.3-1**) through 2020, the planning horizon for the IRP. If these trendlines continue through 2025, there will be substantial available capacity within the HSA to treat projected flows.

Southern California Association of Governments (SCAG) projected flows similarly show substantial future wastewater treatment capacity. Estimates of future wastewater flows based on SCAG's 2008 *Regional Transportation Plan* (RTP) regional projections show a gradual increase in flows through 2020, the IRP planning horizon.[786] If these trendlines are extended through 2025, future flows, although greater than the City's projections, would still be lower than the capacity of the wastewater treatment facilities within the HSA. Both the 2008 RTP and the 2012-2035 RTP/Sustainable Communities Strategy (SCS) assume a future passenger activity level at LAX of 78.9 MAP.[787]

Wastewater-Related Policies at LAX

In 2008, LAWA prepared the *Los Angeles World Airports Sustainability Plan* (Sustainability Plan).[788] The Sustainability Plan outlines LAWA's goals regarding implementation of sustainability-related initiatives set forth by the Mayor, the City Council, and the Board of Airport Commissioners. The Sustainability Plan initiatives pertaining to the reduction of potable water use at LAX facilities include evaluating the feasibility of installing waterless urinals in LAWA buildings, which would reduce wastewater generation.

In February 2010, LAWA prepared the *Sustainable Airport Planning, Design and Construction Guidelines* (LSAG) for all its airports to formalize its commitment to building sustainability.[789] The LSAG includes guidelines to reduce wastewater generation, which address the installation of high-efficiency fixtures, low- or dual-flush toilets, and occupant-sensors in urinals and faucets, as well as the evaluation of dry fixtures such as waterless urinals and composting toilets.

As a result of these and prior efforts, LAWA has installed low-flow fixtures on all toilets and sinks in all LAX terminals and buildings.[790]

Baseline LAX Sanitary Wastewater Flows

Site-specific wastewater flow data are not collected at LAX. To calculate baseline (2010) wastewater generation, usage-based factors were used, as described above in Section 4.13.3.2. These wastewater generation factors were applied to building square footages associated with SPAS, namely concourse areas at Terminals 1, 2, and 3. Based on these factors, baseline wastewater generation at LAX for

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784 City of Los Angeles, Department of Public Works, Bureau of Sanitation and Department of Water and Power, IRP 5-Year Review Draft Documents for Stakeholder Review, January 2012, Available: http://www.lacitysan.org/irp/documents/I5R_DRAFT_Documents-v2.pdf, accessed March 7, 2012.

785 City of Los Angeles, Department of Public Works, Bureau of Sanitation and Department of Water and Power, IRP 5-Year Review Draft Documents for Stakeholder Review, January 2012, Available: http://www.lacitysan.org/irp/documents/I5R_DRAFT_Documents-v2.pdf, accessed March 7, 2012.

786 SCAG recently adopted the 2012-2035 RTP/SCS; however, the 2012-2035 RTP/SCS does not include projections of wastewater generation. The 2012-2035 RTP/SCS projects a lower future regional population than did the 2008 RTP; therefore, the trendline based on the 2008 RTP is likely conservative.

787 Southern California Association of Governments, 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy, April 2012.

788 City of Los Angeles, Los Angeles World Airports, Los Angeles World Airports Sustainability Plan, April 2008.

789 City of Los Angeles, Los Angeles World Airports, Sustainable Airport Planning, Design and Construction Guidelines for Implementation on All Airport Projects, Version 5.0, prepared by LAWA and CDM, February 2010.

790 City of Los Angeles, Los Angeles World Airports, Los Angeles World Airports Sustainability Plan, p. 9, April 2008.

passenger-related facilities is 57,840 gpd (0.06 mgd). This represents 0.01 percent of the wastewater treatment capacity of HTP.

4.13.3.4 Thresholds of Significance

A significant wastewater generation impact would occur if the direct and indirect changes in the environment that may be caused by the particular SPAS alternative would result in the following future condition:

- An exceedance in the capacities of regional wastewater treatment facilities due to project-related wastewater generation.

This threshold is based upon guidance provided in the *L.A. CEQA Thresholds Guide*.

4.13.3.5 Applicable LAX Master Plan Commitments and Mitigation Measures

As part of the LAX Master Plan, LAWA adopted one commitment and one mitigation measure pertaining to wastewater/public utilities in the Alternative D Mitigation Monitoring and Reporting Program (MMRP). These measures are not applicable to the SPAS alternatives. However, one commitment pertaining to water use is applicable to wastewater and is considered in the analysis herein.

- **W-2. Enhance Existing Water Conservation Program.**

  LAWA will enhance the existing Street Frontage and Landscape Plan for LAX to ensure the ongoing use of water conservation practices at LAX facilities. The intent of this program, to minimize the potential for increased water use due to implementation of the LAX Master Plan program, is also in accordance with regional efforts to ensure adequate water supplies for the future. Features of the enhanced conservation program will include identification of current water conservation practices and an assessment of their effectiveness; identification of alternate future conservation practices; continuation of the practice of retrofitting and installing new low-flow toilets and other water-efficient fixtures in all LAX buildings, as remodeling takes place or new construction occurs; use of BMPs for maintenance; use of water efficient vegetation for landscaping, where possible; and continuation of the use of fixed automatic irrigation for landscaping.

4.13.3.6 Impacts Analysis

This section describes the impacts related to wastewater for the SPAS alternatives. For each alternative, the effects are discussed as they relate to projected wastewater generation. The analysis focuses on wastewater generation associated with passenger-related facilities. **Table 4.13.3-1** identifies wastewater generation associated with passenger-related facilities for the SPAS alternatives as well as under 2010 baseline conditions.

4.13.3.6.1 Alternative 1

Under Alternative 1, the passenger-related building area would increase compared to baseline conditions. Although concourse areas associated with Terminals 1 and 3 would decrease, there would be new concourse areas associated with Terminal 0 and the northerly extensions of Bradley West and the Midfield Satellite Concourse (MSC). In addition, this alternative would include a passenger service area at the ITF. As shown in **Table 4.13.3-1**, under Alternative 1, wastewater generation from passenger-related facilities would be 112,896 gpd (0.11 mgd) in 2025. As noted above, HTP had baseline wastewater flows of 299 mgd in 2010, and currently has a design capacity of 450 mgd. Therefore, the increased wastewater generation from Alternative 1 could be accommodated by the existing wastewater treatment facilities at HTP. Moreover, as shown in **Figure 4.13.3-1**, if the SCAG and HSA flow trendlines are extended beyond the City's 2020 planning horizon for wastewater facilities, the HSA would have sufficient capacity to handle projected wastewater flows in 2025, including flows associated with

Table 4.13.3-1

Baseline (2010) and Projected (2025) Wastewater Generation

Building Components	Baseline Conditions	Alt. 1 Airfield/ Terminals	Alt. 1 Ground Access	Alt. 1 Total Alt. 1	Alt. 2 Airfield/ Terminals	Alt. 2 Ground Access	Alt. 2 Total Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	Alt. 8	Alt. 9
Terminals														
Terminal 0	NA	330,000	NA	330,000	330,000	NA	330,000	NA	NA	330,000	330,000	325,000	NA	NA
Terminal 1 Concourse	138,000	114,000	NA	114,000	114,000	NA	114,000	See Linear Concourse	138,000	114,000	114,000	114,000	NA	NA
Terminal 2 Concourse	306,000	306,000	NA	306,000	306,000	NA	306,000	See Linear Concourse	306,000	306,000	306,000	306,000	NA	NA
Terminal 3 Concourse	279,000	223,000	NA	223,000	223,000	NA	223,000	See Linear Concourse	279,000	223,000	223,000	205,000	NA	NA
New Linear Concourse	NA	NA	NA	NA	NA	NA	NA	1,400,000	NA	NA	NA	NA	NA	NA
New Passenger Processing Terminals	NA	NA	NA	NA	NA	NA	NA	2,151,000	NA	NA	NA	NA	NA	NA
Bradley West North Concourse Extension	NA	113,800	NA	113,800	113,800	NA	113,800	NA	NA	73,300	113,800	64,400	NA	NA
MSC North Concourse Extension	NA	249,400	NA	249,400	249,400	NA	249,400	NA	NA	204,800	249,400	190,700	NA	NA
Subtotal Terminal Components	**723,000**	**1,336,200**	**0**	**1,336,200**	**1,336,200**	**0**	**1,336,200**	**3,551,000**	**723,000**	**1,251,100**	**1,336,200**	**1,205,100**	**0**	**0**
Ground Access Components														
Ground Transportation Center	NA	NA	NA	0	NA	NA	0	1,400,000	NA	NA	NA	NA	NA	NA
Intermodal Transportation Center	NA	NA	NA	0	NA	NA	0	85,000	NA	NA	NA	NA	NA	NA
Intermodal Transportation Facility	NA	NA	75,000	75,000	NA	75,000	75,000	NA	NA	NA	NA	NA	75,000	75,000
CONRAC	NA	NA	NA	0	NA	NA	0	89,000	89,000	NA	NA	NA	85,000	85,000
Subtotal Ground Access Components	**0**	**0**	**75,000**	**75,000**	**0**	**75,000**	**75,000**	**1,574,000**	**89,000**	**0**	**0**	**0**	**160,000**	**160,000**
Total Building Area (sf)	**723,000**	**1,336,200**	**75,000**	**1,411,200**	**1,336,200**	**75,000**	**1,411,200**	**5,125,000**	**812,000**	**1,251,100**	**1,336,200**	**1,205,100**	**160,000**	**160,000**
Total Wastewater Generation (gpd)	**57,840**	**106,896**	**6,000**	**112,896**	**106,896**	**6,000**	**112,896**	**410,000**	**64,960**	**100,088**	**106,896**	**96,408**	**12,800**	**12,800**
% of Hyperion Treatment Plant Capacity	**0.01%**	**0.02%**	**0.001%**	**0.03%**	**0.02%**	**0.001%**	**0.03%**	**0.09%**	**0.01%**	**0.02%**	**0.02%**	**0.02%**	**0.003%**	**0.003%**

Note:

Alternatives 1 through 4 consist of airfield, terminal, and ground access improvements. Alternatives 5 through 7 focus on airfield and terminal improvements only. Alternatives 8 and 9 focus on ground access improvements only. The airfield/terminal improvements associated with Alternatives 1, 2, 5, 6, and 7 could be paired with the ground access improvements associated with Alternatives 1, 2, 8, or 9. Similarly, the ground access improvements associated with Alternatives 1, 2, 8, and 9 could be paired with the airfield improvements associated with Alternatives 1, 2, 5, 6, or 7. The full impacts of any alternative must consider airfield, terminal, and ground access contributions. The airfield, terminal, and ground access improvements associated with Alternatives 3 and 4 are specific to each of those alternatives and cannot be paired with other alternatives.

Source: CDM Smith, 2012.

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Alternative 1. In addition, LAWA would implement LAX Master Plan Commitment W-2, Enhance Existing Water Conservation Program, and would comply with its Sustainability Plan and LSAG, all of which would reduce wastewater flows associated with Alternative 1. For these reasons, wastewater generation related to Alternative 1 would not exceed the existing or future capacity of regional wastewater treatment facilities. Therefore, impacts from increased wastewater generation under this alternative would be less than significant.

4.13.3.6.2 Alternative 2

Under Alternative 2, impacts associated with wastewater generation from passenger-related facilities would be the same as described above for Alternative 1. As with Alternative 1, project-related wastewater generation could be accommodated by existing wastewater treatment facilities at HTP. In addition, LAWA would implement LAX Master Plan Commitment W-2, Enhance Existing Water Conservation Program, and would comply with its Sustainability Plan and LSAG, all of which would reduce wastewater flows associated with this alternative. For these reasons, wastewater generation related to Alternative 2 would not exceed the existing or future capacity of regional wastewater treatment facilities, and impacts from wastewater generation would be less than significant.

4.13.3.6.3 Alternative 3

Under Alternative 3, the passenger-related building area would increase compared to baseline conditions. Terminals 1, 2, and 3 would be replaced with a linear concourse and four new terminals would be built in the central portion of the CTA. In addition, this alternative would include passenger-related facilities at the GTC, ITC, and CONRAC. As shown in **Table 4.13.3-1**, under Alternative 3, wastewater generation from passenger-related facilities would be 410,000 gpd (0.41 mgd) in 2025. As noted above, HTP had baseline wastewater flows of 299 mgd in 2010, and currently has a design capacity of 450 mgd. Therefore, under Alternative 3, the increased wastewater generation could be accommodated by the existing wastewater treatment facilities at HTP. Moreover, as shown in **Figure 4.13.3-1**, if the SCAG and HSA flow trendlines are extended beyond the City's 2020 planning horizon, the HSA would have sufficient capacity to handle projected wastewater flows in 2025, including flows associated with Alternative 3. In addition, LAWA would implement LAX Master Plan Commitment W-2, Enhance Existing Water Conservation Program, and would comply with its Sustainability Plan and LSAG, all of which would reduce wastewater flows associated with Alternative 3. For these reasons, wastewater generation related to Alternative 3 would not exceed the existing or future capacity of regional wastewater treatment facilities, and the impacts from increased wastewater generation would be less than significant.

4.13.3.6.4 Alternative 4

Under Alternative 4, the only facility that would increase passenger-related building area over baseline conditions and result in increased wastewater flows would be the CONRAC customer service area. As shown in **Table 4.13.3-1**, under Alternative 4, wastewater generation from passenger-related facilities would be 64,960 gpd (0.06 mgd) in 2025. As noted above, HTP had baseline wastewater flows of 299 mgd in 2010, and currently has a design capacity of 450 mgd. Therefore, under Alternative 4, the increased wastewater generation could be accommodated by the existing wastewater treatment facilities at HTP. Moreover, as shown in **Figure 4.13.3-1**, if the SCAG and HSA flow trendlines are extended beyond the City's 2020 planning horizon, the HSA would have sufficient capacity to handle projected wastewater flows in 2025, including flows associated with Alternative 4. In addition, LAWA would implement LAX Master Plan Commitment W-2, Enhance Existing Water Conservation Program, and would comply with its Sustainability Plan and LSAG, all of which would reduce wastewater flows associated with Alternative 4. For these reasons, wastewater generation related to Alternative 4 would not exceed the existing or future capacity of regional wastewater treatment facilities, and the impacts from increased wastewater generation would be less than significant.

4.13.3.6.5 Alternative 5

Alternative 5 focuses on airfield and terminal improvements. Under Alternative 5, impacts related to wastewater generation associated with terminal uses would be similar to those described above for Alternative 1. New concourse areas associated with Alternative 5 would be similar to those under Alternative 1, although approximately 6 percent less square footage would be developed under Alternative 5 due to the more southerly aircraft parking limit line. As shown in **Table 4.13.3-1**, under Alternative 5, wastewater generation from passenger-related facilities would be 100,088 gpd (0.1 mgd) in 2025. As noted above, HTP had baseline wastewater flows of 299 mgd in 2010, and currently has a design capacity of 450 mgd. Therefore, the increased wastewater generation from Alternative 5 could be accommodated by the existing wastewater treatment facilities at HTP. Moreover, as shown in **Figure 4.13.3-1**, if the SCAG and HSA flow trendlines are extended beyond the City's 2020 planning horizon, the HSA would have sufficient capacity to handle projected wastewater flows in 2025, including flows associated with Alternative 5. In addition, LAWA would implement LAX Master Plan Commitment W-2, Enhance Existing Water Conservation Program, and would comply with its Sustainability Plan and LSAG, all of which would reduce wastewater flows associated with Alternative 5. For these reasons, wastewater generation related to Alternative 5 would not exceed the existing or future capacity of regional wastewater treatment facilities, and the impacts from increased wastewater generation would be less than significant.

4.13.3.6.6 Alternative 6

Similar to Alternative 5, Alternative 6 focuses on airfield and terminal improvements. Under Alternative 6, impacts related to wastewater generation associated with terminal uses would be the same as described above for Alternative 1. As shown in **Table 4.13.3-1**, under Alternative 6, wastewater generation from passenger-related facilities would be 106,896 gpd (0.11 mgd) in 2025. As noted above, HTP had baseline wastewater flows of 299 mgd in 2010, and currently has a design capacity of 450 mgd. Therefore, the increased wastewater generation from Alternative 6 could be accommodated by the existing wastewater treatment facilities at HTP. Moreover, as shown in **Figure 4.13.3-1**, if the SCAG and HSA flow trendlines are extended beyond the City's 2020 planning horizon, the HSA would have sufficient capacity to handle projected wastewater flows in 2025, including flows associated with Alternative 6. In addition, LAWA would implement LAX Master Plan Commitment W-2, Enhance Existing Water Conservation Program, and would comply with its Sustainability Plan and LSAG, all of which would reduce wastewater flows associated with Alternative 6. For these reasons, wastewater generation related to Alternative 6 would not exceed the existing or future capacity of regional wastewater treatment facilities, and the impacts from increased wastewater generation would be less than significant.

4.13.3.6.7 Alternative 7

Similar to Alternative 5, Alternative 7 focuses on airfield and terminal improvements. Under Alternative 7, the impacts related to wastewater generation associated with terminal uses would be similar to those described above for Alternative 1, although almost 15 percent less square footage would be developed under Alternative 7 due to the more southerly aircraft parking limit line. As shown in **Table 4.13.3-1**, under Alternative 7, wastewater generation from passenger-related facilities would be 96,408 gpd (0.09 mgd) in 2025. As noted above, HTP had baseline wastewater flows of 299 mgd in 2010, and currently has a design capacity of 450 mgd. Therefore, the increased wastewater generation from Alternative 7 could be accommodated by the existing wastewater treatment facilities at HTP. Moreover, as shown in **Figure 4.13.3-1**, if the SCAG and HSA flow trendlines are extended beyond the City's 2020 planning horizon, the HSA would have sufficient capacity to handle projected wastewater flows in 2025, including flows associated with Alternative 7. In addition, LAWA would implement LAX Master Plan Commitment W-2, Enhance Existing Water Conservation Program, and would comply with its Sustainability Plan and LSAG, all of which would reduce wastewater flows associated with Alternative 7. For these reasons, wastewater generation related to Alternative 7 would not exceed the existing or future capacity of regional

wastewater treatment facilities, and the impacts from increased wastewater generation would be less than significant.

4.13.3.6.8 Alternative 8

Alternative 8 focuses on ground access improvements. Ground access improvements that would increase passenger-related building area over baseline conditions and result in increased wastewater generation include the ITF passenger service area and the CONRAC customer service area. As shown in **Table 4.13.3-1**, under Alternative 8, wastewater generation from passenger-related facilities would be 12,800 gpd (0.01 mgd) in 2025. As noted above, HTP had baseline wastewater flows of 299 mgd in 2010, and currently has a design capacity of 450 mgd. Wastewater flows under Alternative 8 would represent less than 0.003 percent of HTP's current design capacity, which would not be significant compared to the total existing capacity at HTP. Therefore, the increased wastewater generation from Alternative 8 could be accommodated by the existing wastewater treatment facilities at HTP. Moreover, as shown in **Figure 4.13.3-1**, if the SCAG and HSA flow trendlines are extended beyond the City's 2020 planning horizon, the HSA would have sufficient capacity to handle projected wastewater flows in 2025, including flows associated with Alternative 8. In addition, LAWA would implement LAX Master Plan Commitment W-2, Enhance Existing Water Conservation Program, and would comply with its Sustainability Plan and LSAG, all of which would reduce wastewater flows associated with Alternative 8. For these reasons, wastewater generation related to Alternative 8 would not exceed the existing or future capacity of regional wastewater treatment facilities, and the impacts from increased wastewater generation would be less than significant.

4.13.3.6.9 Alternative 9

Under Alternative 9, impacts associated with wastewater generation from the passenger-related components of ground access facilities would be the same as described above for Alternative 8. As with Alternative 8, project-related wastewater generation could be accommodated by existing wastewater treatment facilities at HTP. In addition, LAWA would implement LAX Master Plan Commitment W-2, Enhance Existing Water Conservation Program, and would comply with its Sustainability Plan and LSAG, all of which would reduce wastewater flows associated with Alternative 9. For these reasons, wastewater generation related to Alternative 9 would not exceed the existing or future capacity of regional wastewater treatment facilities, and the impacts from increased wastewater generation would be less than significant.

4.13.3.6.10 Summary of Impacts

Under all of the SPAS alternatives, the passenger-related building area would increase compared to baseline conditions, resulting in an increase in wastewater generation. The highest wastewater generation would be associated with Alternative 3, as this alternative includes the greatest amount of new building area, whereas the lowest wastewater generation would occur under Alternative 4. The projected wastewater generation for each alternative could be accommodated by existing wastewater treatment facilities at HTP. Moreover, trendlines of future flows indicate that sufficient capacity exists to treat projected wastewater flows in 2025, including project-related flows under all of the SPAS alternatives. Under all of the alternatives, LAWA would implement LAX Master Plan Commitment W-2, Enhance Existing Water Conservation Program, and would comply with its Sustainability Plan and LSAG, which would reduce wastewater flows. For these reasons, under all of the alternatives, impacts associated with wastewater generation from the increase in passenger-related building area would be less than significant.

4.13.3.7 Mitigation Measures

Implementation of LAX Master Plan Commitment W-2, Enhance Existing Water Conservation Program, would ensure that impacts relative to wastewater generation would be less than significant. Therefore, no mitigation measures specific to SPAS are required.

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