
ENVIRONMENTAL SETTING

Existing Conditions

The City of Glendale Public Works Division provides sewer collection and treatment services in the City of Glendale. Sewage from the City of Glendale and other jurisdictions is treated by the City of Los Angeles Hyperion System, which includes the Los Angeles/Glendale Water Reclamation Plant, located outside the Glendale City limits in Los Angeles, and the Hyperion Treatment Plant, located in Playa del Rey. The City of Glendale and the City of Los Angeles jointly own and share operating capacity of the Los Angeles/Glendale Water Reclamation Plant. The City of Glendale has recently entered into a new amalgamated treatment and disposal agreement (amalgamated agreement) with the City of Los Angeles, which eliminates entitlements and reduces limitations previously set on the amount of sewage discharged into the Hyperion system.¹ Any Glendale sewage not treated at the Los Angeles/Glendale Water Reclamation Plant is treated at the Hyperion Treatment Plant.

The Los Angeles/Glendale Water Reclamation Plant has a design treatment capacity of 20 million gallons per day. Currently, due to biological nutrient removal testing and implementation, the Los Angeles/Glendale Water Reclamation Plant is temporarily operating below full capacity and is treating between 16 million gallons and 18 million gallons of sewage per day. The City of Glendale is currently utilizing half this capacity.²

The Hyperion Treatment Plant has a dry weather design capacity of 450 million gallons per day and is currently operating below its design capacity at 360 million gallons per day. The City of Glendale has access to this excess capacity upon payment of Amalgamated Sewerage System Facilities Charges to the City of Los Angeles.³

Approximately 340 miles of underground sewer mains ranging in size from 6 inches to 36 inches in diameter are located throughout the City of Glendale. The City owns and maintains the sewer lines within its public rights-of-way. These sewer mains collect sewage and convey it to trunk lines and into regional interceptor sewers for conveyance to the Los Angeles/Glendale Water Reclamation Plant or the

¹ Written correspondence from Lucien J. Le Blanc, City Engineer, Glendale Public Works Division, to Mark Berry, Project Manager, Glendale Redevelopment Agency, October 2003.

² Ibid.

³ Ibid.

Hyperion Treatment Plant for treatment. The sewer system uses the rolling topography in the City of Glendale to allow gravity to convey the majority of its sewage with minimum pumping costs. Pumping of sewage is only required in the southwestern section of the City, bounded by the Arroyo Verdugo Wash and the Los Angeles River.

As illustrated in **Figure 4.12.3-1**, existing sewer lines within and adjacent to the project site include a 12-inch line and a 10-inch line in Central Avenue, a 21-inch line in Colorado Street, and a 10-inch line in the alley between Orange Street and Brand Boulevard. In addition, an 8-inch line runs south in Orange Street to Harvard Street where it turns west along Harvard Street to Central Avenue, and another 8-inch line flowing south is located in the alley between Central Avenue and Orange Street from Harvard Street to Colorado Street. Another 8-inch line runs east in Harvard Street from Orange Street to Brand Boulevard.⁴ Sewer laterals extend from these lines into individual structures on the project site. Sewage flow in the area is generally south-southwest and the sewage collection lines on the site currently drain to the 21-inch Colorado Street main line.

To estimate the amount of sewage currently generated by existing uses on the project site, sewage generation factors were applied to existing uses by land use type. As indicated in **Table 4.12.3-1**, current on-site sewage generation is 9,813 gallons per day.

Table 4.12.3-1
Estimated Existing and Future without Project Sewage Generation

Use	Area (sq. ft.)	Loading Factor ¹	Annual Generation (gal./day)
Office	22,240	150 gpd/ksf	3,336
Retail	80,960	80 gpd/ksf	6,477
Vacant	98,293	--	--
Total			9,813

Source: Impact Sciences, Inc.



¹ City of Los Angeles, Bureau of Sanitation Sewage Generation Factors.

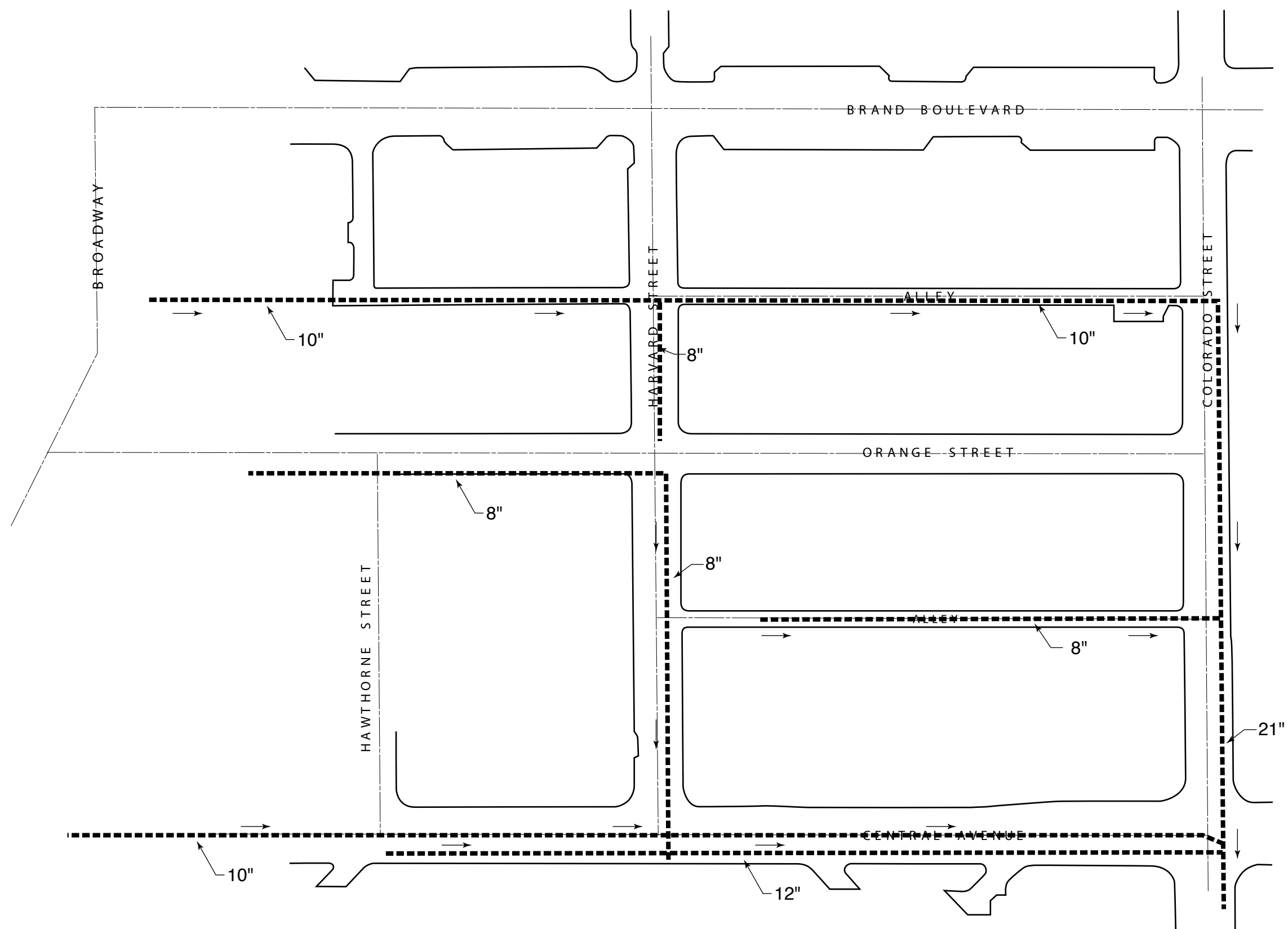
gpd = gallons per day

ksf = kilo/thousand square feet

⁴ Moffatt Nichols Engineers, *Glendale Town Center Wet Utility Impacts Report*, November 2002, pg. 1.

LEGEND

-  Existing Sewer Line
-  Direction of Flow



SOURCE: Moffat & Nichol Engineers.

FIGURE 4.12.3-1

Existing Sewer Infrastructure

REGULATORY FRAMEWORK

There are goals and policies set forth by the City of Glendale in the General Plan Community Facilities Element that relate to the City's sewage collection and treatment system. A description of applicable goals and policies is provided in **Section 4.1, Land Use and Planning**. As discussed in **Section 4.1**, the project does not conflict with applicable General Plan goals and policies relating to the City's sewage collection and treatment system.

ENVIRONMENTAL IMPACTS

Methodology

The impact of the Glendale Town Center on the existing sewage collection and treatment system was determined by evaluating existing sewage treatment and sewage conveyance capacity. To perform this evaluation, estimates of both existing and future sewage amounts were calculated. The projected increase in sewage from the project site was then compared against existing system capacity to determine if sufficient capacity would be available to serve the project.

Thresholds of Significance

The following thresholds for determining the significance of impacts related to sewage are contained in the environmental checklist form contained in Appendix G of the most recent update of the California Environmental Quality Act *Guidelines*. The impact analysis addresses whether the proposed project would:

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

Impact Analysis

Each applicable threshold of significance is listed below, and it is followed by analysis of the significance of any potential impacts and the identification and discussion of any design features of the project that would lessen or avoid potential impacts, as well as other measures identified that would lessen or avoid

potential impacts. Finally, the significance of potential impacts after the implementation of all identified mitigation measures is presented.

Threshold: **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.**

Impact Analysis: As shown in **Table 4.12.3-2**, the Glendale Town Center project would, on average, generate 128,380 gallons of sewage per day. This amount of sewage represents an increase of 118,567 gallons per day over the 9,813 gallons per day generated by the uses existing on the project site.

**Table 4.12.3-2
Projected Project Sewage Generation**

Use	Units	Area (sq. ft.)	Loading Factor ¹	Annual Generation (gal./day)
Retail	--	338,500	80 gpd/ksf	27,080
Cinema	3,500 seats	70,000	4 gpd/seat	14,000
Restaurants	790 seats	66,500	30 gpd/seat	23,700
Condominiums	100	96,162	160 gpd/unit	16,000
Apartments	238	260,750	200 gpd/unit	47,600
Total				128,380

Source: Impact Sciences, Inc.

¹ City of Los Angeles, Bureau of Sanitation Sewage Generation Factors.

gpd = gallons per day

ksf = kilo/thousand square feet

Sewage generated on the project site will be conveyed to either the Los Angeles/Glendale Water Reclamation Plant or the Hyperion Treatment Plant for treatment, as discussed above. If the Reclamation Plant is operating at full capacity, excess sewage from the site will be conveyed to the Hyperion facility for treatment, which the City of Glendale has access to through the amalgamated agreement. With the Hyperion Treatment Plant currently operating 90 million gallons per day below capacity, the addition of approximately 128,400 gallons of sewage per day generated by the proposed project will not result in the plant exceeding capacity. Therefore, adequate capacity exists to treat sewage generated by the project, and the impact of the proposed project on the sewage treatment system is less than significant.

Analysis of sewage capacity in the City of Glendale indicates that the City's sewage collection system has enough excess volume to convey an increase in sewage from the project site. Additional sewage from the project was added to the City's sewer master plan model, which reflects full buildout of the City's General Plan. Under these conditions, the 21-inch main line located in Colorado Street will have adequate capacity to accommodate the increase in sewage from the project. According to City sewer

design criteria, pipeline capacity for existing pipes of 18-inches in diameter or larger is considered sufficient if the maximum ratio of the depth of flow to the diameter of the pipe is equal to 0.75 or less.⁵ Implementation of the proposed project will result in the Colorado Street line operating at a maximum depth to diameter ratio of 0.60.⁶ Therefore, the impact of the proposed project on the existing sewage conveyance system is less than significant.

Project Design Features: None are required.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: None are required.

Level of Significance After Mitigation: Less than significant.

Threshold: **Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.**

Impact Analysis: As discussed above, when the Los Angeles/Glendale Water Reclamation facility reaches capacity, the Hyperion Treatment Plant will treat any excess waste generated by the proposed project, which the City of Glendale has access to through the amalgamated agreement. With the Hyperion Treatment Plant currently operating 90 million gallons per day below capacity, adequate capacity exists to treat project-generated effluent. Therefore, the proposed project will not require the expansion or construction of sewage treatment facilities, the construction of which could cause significant environmental effects. No significant impact would result.

As for the sewage collection system, no expansion of existing lines is required. However, several lines within the project site will need to be relocated to accommodate construction. Construction of the northern parking garage will require the relocation of the 10-inch sewer line in the east alley between Hawthorne Street and Harvard Street, as well as the relocation of existing 8-inch sewer lines in Orange Street (flowing north to south), and in Harvard Street (flowing east to west). In addition, the proposed retail-residential structure between Harvard Street and the new street along Brand Boulevard will require the relocation of the 8-inch sewer line in the west alley between Harvard Street and Colorado Street. The relocation of these lines could result in short-term service interruptions to service area users. However, replacement lines will be built and operational before abandonment of existing lines begins to ensure

⁵ Written correspondence with Sam Adarme, Senior Civil Engineer, Glendale Public Works Division, November 2003. The City of Glendale sewer capacity standard for existing pipes of 18-inches in diameter or larger is a maximum D/d ratio of 0.75 or less. The standard for existing pipes of 15-inches or less in diameter is a maximum D/d ratio of 0.50 or less.

⁶ Kennedy/Jenks Consultants, *Impact Analysis Review, Town Center Project, City of Glendale*, 2003, pg. 3.

service to existing uses is not interrupted. The short-term impacts associated with the relocation of these lines are addressed in **Sections 4.6, Traffic, Circulation and Parking, 4.7, Air Quality, and 4.8, Noise.** Therefore, the impact of the proposed project on the sewage collection system is less than significant.

Project Design Features: The following are project design features that will reduce the impact of the proposed Glendale Town Center on existing sewage conveyance facilities.

PDF 4.12.3-1(a) The applicant will construct the new lines or provide for temporary lines prior to the abandonment of the existing lines to allow for the switching over of sewer service to the new lines or temporary lines.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: None are required.

Level of Significance After Mitigation: Less than significant.

Threshold: Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.

Impact Analysis: The Los Angeles/Glendale Water Reclamation Plant and the Hyperion Treatment Plant are both subject to permits issued by the Regional Water Quality Control Board. The Los Angeles/Glendale Water Reclamation Plant is subject to two permits, a National Pollution Discharge Elimination System (NPDES) Permit (Order No. 98-047), regulating the discharge of treated sewage from the Plant to the Los Angeles River, and a Reclamation Permit (Order 97-072), regulating the distribution of reclaimed water for irrigation and industrial uses in the Cities of Los Angeles and Glendale.⁷ In addition, the Hyperion Treatment Plant is also subject to a NPDES Permit (Order No. 94-021), regulating the discharge of treated sewage in the Santa Monica Bay.⁸

The permits that regulate the Los Angeles/Glendale Water Reclamation Plant and the Hyperion Treatment Plant set limitations on the amount of pollutants that the plants can discharge into receiving waters or the amount of pollutants allowable to remain in reclaimed water for municipal use. An increase in the amount of sewage treated at these plants could result in the plants not being able to meet pollutant standards outlined in their respective permits.

⁷ California State Water Resources Control Board Order WQ 2001-02, 2001, pg. 2.

⁸ Personal communication with J. Chen, Los Angeles Regional Water Quality Control Board, December 2003.

As discussed above, sewage generated by development in the City of Glendale will be treated at both the Los Angeles/Glendale Water Reclamation Plant and the Hyperion Treatment Plant. When capacity is reached at the this plant, sewage will be diverted toward the Hyperion facility, which the City has access to through the amalgamated agreement. Given that the Hyperion Treatment Plant is currently operating 90 million gallons per day below capacity, additional sewage generated by the proposed project will not result in the plant exceeding sewage treatment requirements. Consequently, each plant will operate within the limitations contained in their respective permits. Therefore, the impact of the proposed project on sewage treatment requirements is less than significant.

Project Design Features: None are required.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: None are required.

Level of Significance After Mitigation: Less than significant.

Cumulative Impacts

The following cumulative analysis evaluates the impact of the proposed project and Citywide Projects on sewage in the City of Glendale. Each applicable threshold is listed below in bold, and it is followed by an analysis of the cumulative impact of the project and Citywide Projects and their potential significance.

Threshold: **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.**

Impact Analysis: As shown in **Table 4.12.3-3**, development of Citywide Projects will add 367,733 gallons per day to the Hyperion Treatment Plant and the City's sewage conveyance system. Combined, the increase in demand generated by the proposed Glendale Town Center and the amount demanded by Citywide Projects will generate an overall sewage demand of 486,300 gallons per day.

**Table 4.12.3-3
Generation of Sewage by Citywide Projects**

Use	Units	Area	Loading Factor ¹	Daily Generation (gal./day)
Hotel	277 rooms	190,000 sq. ft.	130 gpd/room	36,010
Office	--	989,455 sq. ft.	150 gpd/ksf	148,418
Retail	--	281,524 sq. ft.	80 gpd/ksf	22,522
Industrial	--	15,060 sq. ft.	80 gpd/ksf	1,205
Hospital	--	125,671 sq. ft.	250 ² gpd/ksf	31,418
Residential	801 units	--	160 gpd/unit	128,160
Total				367,733

Source: Impact Sciences, Inc.

¹ City of Los Angeles, Bureau of Sanitation Sewage Generation Factors.

² Medical building sewage factor

As discussed above, when the Los Angeles/Glendale Reclamation Plant reaches capacity, the Hyperion Treatment Plant will treat a majority of the waste generated by the proposed project and Citywide Projects. With the Hyperion Treatment Plant currently operating 90 million gallons per day below capacity, the additional 486,300 gallons of sewage per day generated by cumulative development will not result in the plant exceeding capacity. With excess capacity available to the City of Glendale upon payment of fees to the City of Los Angeles, adequate capacity exists to treat sewage generated by the project and Citywide Projects. Therefore, the cumulative impact of the proposed project and Citywide Projects on available sewage treatment capacity is less than significant.

Development of the Citywide Projects will place additional demand on the City's sewage conveyance system. Sewage conveyance infrastructure serving the individual Citywide Projects may not have adequate capacity to handle additional sewage loads, which represents a significant impact. In addition, development of the Citywide Projects may also require relocation of existing sewer lines. These relocations could result in short-term service interruptions for service area users, representing a significant impact as well. However, the City will require capacity upgrades to the sewer conveyance system prior to occupancy to avoid overloading the system on a project-by-project basis. Similarly, the City will also require that temporary sewer lines be installed and operational prior to construction to avoid service interruptions on a project-by-project basis. The inclusion of these requirements would reduce the Citywide Project impact to less than significant. The Colorado Street main serving the project site has adequate capacity, and the project will include temporary sewer lines that will be installed and operational prior to buildout in order to avoid service interruption; thus, impacts would be less than significant. Consequently, the project contribution is not cumulatively considerable and is less than significant.

Project Design Features: None are required.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: None are required.

Level of Significance After Mitigation: Less than significant.

Threshold: **Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.**

Impact Analysis: As discussed above, when the Los Angeles/Glendale Water Reclamation Plant reaches capacity, the Hyperion Treatment Plant, which the City of Glendale has access to through the amalgamated agreement, will treat a majority of the waste generated by the proposed project and Citywide Projects. With the Hyperion Treatment Plant currently operating 90 million gallons a day below capacity, adequate capacity exists to treat effluent generated by cumulative development. Therefore, the proposed project and Citywide Projects will not require the expansion or construction of sewage treatment facilities, the construction of which could cause significant environmental effects. The cumulative impact of the proposed project and Citywide Projects is less than significant.

Project Design Features: None are required.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: None are required.

Level of Significance After Mitigation: Less than significant.

Threshold: **Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.**

Impact Analysis: As discussed previously, both the Los Angeles/Glendale Water Reclamation Plant and the Hyperion Treatment Plant are subject to permits issued by the Regional Water Quality Control Board. Sewage generated by development in City of Glendale will be treated at both the Los Angeles/Glendale Water Reclamation Plant and the Hyperion Treatment Plant. When capacity is reached at the Los Angeles/Glendale Water Reclamation Plant, sewage is redirected toward the Hyperion facility, which the City has access to through the amalgamated agreement. Given that the Hyperion Treatment Plant is currently operating well below capacity, additional sewage generated by the proposed project and sewage generated by Citywide Projects will not result in the plant exceeding sewage treatment

requirements. Consequently, each plant will operate within the limitations contained in their respective permits. Therefore, the cumulative impact of the proposed project and Citywide Projects on the ability of each plant to meet applicable treatment requirements is less than significant.

Project Design Features: None are required.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: None are required.

Level of Significance After Mitigation: Less than significant.