
IV. ENVIRONMENTAL IMPACT ANALYSIS
J. UTILITIES
1. WATER SUPPLY

1. INTRODUCTION

This section addresses the potential impacts of the Project on the water supply and water distribution infrastructure systems. This analysis estimates domestic water demands of the Project and compares this demand to existing and planned water supply sources and conveyance facilities.

2. ENVIRONMENTAL SETTING

a. Regulatory Framework

(1) State Level

Title 20 of the California Administrative Code, (CAC) Section 1604, establishes efficiency standards (i.e., maximum flow rates) for all new showerheads, lavatory faucets, and sink faucets, and prohibits the sale of fixtures that do not comply with the regulations.

Other applicable State water conservation laws include:

- Health and Safety Code Section 17921.3 requires all new buildings, as of January 1, 1983, to install water conservation water closets, as defined by American National Standards Institute (ANSI) Standard A112.19.2, and urinals and associated flushometer valves that use less than an average of 1.5 gallons per flush.
- Title 20, CAC, Section 1604(f) establishes efficiency standards that give the maximum flow rate of all new showerheads, lavatory and sink faucets, as specified in ANSI A112.18.1M-1979.
- Title 20, CAC, Section 1606(b) prohibits the sale of fixtures that do not comply with regulations.
- Title 24, CAC, Section 2-5307(b) prohibits the installation of fixtures unless the manufacturer has certified compliance with the flow rate standards.

- Title 24, CAC, Section 2-5352(i) and (j) address pipe insulation requirements that can reduce water used before hot water reaches fixtures.

The California Urban Water Management Planning Act requires every municipal water supplier who serves more than 3,000 customers or provides more than 3,000 acre-feet per year (AF/yr) of water to prepare and adopt an Urban Water Management Plan (UWMP). UWMPs are required to include estimates of past, current, and projected potable and recycled water use, identify conservation and reclamation measures currently in practice, describe alternative conservation measures, and provide an urban water shortage contingency plan. UWMPs must be developed every five years to identify short-term and long-term water demand management so as to meet growing water demands during normal, dry, and multi-dry years. The California Water Services Company (CWS), the water supplier serving the proposed Project site and its vicinity, has met its obligation to prepare a UMWP with the most recent version being published in January 2003.

Additional State legislation, Senate Bill 221 (Kuehl) and Senate Bill 610 (Costa), expands upon the requirements of the California Urban Water Management Planning Act. Senate Bill 610 recognizes the need to link water supply and land use planning as currently required by Section 10910 of the Water Code. Under certain circumstances, a city or county is required to request in conjunction with a development project a water supply assessment containing specific information from the water service provider.

Under SB 610, it is the responsibility of the water service provider to prepare a water supply assessment requested by a city or county for any “project” defined by Section 10912 of the Water Code that is subject to CEQA. The bill prescribes a timeframe within which a public water system is required to submit the assessment to the city or county and authorizes the city or county to seek a writ of mandamus to compel the public water system to comply with the requirements relating to the submission of the assessment. If the provider determines that water supplies are, or will be, insufficient, plans must be submitted for acquiring additional water supplies. Additionally, the bill requires a city or county to include the water supply assessment and other pertinent information in any environmental document prepared (e.g., EIR) for the project pursuant to the act. CWS, as a water service supplier, has incorporated the provisions of SB 610 into its water supply planning process. Under Senate Bill 610, a water supply assessment must be evaluated and approved for larger projects (i.e., residential projects with more than 500 dwelling units, shopping centers employing more than 1,000 persons or having more than 500,000 square feet of floor space, or commercial office buildings employing more than 1,000 persons or having more than 250,000 square feet of floor space). The approved water supply assessment, which evaluates the quality and reliability of existing and projected water supplies, as well as alternative sources of water supply and how they would be secured if needed, must be incorporated into the EIR for individual projects. Based on the quantity of development proposed, a water supply assessment for the Project was prepared and certified by the CWS.

Senate Bill 221 requires “written verification” of water availability for large subdivision projects. It is distinct from Senate Bill 610, but requires a similar demonstration of water availability.

(2) Local Level

The City of Carson General Plan Open Space and Conservation Element and the Land Use Element have also identified measures to conserve water, promote use of reclaimed water, and protect water quality, including the following policies:¹⁴⁷

Policy OSC-2.2 Continue to monitor land uses discharging into water sources and water recharge areas to prevent potential contamination from hazardous or toxic substances.

Policy OSC-2.2 [*sic*] Minimize soil erosion and siltation from construction activities through monitoring and regulation.

Policy OSC-2.3 Conserve the water supply available to the City and promote water conservation in the management of public properties.

Policy OSC-2.4 Educate citizens about water conservation, encourage its practice, and monitor its effectiveness.

Policy OSC-2.5 Facilitate the completion of the infrastructure of the reclaimed water facility in the City of Carson.

Policy OSC-2.6 Encourage the use of reclaimed water in applications for which potable water is not necessary.

Policy LU-15.7 Provide for efficient use of water through the use of natural drainage, drought tolerant landscaping and use of reclaimed water, efficient appliances and water conserving plumbing fixtures.

Furthermore, the City of Carson adopted the “Water Efficient Landscape Ordinance,” which outlines water conservation measures, goals and objectives (Carson Municipal Code, Section 9168.1). The Ordinance includes measures such as preparation of a landscape plan (for projects that contain landscaped areas over 2,500 square feet) that incorporates water-efficient

¹⁴⁷ *City of Carson General Plan, Chapter 8 Open Space and Conservation Element, Section 4.0 Planning Issues, Goals, Policies and Implementation and Chapter 2 Land Use, Section 5.0 Planning Factors, Goals, Policies, and Implementation.*

irrigation designs and drought tolerant plantings, as well as regular water-consumption audits and water-waste prevention techniques.

b. Existing Conditions

(1) Water Service Capacity

Water service in the City of Carson is provided by the California Water Service Company (formerly Dominguez Water Corporation) and the Southern California Water Company (SCWC). The Project site is served by California Water Service Company (CWS), which serves a 35-square-mile area including most of the City of Carson. This investor-owned public water utility obtains its water supplies from two principal sources: (1) local groundwater; and (2) purchased imported water.

There are two groundwater basins which underlie the City Carson: the Central Water Basin and the West Coast Basin. Groundwater in the Central Basin is dependent upon local storm runoff, imported and recycled water for groundwater recharge, and the injection of imported water from the inland side of the Alamitos Seawater Intrusion Barrier. The Central Basin is also replenished through subsurface flows from the San Gabriel Valley into the Basin and precipitation that falls directly on the Montebello Forebay and percolates into the Basin.¹⁴⁸

Groundwater for the West Coast basin originates from subsurface flow from the Central basin and injection along the sea water barrier system. Virtually all of the major drainage courses flowing through the Central and West Coast Basins have been developed into a comprehensive system of dams, flood control channels, and percolation ponds for artificially recharging the basins.

Imported water is purchased from the Metropolitan Water District of Southern California (MWD) through a member agency, the West Basin Municipal Water District (WBMWD).¹⁴⁹ CWS has eight direct MWD service connections and one indirect MWD service connection. CWS also participates in the MWD-sponsored “In-Lieu” Water Programs, whereby water suppliers purchase imported water from MWD at a reduced rate instead of pumping groundwater. The non-pumped groundwater then stays in the basins for use in the future when imported water may not be as plentiful.

¹⁴⁸ *City of Carson General Plan, Chapter 8 Open Space and Conservation Element Section 3.21 Water Resources.*

¹⁴⁹ *City of Carson General Plan, Chapter 4 Transportation and Infrastructure Element.*

The total number of CWS customers is projected to grow approximately 6.2 percent from 1995 to 2015.¹⁵⁰ Future shifts in water demand most likely would result from either the expansion/downsizing of major industrial customers, new industrial customer growth and the introduction of recycled water. To meet water demands for the next decade, the company will rely on a mix of ground, imported, desalinated and recycled water sources. Approximately 80 percent of the water supply distributed by CWS is comprised of imported water, 18 percent is groundwater, and 2 percent desalinated water.¹⁵¹ CWS projections indicate that, under normal precipitation conditions, it will have sufficient water supplies to meet annual customer water demand through 2015.¹⁵² This is based on the continuation of conservation programs, on desalinated and recycled water becoming available, and on planned efforts to emphasize groundwater supplies and to reduce reliance on imported water sources.

(2) Existing Infrastructure

The CWS water infrastructure is a combined domestic and fire water supply system that is an integrated network of pipelines located in City streets. The larger mains range in size from 12 to 42 inches in diameter. Several residential areas have mains less than 6 inches in diameter. However, these mains provide sufficient flow for both normal use and Fire Department fire flow requirements. A 6-inch diameter main is the minimum size presently installed per California Public Utilities Commission Regulation. Currently there are no additional facilities planned.¹⁵³ New customers are either connected to existing mains or are required to pay for installation of facilities required to provide service.

The exiting water distribution system within the vicinity of the Project site is shown in Figure 40 on page 510. As indicated, the Project site is served by a 16 inch concrete lined and coated main along Del Amo Boulevard and by a 12 inch main on Main Street. There are also secondary feeds from the two main lines that provide service into the interior of the Project site and that could be used to serve the current Project if determined to be appropriate for the uses and requirements of the currently proposed development program. Within the Project site, the water system consists of 12-inch PVC water mains buried under Stamps and Lenardo Drives, the existing on-site access roads within Districts 1 and 2. This backbone distribution of mains and

¹⁵⁰ *Ibid.*

¹⁵¹ *City of Carson General Plan, Chapter 8 Open Space and Conservation Element, Section 3.21 Water Resources.*

¹⁵² *City of Carson General Plan, Chapter 4 Transportation and Infrastructure Element.*

¹⁵³ *Carson General Plan Environmental Impact Report October 30, 2002.*

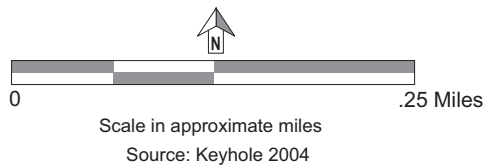
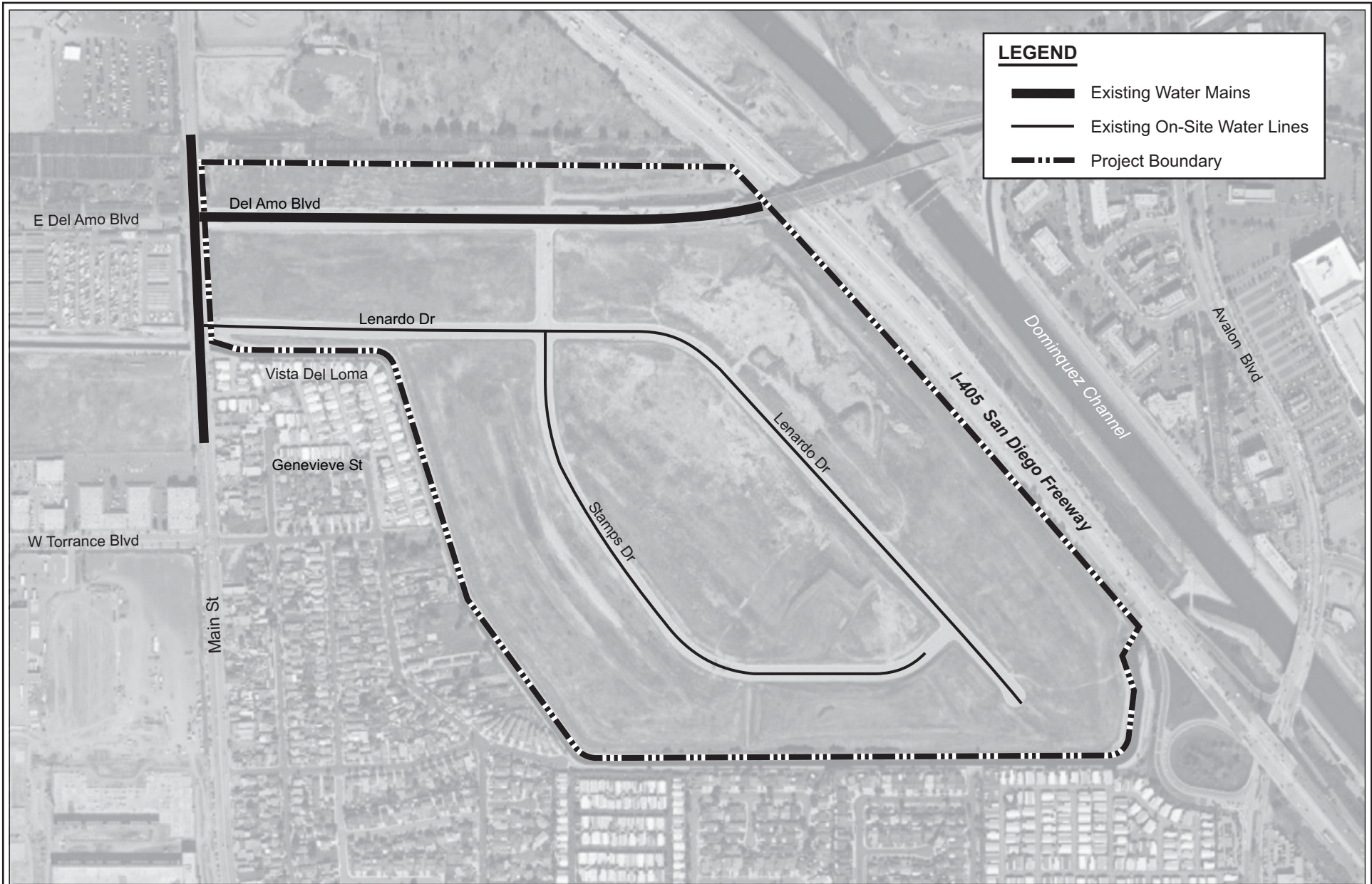


Figure 40
Existing Water Mains

fire hydrants was engineered for future commercial/industrial uses and was approved by the Los Angeles County Department of Public Works.¹⁵⁴

There is a backbone reclaimed water system in place on the northern side of the I-405 Freeway and Dominguez Channel, which is operated by the West Basin Municipal Water District (WBMWD). The WBMWD currently implements a program for water recycling in the South Bay area. Recycled water can be used for landscape irrigation, cooling towers, and refineries, as well as street sweeping and toilet flushing. The WBMWD's Harbor/South Bay Water Recycling Project, slated for completion in 2010, aims to further the program's development of local water resources and diversification of the "portfolio" of water supply, in order to reduce the region's dependence on imported water.¹⁵⁵

3. PROJECT IMPACTS

a. Methodology

The analysis of potential impacts to water resources was based on the increase in demand resulting from the proposed Project relative to the capacity of the existing water distribution and water supply systems as well as the ability to provide the required domestic water for the Project. The water supply required to serve the Project was determined by applying water-generation factors to the types and amounts of development that would be included in the proposed Project. The ability of the infrastructure to serve the Project site was evaluated by comparing the service capabilities of the water supply infrastructure to the requirements of the proposed site uses and populations.

b. Thresholds of Significance

The proposed Project would have a significant impact if:

- The total estimated water demand for the Project at buildout would exceed available supplies or distribution infrastructure capabilities (i.e., water infrastructure); or
- The Project would exceed the projected employment, housing, or population growth projections assumed in the planning for future water infrastructure needs.

¹⁵⁴ Information based on the Dominguez District's Plat Sheet, as confirmed by the California Water Service Company: Phone call with Terry S. Tamble, District Manager, August 8, 2005.

¹⁵⁵ The West Basin Municipal Water District Website at http://www.westbasin.org/recycle_project.php.

c. Project Design Features

The proposed Project would provide an on-site water supply system that would connect with the existing water mains in Del Amo Boulevard and Main Street. The on-site system may include use of the existing lines in Lenardo Drive and Stamps Drive, or may replace these lines with lines better suited to the currently proposed development. New water lines would be sized to meet the fire flow requirements, as well as Building Code standards of the County of Los Angeles. The Carson Marketplace Specific Plan states that a reclaimed water infrastructure system will be provided, if feasible. The proposed development would implement water conservation methods such as ultra low-flow toilets, low-flow showerheads, low-flow fixtures and water saving appliances, as required by existing regulations.

d. Project Impacts

(a) Construction

During construction, water would be used for dust suppression, the mixing and pouring of concrete, and other construction-related activities. The majority of water use during construction would be associated with dust suppression during excavation. This is generally performed by water trucks which derive non-potable water from offsite sources. As such, the impact on treated water from the CWS would be incrementally small and the impact on adjacent water conveyance systems would not occur. As such, no significant impact is anticipated to occur due to Project construction activities because the water demands associated with construction activities would not exceed available supplies or the distribution infrastructure.

The Project's on-site water system would be developed during the construction of the Project, subsequent to implementation of the remediation cap and site grading, and prior to the construction of new buildings. The system may require new tie-ins to the existing water mains in Main Street and Del Amo Boulevard; particularly if existing on-site lines in Stamps Drive and Lenardo Drive are not used. If such new connections are required, Project construction would require construction activity within the Del Amo Boulevard and Main Street rights of way. This would result in secondary, short-term construction impacts. Interruptions to water service can often be avoided, however, on occasion very short term interruptions, e.g. a few hours, may occur. Traffic disruption may also occur for trenching, backfilling, and repaving of the affected roadway. The analysis of Project impacts on traffic includes a discussion of construction impacts, and recommends a Traffic Management Plan as a mitigation measure. With implementation of these measures, short-term impacts on traffic would be less than significant.

(b) Operation**(1) Water Use and Supply**

The proposed Project includes a mix of development uses that would require the use of domestic water supplies for daily operations. The estimated water demand for the Project at buildout is presented in Table 68 on page 514.

As indicated, the average daily consumption is estimated to be 795,470 gallons per day or 552 gallons per minute. Assuming the average daily demand for water is extended over 365 days per year, the projected annual consumption would be 290.5 million gallons, or 892 acre-ft/year. This is 42.3% of the forecasted growth in demand for the Dominguez District, 1,880,000 gallons per day, that is expected to occur between 2005 and 2010. The estimated maximum daily water demand would 1,193,000 gallons/day or 829 gallons per minute.¹⁵⁶

The Project would also require the availability of water service to support a system of hydrants for fire fighting capabilities. The delivery of water to the Project site would occur via the mains located in Main Street and Del Amo Boulevard, and through the Project's on-site infrastructure. The ability of the infrastructure to meet fire flow requirements, the critical factor in the delivery of water to the Project site, is discussed further below.

The Project falls within Senate Bill 610 size criteria in which a water supply assessment (WSA) must be evaluated and approved by the CWS. Accordingly, a WSA has been prepared relative to the water consumption identified in Table 68. (See Appendix H of this Draft EIR)¹⁵⁷ The assessment provides a detailed analysis of the availability and conveyance of the water required to serve the Project site. The CWS, based on the results of the WSA, has concluded that the needed quantities of water, and its conveyance to the Project site are sufficient to meet Project needs. As stated in the WSA, "Cal Water believes it will have adequate water supplies to meet the projected demands of the Carson Marketplace in addition to those of its existing customers and other anticipated future water users in the Dominguez District for the 20-year period from 2005 and 2025 under normal, single dry year and multiple dry; year conditions." Therefore impacts on water supply would not exceed the significance threshold identified above, and Project impacts on water supply would be less than significant.

¹⁵⁶ *Water Supply Assessment Report for the Carson Market Place [sic] Project, California Water Service Company, August 11, 2005, page 5; based on conversion of the average demand to a maximum demand, using a factor of 1.5, a typical factor experienced in various Cal Water Districts.*

¹⁵⁷ *Water Supply Assessment Report for the Carson Market Place [sic] Project, California Water Service Company, August 11, 2005.*

Table 68
Projected Water Demand

Use	Units/Size	Average Daily Flow^a (gal/day)	Annual Generation (million gal/year)^b
Proposed Project			
Residential	1,550 units	315,000	115.0
Neighborhood Commercial	130,000 sq.ft.	42,680	40.7
Restaurant	81,125 sq.ft.	89,240	32.6
Hotel (300 rooms)	200,000 sq.ft.	41,400	15.1
Commercial Recreation/Entertainment	214,000 sq.ft.	28,600	10.4
Regional Commercial	1,370,000 sq.ft.	278,550	76.5
Total	1,995,125 sq.ft.	795,470	290.3

^a Generation factors and calculations of the Project's water consumption are presented in the Water Supply Assessment, Appendix H of the Draft EIR.

^b Annual water consumption assumes 365 days of operation a year.

Source: PCR Services Corporation, June 2005.

The actual consumption of domestic water supply may be reduced from that considered in this analysis if a recycled water system is used for irrigation and/or on-site water features. The Specific Plan states that a reclaimed water infrastructure system will be provided, if feasible. At this time the WBMWD's Harbor/South Bay Water Recycling Project is not providing recycled water to the Project site. Implementation of such a system would support City policies for reducing water consumption. However, Project impacts on water supply would be less than significant without the implementation of such a system. The CWS Urban Water Management Plan is based on very conservative assumptions regarding the amount of recycled water that would be used, system-wide, in the future.

(2) Fire Flow

The water conveyance system at the Project site would be required to meet LACFD fire flow standards. The required flows would be determined at the time site plans are provided, subject to review of buildings, their relationship to other structures, property lines, and types of construction used. The development of commercial/high-density residential development may require fire flows up to 5,000 gallons per minute at 20 pounds per square inch residual pressure for up to a five-hour duration.

The existing water mains are anticipated to be sufficient to meet fire flow requirements, as they are large oversized lines that were originally sized to meet future development needs in the Project area. In any case, such determination would be confirmed through an analysis

performed by CWS at the time a development application has been filed with the City. Further, all new lines included within the development would be sized to meet fire flow requirements.

In summary, the Project's total estimated water demand at buildout would not exceed available supplies or distribution infrastructure capabilities, the Project would not create a significant impact relative to the existing conveyance system, and fire flow would be adequate to meet LACFD requirements. Therefore, the Project would generate a less than significant impact with regard to water supply and water conveyance systems.

4. MITIGATION MEASURES

Although development of the proposed Project is not anticipated to result in significant impacts to water supply services, the following measures would ensure that water resources would be conserved to the extent feasible:

Mitigation Measure J.1-1: The Building Department and the Planning Division shall review building plans to ensure that water reducing measures are utilized, as required by Title 20 and Title 24 of the California Administrative Code. These measures include, but are not limited to, water conserving dishwashers, low-volume toilet tanks, and flow control devices for faucets.

Mitigation Measure J.1-2: The Project shall comply with the City's landscape ordinance, "A Water Efficient Landscape Ordinance," as required by the State Water Conservation Landscape Act.

Mitigation Measure J.1-3: The Applicant shall provide reclaimed water for the Project's non-potable water needs, if feasible.

Mitigation Measure J.1-4: Landscaping of the Project site shall utilize xeriscape (low-maintenance, drought-resistant) plantings.

Mitigation Measure J.1-5: Automatic irrigation systems shall be set to insure irrigation during early morning or evening hours to minimize water loss due to evaporation. Sprinklers must be reset to water less in cooler months and during rainfall season so that water is not wasted on excessive landscape irrigation.

Mitigation Measure J.1-6: The Project shall be designed to recycle all water used in cooling systems to the maximum extent possible.

Mitigation Measure J.1-7: To the maximum extent feasible, reclaimed water shall be used during the grading and construction phase of the Project for the following activities: (1) dust control, (2) soil compaction, and (3) concrete mixing.

Mitigation Measure J.1-8: Water lines and hydrants shall be sized and located so as to meet the fire flow requirements established by the Los Angeles County Fire Department.

5. CUMULATIVE IMPACTS

Section III.B of the Draft EIR identifies 36 Related Projects that may be developed within the vicinity of the proposed Project. Of the 36 Related Projects, 35 are located within the Dominguez District. Related project development is situated such that the water infrastructure that would support the identified related projects would not utilize the water mains in the immediate Project vicinity that would be utilized by the proposed Project. Notwithstanding, these projects would contribute with the proposed Project to the total consumption of water in the service area. The water-relevant related projects unto themselves, as well as in conjunction with the proposed Project, are shown in Table 69 on page 517. As indicated, the Related Projects would consume 1,012,812 gallons of water per day; or 369.6 million gallons per year. With the proposed Project the total consumption would be 1,808,282 gallons per day, or 660.0 million gallons per year. This amounts to approximately 96% of 1,880,000 gallons per day growth in demand that was forecasted to occur in the Dominguez District between 2005 and 2010. The actual demand from the related Projects may vary, as some of these projects may not be developed, or may be developed at a later time. It may also be noted that the total consumption of 1,808,282 gallons per day would be 21% of the 8,440,000 gallons per day growth forecasted to occur through 2025. However, since the amount of cumulative water consumption identified is at the edge of the five year forecast, it is noted that a significant cumulative impact could occur without monitoring and planning pursuant to existing regulations.

As discussed above in Subsection 2.a, Regulatory Framework, CWS, as a public water service provider, is required to prepare and periodically update an UWMP to plan and provide for water supplies to serve existing and projected demands. The UWMP prepared by CWS accounts for existing development within the City, as well as projected growth anticipated to occur through redevelopment of existing uses and the development of new uses. In addition, water supply assessments for large-scale projects, in conformance with Senate Bill 610 (Costa), SB 221 (Kuehl) and the UWMP, evaluate the quality and reliability of existing and projected water supplies, as well as alternative sources of water supply and how they would be secured if needed. A WSA was prepared for the proposed Project by the CWS, which concludes that adequate water supplies are available to meet the proposed Project's potable water demand.

Table 69

Forecast of Cumulative Water Consumption

Land Use	Size	Water Consumption	
		Average Daily Flow ^a (gallons per day)	Annual Generation (million gal/year) ^b
Retail ^b	919,207 sq.ft.	179,456	65.5
Residential	588 units	126,126	46.0
Office	1,740,070 sq.ft.	382,815	139.7
Light Industrial	871,192 sq.ft.	191,622	70.0
Churches	30,200 sq.ft.	1,510	0.6
Gym (with Showers)	33,000 sq.ft.	21,780	7.9
Training Facilities	80,000 sq.ft.	20,000 ^c	7.3
Hotel	200 rooms	27,500	10.0
Movie Theater	46,000 sq.ft. ^d	6,325	2.3
Childcare	150 children	3,300	1.2
University Expansion	1,479 students	32,538	11.9
Dormitories	240 beds	19,800 ^e	7.2
Total Related Projects in Service Area		1,012,812	369.6
Proposed Project		795,470	290.3
Total Cumulative Water Consumption		1,808,282	660.0

^a Unless noted, these values are based on County Sanitation Districts of Los Angeles County average daily waste generation factors for individual land uses (March 2004) (in gallons per day per 1,000 sq. ft., unless noted), increased by 10% to create the water consumption factors. The factors are as follows.: Retail – 150, Residential -195 per unit, Office -200, Light Industrial -200, Churches -45, Gym (with Showers) -600, Hotel- 125 per room, Indoor Theater -125, Childcare – 20 per child, University Growth – 20 per student. (Calculations are provided in Appendix A.)

^b Annual water consumption assumes 365 days of operation a year.

^c A generation factor of 250 gallons per 1,000 square feet for Practice Facilities.

^d Total square footage of the movie theater was calculated based on a 2,000 seat theater and an assumption of 23 sq. ft. per seat.

^e Based on a consumption rate for dormitories of 75 gallons per bed, obtained from the City of Los Angeles waste generation factors (March 2002).

Source: PCR Services Corporation.

Given that the UWMP plans and provides for water supplies to serve existing and projected needs, including those of future growth and development that may occur through related projects, and that the requirements of Senate Bill 610 and SB 221 provide the means to ensure that the water supply needs of notable development projects have been carefully considered relative to CWS's ability to adequately meet future needs, it is anticipated that CWS would be able to supply the demands of the Project and related projects through the foreseeable future. With implementation of the mitigating regulatory protections, no significant cumulative impacts related to water demand are anticipated.

6. LEVEL OF SIGNIFICANCE AFTER MITIGATION

The total estimated water demand for the Project at buildout is not anticipated to exceed available supplies or distribution infrastructure capabilities (i.e., water infrastructure), or exceed the projected demand assumed in the planning for future water infrastructure needs. No local or regional upgrading of water conveyance systems is anticipated and, as such, no cumulative construction impacts from the development of additional off-site water lines are anticipated. Therefore, no significant unavoidable adverse impacts relative to water consumption are anticipated to occur.

IV. ENVIRONMENTAL IMPACT ANALYSIS
J. UTILITIES
2. WASTEWATER

1. INTRODUCTION

The following section addresses the potential impacts of the proposed Project on local and regional wastewater facilities and infrastructure. The analysis estimates and compares the demand for service to the capacity of the existing and proposed collection, conveyance, and treatment facilities. The Project's consistency with adopted wastewater plans and policies is also addressed.

2. ENVIRONMENTAL SETTING

a. Regulatory Framework

The Los Angeles County Public Works Department (LACPWD) maintains the local sewer lines that run in the street to the trunk sewer lines. Wastewater treatment in the Project area is under the jurisdiction of the County Sanitation Districts of Los Angeles County (the Districts), which is part of the Los Angeles County Department of Public Works. The City of Carson contracts with the Districts to maintain the trunk sewer lines within the City of Carson. The Project site is located within the jurisdictional boundaries of District No. 8.¹⁵⁸

The Districts are empowered by the California Health and Safety Code to charge a fee for the privilege of connecting to a Sanitation District's sewerage system. These fees are used to provide additional conveyance, treatment, and disposal facilities which are made necessary by new users connecting to the sewerage system, or by existing users who significantly increase the quantity; or strength of their wastewater discharge. The connection Fee Program insures that all users pay their fair share for any necessary expansion of the system.

b. Wastewater Infrastructure

Wastewater generated on the Project site would be treated at the Joint Water Pollution Control Plant (JWPCP), located at 24501 South Figueroa Street in Carson.

¹⁵⁸ <http://www.lacsd.org/cities.htm> accessed May 24, 2005

The JWPCP is part of the Joint Outfall System that provides sewage treatment and disposal for residential, commercial and industrial users within the 17 sanitation districts in Los Angeles County that are participants in the Joint Outfall Agreement. These 17 districts, known as the Joint Outfall Districts (JOD), are located in the central Los Angeles Basin and primarily serve the eastern and southern portions of the county. The JOD extend south and west from the San Gabriel Mountain foothills to the Palos Verdes Peninsula, bounded to the east by San Bernardino and Orange counties and to the west by the Cities of Glendale and Los Angeles. The system consists of six treatment plants, over 1,000 miles of trunk sewer lines, 48 pumping plants, and four submarine outfalls. The JWPCP is one of the largest wastewater treatment plants in the world. It serves a population of about 3.5 million people and many industries in southern and eastern Los Angeles County. The JWPCP has a design capacity of 385 million gallons per day (mgd) and currently processes an average flow of 324.9 mgd.¹⁵⁹

Within the City of Carson most local sewer lines are 8 inches in diameter and there are approximately one dozen trunk lines, ranging in size from 50 inches to 8 feet in diameter, which are generally located as follows: (1) Del Amo Boulevard – running east to west; (2) Main Street – running north to south; (3) Wilmington Avenue – three lines running north to south and two lines running east to west along the railroad tracks; (4) Alameda Street – two lines running north to south and (5) Broadway – two lines running north to south. No new upgrades are currently planned.¹⁶⁰

The existing district trunk sewers serving the Project site are shown in Figure 41 on page 521. The Districts' Del Amo Replacement Trunk Sewer is located in Del Amo Boulevard between the San Diego Freeway and Main Street. The District was unable to provide capacity information on the Del Amo Replacement Trunk Sewer. However, this is a 42-inch diameter, recently constructed, replacement sewer line with a design capacity of 10.8 mgd. The Main Street Relief Sewer is located in Main Street south of Del Amo Boulevard. This is a 42-inch diameter line with a design capacity of 20.2 mgd. It conveyed a peak flow of 5.8 mgd when last measured in 2003.¹⁶¹ There is also an existing local system of lines located within the Project site that was installed in the 1980s. This system includes lines ranging from eight inches to 18 inches in size that may be used, if appropriate for the proposed development program.

¹⁵⁹ *The County Sanitation Districts of Los Angeles County. Letter from Ruth I. Frazen Engineering Technician, Planning and Property Management Section, to Mr. Ronald Winkler, Economic Development General Manager, Carson Redevelopment Agency. June 2, 2005.*

¹⁶⁰ *City of Carson General Plan, Chapter 4 Transportation and Infrastructure Element.*

¹⁶¹ *Information on the existing lines was provided by the County Sanitation Districts of Los Angeles County. Letter from Ruth I. Frazen Engineering Technician, Planning and Property Management Section, to Mr. Ronald Winkler, Economic Development General Manager, Carson Redevelopment Agency. June 2, 2005.*

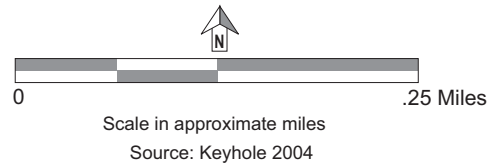
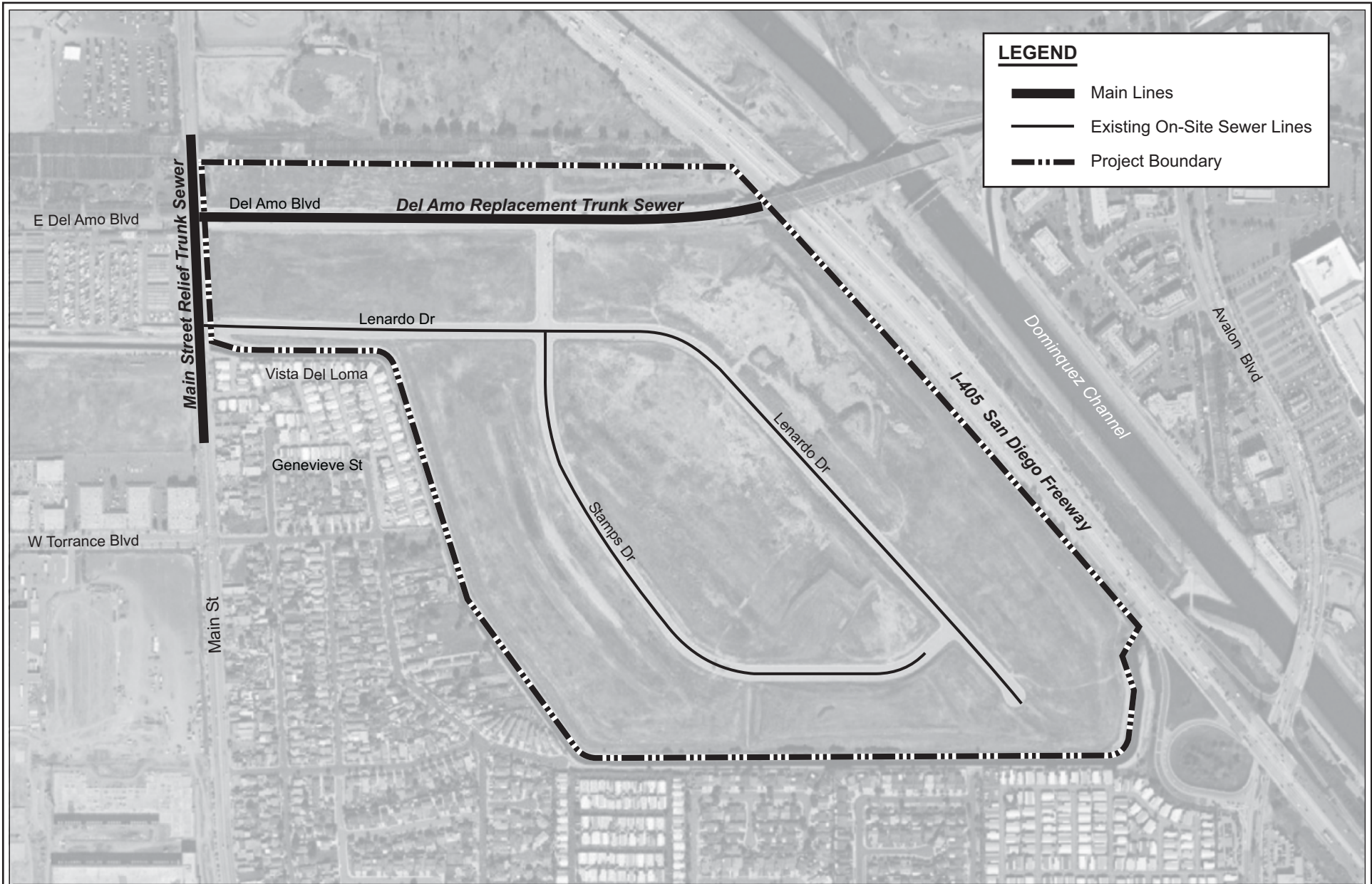


Figure 41
Existing Sanitary Sewer Lines

3. PROJECT IMPACTS

a. Methodology

Wastewater generation estimates for individual land use categories were provided by the County Sanitation Districts of Los Angeles County. The generation factors were multiplied by the amount and types of development proposed to determine the Project's wastewater generation. The forecasted amount of wastewater generation was compared to the capacities of the treatment facility and conveyance systems that would serve the Project site to determine whether these facilities would be sufficient for meeting the Project's needs.

b. Thresholds of Significance

The Project would have a significant wastewater impact if:

- The Project would cause a more than limited increase in wastewater flows at a point where, and a time when, a sewer's capacity is already constrained or that would cause a sewer's capacity to become constrained, or
- The Project's additional wastewater flows would substantially or incrementally exceed the future scheduled capacity of any one treatment plant.

c. Project Design Features

The proposed Project would provide an on-site sewer system that would connect with the existing trunk sewer lines in Del Amo Boulevard and Main Street. The on-site system may include use of the existing on-site lines in Lenardo Drive and Stamps Drive, or may replace these lines with lines better suited to the currently proposed development. The proposed Project would also incorporate water conservation methods such as ultra low-flow toilets, low-flow showerheads, low-flow fixtures and water saving appliances, as required by existing regulations. The Specific Plan includes provisions for the installation of a reclaimed water infrastructure system if a supply of reclaimed water is feasible by 2009.

d. Project Impacts

(a) Construction

During construction of the Proposed Project, a negligible amount of wastewater would be generated by construction personnel. 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 time when a sewer's capacity is already constrained or that would cause a sewer's capacity to become constrained. Additionally, construction is not anticipated to generate wastewater flows that would substantially or incrementally exceed the future scheduled capacity of any treatment plant by generating flows greater than those anticipated. Thus, impacts during construction are concluded to be less than significant

The Project's on-site wastewater system would be developed during the construction of the Project, subsequent to implementation of the remediation cap and site grading, and prior to the construction of new buildings. The system may require new tie-ins to the existing sewer lines in Main Street and Del Amo Boulevard; particularly if the existing on-site lines in Stamps Drive and Lenardo Drive are replaced. If such new connections are required, Project construction would require construction activity within the Del Amo Boulevard and Main Street rights of way. Such construction would require approval of the Districts.

If new connections to the existing main lines are required, this could result in secondary, short-term construction impacts. Traffic disruption may occur for trenching, backfilling, and repaving of the roadway. The analysis of Project impacts on traffic includes a discussion of construction impacts, and recommends a Traffic Management Plan as a mitigation measure. With implementation of the identified mitigation measures short-term impacts on traffic due to the construction of the Project's sewer line improvements would be less than significant.

(b) Operation

The projected daily and annual wastewater generation for the proposed Project is summarized in Table 70 on page 524. As indicated, the Project would generate 721,113 gallons per day (gpd) that would need to be conveyed to, and treated at, the JWPCP. As described in the setting section above, the JWPCP has a design capacity of 385 million gallons per day (mgd) and currently processes an average flow of 324.9 mgd.¹⁶² The Project's additional waste flow would require the use of 1.2% of the remaining 60.1 mgd capacity, and would not cause an exceedance of the available capacity.

Also, the Project's total 721,113 gpd would be less than the remaining capacity of 14.4 mgd in the District's 42 inch Main Street Relief Sewer, which would only receive a portion of

¹⁶² *The County Sanitation Districts of Los Angeles County. Letter from Ruth I. Frazen Engineering Technician, Planning and Property Management Section, to Mr. Ronald Winkler, Economic Development General Manager, Carson Redevelopment Agency. June 2, 2005.*

Table 70
Projected Sewage Generation

Use	Size (sq.ft.)	Average Daily Flow (gallons per day)^a	Annual Generation (million gal/year)^b
Proposed Project			
Residential			
For Sale	1,150 units	224,250	81.9
Rental	400 units	62,400	22.8
Neighborhood Commercial	130,000 sq.ft.	38,420	14.0
Restaurant	81,125 sq.ft.	81,125	29.6
Hotel (300 rooms)	200,000 sq.ft.	37,500	13.7
Commercial Recreation/Entertainment	214,000 sq.ft.	25,918	9.5
Regional Commercial	1,370,000 sq.ft.	<u>251,500</u>	<u>91.8</u>
Total	--	721,113	263.3

^a Calculations are provided in Appendix I.

^b Annual generation reflects the Daily Flow x 365 days.

Source: PCR, May 2005.

that total.¹⁶³ The District was unable to provide capacity information on the Del Amo Replacement Trunk Sewer. However, this is a 42-inch diameter, recently constructed (2004), replacement sewer line with a design capacity of 10.8 mgd. It conveys waste water from limited uses in the vicinity of the Project site itself, and is not known to have capacity constraints for the near future. The District's review of the Project indicated that there are no known limitations to the provision of sewer services, at this time. However, the District notes that significant impacts on downstream portions of the District's sewerage system can occur and capacities need to be verified at the time actual new connections are made. As a matter of course, the District reviews/re-reviews projects at the time building permits are issued and new sewer connection permits requested with payment of fees.

New users to the sewerage system and users with increases in the strength and/or quantity of wastewater attributable to a particular parcel or operation are required to attain a Trunk Sewer Connection Permit, issued by the District, and pay connection fees. As described by the District, "This connection fee is required to construct an incremental expansion of the Sewerage System to accommodate the proposed project, which will mitigate the impact of this project on the

¹⁶³ As described in the Setting Section above, the Main Street Relief Sewer has a design capacity of 20.2 mgd, and conveyed a peak follow of 5.8 mgd when last measured in 2003.

present Sewerage System.”¹⁶⁴ Thus, the District assures that new conditions have not arisen that would limit service and/or that appropriate improvements to provide service go forth.

In order for the Districts to conform to the requirements of the Federal Clean Air Act (CAA), the design capacities of the Districts’ wastewater treatment facilities are based on the regional growth forecast adopted by the Southern California Association of Governments (SCAG). All expansions of the Districts’ facilities are sized and service is phased in a manner that is consistent with the SCAG regional growth forecast. The available capacities of the Districts’ facilities are, therefore, limited to levels associated with the approved growth identified by SCAG. As described in Section IV.A, Land Use and Planning, the Project is consistent with SCAG regional forecasts for the South Bay Cities sub-region.

Therefore, the Project is not anticipated to cause a measurable increase in wastewater flows concurrent in time or at a point when a sewer’s capacity is already constrained or that would cause a sewer’s capacity to become constrained during peak service. As previously described, the Project would not be permitted prior to the determination of treatment capacity, sufficiency of local service lines and payment of fees to mitigate potential impacts. Therefore, no significant impacts in relation to regional treatment capacity would occur.

4. MITIGATION MEASURES

Although development of the proposed Project is not anticipated to produce significant impacts to sanitary sewers, the following measures would ensure that the increase in sewage generation would result in a less than significant impact.

Mitigation Measure J.2-1: All required sewer improvements shall be designed and constructed according to the standards of the City of Carson and County of Los Angeles.

Mitigation Measure J.2-2: Fee payment is required prior to the issuance of a permit to connect to district sewer facilities.

Mitigation Measure J.2-3: The Building and Safety and Planning Divisions of the Development Services Department shall review building plans to ensure that water reducing measures are utilized, as required by Title 24 of the California Administrative Code. These measures include, but are not limited to, water

¹⁶⁴ *The County Sanitation Districts of Los Angeles County. Letter from Ruth I. Frazen Engineering Technician, Planning and Property Management Section, to Mr. Ronald Winkler, Economic Development General Manager, Carson Redevelopment Agency. June 2, 2005.*

conserving dishwashers, low-volume toilet tanks, and flow control devices for faucets.

Mitigation Measure J.2-4: The project shall include a dual plumbing system designed to utilize reclaimed water for non-potable uses.

5. CUMULATIVE IMPACTS

Section III.B of the Draft EIR identifies 36 Related Projects that may be developed within the vicinity of the proposed Project. These projects would contribute with the proposed Project to the generation of wastewater in the Project area. The wastewater generated by these projects unto themselves, as well as in conjunction with the proposed Project are shown in Table 71 on page 527. As indicated, the related projects would collectively generate 924,638 gallons of wastewater per day; or 337.4 million gallons per year. With the proposed Project the total wastewater generation would be 1,645,751 gallons per day and 600.7 million gallons per year. Related project development is situated such that the water infrastructure that would support the identified related projects would not utilize the water mains in the Project's vicinity that would be utilized by the proposed Project. Thus, cumulative impacts on the local conveyance system would be less than significant.

As described in the setting section above, the JWPCP has a design capacity of 385 mgd and currently processes an average flow of 324.9 mgd.¹⁶⁵ The additional waste flow of the Project and the related projects combined would require the use of 2.7 % of the remaining 60.1 mgd capacity, and would not cause an exceedance of the available capacity. Thus, cumulative impacts on the wastewater treatment capacity would be less than significant.

In relation to broad growth and demand, all of the related projects would individually require a Trunk Sewer Connection Permit, issued by the Districts for the JWPCP. The Los Angeles County Department of Public Works must first determine if there is allotted sewer capacity available for any project prior to accepting building plans for approval. Therefore, cumulative impacts to the local and regional sewer conveyance and treatment system, from the implementation of the proposed Project and the identified related projects are not anticipated to exceed capacities of the local sewer system or treatment facility, and cumulative impacts would thus be less than significant.

¹⁶⁵ *The County Sanitation Districts of Los Angeles County. Letter from Ruth I. Frazen Engineering Technician, Planning and Property Management Section, to Mr. Ronald Winkler, Economic Development General Manager, Carson Redevelopment Agency. June 2, 2005.*

Table 71

Forecast of Cumulative Sewage Generation

Land Use	Size	Sewage Generation	
		Average Daily Flow ^a (gallons per day)	Annual Generation (million gal/year) ^b
Retail ^b	1,087,612 sq. ft.	163,142	59.5
Residential	609 units	118,755	43.3
Office	1,740,070 sq. ft.	348,014	127.0
Light Industrial	871,192 sq.ft.	174,238	63.6
Churches	30,200 sq.ft.	1,359	0.5
Gym (with Showers)	33,000 sq.ft.	19,800	7.2
Training Facilities	80,000 sq.ft.	18,000 ^c	6.6
Hotel	200 rooms	25,000	9.1
Movie Theater	46,000 sq.ft. ^d	5,750	2.1
Childcare	150 children	3,000	1.1
University Expansion	1,479 students	29,580	10.8
Dormitories	240 beds	18,000 ^e	6.6
Total Related Projects		924,638	337.4
Proposed Project		721,113	263.3
Total Cumulative Sewage Generation		1,645,751	600.7

^a Unless noted, these values are based on the following County Sanitation Districts of Los Angeles County average daily generation factors for wastewater from different types of land uses (March 2004) (in gallons per day per 1,000 sq. ft., unless noted): Retail – 150, Residential -195 per parcel, Office - 200, Light Industrial -200, Churches -45, Gym (with Showers) -600, Hotel- 125 per room, Indoor Theater -125, Childcare – 20 per child, University Growth – 20 per student. (Calculations are provided in Appendix A.)

^b Annual water consumption assumes 365 days of operation a year.

^c Based on the generation factor of 225 gallons per 1,000 square feet for Practice Facilities.

^d Total square footage of the movie theater was calculated based on a 2,000 seat theater and an assumption of 23 sq. ft. per seat.

^e Based on a consumption rate for dormitories of 75 gallons per bed, obtained from the City of Los Angeles waste generation factors (March 2002).

Source: PCR Services Corporation.

6. LEVEL OF SIGNIFICANCE AFTER MITIGATION

With the implementation of the recommended mitigation measures, any local deficiencies in sewer lines would be identified and remedied and wastewater generation by the Project would be reduced. No significant impact on wastewater conveyances or the capacity of the Joint Water Pollution Control Plant would occur.

IV. ENVIRONMENTAL IMPACT ANALYSIS
J. UTILITIES
3. SOLID WASTE

1. INTRODUCTION

This section focuses on the ability of the solid waste disposed of at disposal facilities that serve the City of Carson to accommodate the solid waste generated by the proposed Project. Information regarding the various regulations established by the State as well as the City of Carson directed towards reducing the volume of solid waste requiring landfill disposal are also described. In order to address the potential impacts of the proposed Project on solid waste facilities, a forecast of the amount of solid waste that would require landfill disposal during construction and operations of the Project is identified.

2. ENVIRONMENTAL SETTING

a. Regulatory Setting

The California Integrated Waste Management Act of 1989 and the California Solid Waste Reuse and Recycling Access Act of 1991, as amended, identify programs local jurisdictions must implement to achieve specific solid waste disposal reduction goals and requires each development project to provide an adequate storage area for the collection and removal of recyclable materials.

The Los Angeles County Solid Waste Management Action Plan is a comprehensive solid waste management study and implements a regional approach to managing solid waste, incorporating source reduction, recycling, and composting programs along with public education awareness programs. The Action Plan recognizes that landfills will remain an integral part of the County's solid waste management system for the foreseeable future, providing for 15 years of disposal capacity on a countywide basis. The Action Plan reaffirms the policy of managing solid waste in Los Angeles County through a reasonable balance of public and private operations and facilities, including a regional public/private landfill system. This policy, combined with sufficient daily disposal capacity, relies on competitive market forces rather than government action to regulate waste flow.

The City of Carson incorporated the requirements of AB 939 into the Municipal Code in 1991.¹⁶⁶ The City's SRRE was approved in 1996,¹⁶⁷ and the City adopted a Construction and Demolition Debris Recycling Program in 2005.¹⁶⁸

b. Existing Conditions

Solid Waste Collection

Solid waste generated by the City of Carson is collected by two private waste haulers: Waste Management and EDCO LLC. The City contracts with Waste Management and EDCO LLC for its commercial/industrial waste. The City contracts with Waste Management for all of its residential waste collection services including the pickup of sorted recyclable materials.¹⁶⁹ Both commercial/industrial and residential agreements with the waste haulers are effective until 2013. According to the City's General Plan Transportation and Infrastructure Element, Waste Management collects approximately 70,000 tons of solid waste from residential customers and 153,500 tons of solid waste from commercial and industrial customers per year, a total of roughly 612 tons per day.

The solid waste collected by Waste Management is transported to the company's transfer station at 321 West Francisco Street in Carson, where it is sorted. The 10-acre facility has a permitted capacity of 5,300 tons per day. Once the materials are sorted, wastes such as tires, green waste, steel, and wood are sent to special facilities for disposal and recycling.¹⁷⁰ Commingled commercial recycling is separated and sold to different markets according to value. Green waste is also trucked to the landfills and is utilized as daily cover. Any remaining waste is hauled to one of two Waste Management-owned landfills: Bradley Landfill located in Sun Valley or El Sobrante Landfill located roughly 75 miles from Carson in Riverside County.

Solid Waste Disposal

Municipal solid waste is generally disposed of at landfill facilities for non-hazardous, household waste (Class III landfills). The City of Carson does not own or operate any landfills. Solid waste generated in the City of Carson is taken to one of two Waste Management-owned landfills: Bradley Landfill located in Sun Valley or the El Sobrante Landfill located in Riverside

¹⁶⁶ *City of Carson Municipal Code, Section 5200.*

¹⁶⁷ *City of Carson General Plan – Open Space and Conservation Element.*

¹⁶⁸ *City of Carson, Interoffice Memorandum to City staff/contractors/permit applicants from M. Victor Rollinger, June 1, 2005.*

¹⁶⁹ *Email from Denny Bacon, Waste Management Specialist, City of Carson dated September 9, 2005.*

¹⁷⁰ *City of Carson General Plan – Open Space and Conservation Element.*

County. Approximately 95 percent of the City's solid waste is currently disposed of at El Sobrante Landfill.¹⁷¹ As of June 6, 2001, the El Sobrante Landfill had a remaining capacity of 3,674,267 cubic yards. Based on this remaining capacity and a throughput of 10,000 tons per day, the landfill has an expected closure date of January 1, 2030.

Unclassified (Inert) Landfills are defined as facilities that accept materials such as soil, concrete, asphalt, and other construction and demolition debris. Inert landfills within Los Angeles County include the following: Azusa Land Reclamation, NU-Way Live Oak Landfill, Peck Road Gravel Pit and Reliance Pit #2. According to the County's 2003 Annual Report,¹⁷² as of December 31, 2003, the total remaining permitted inert waste capacity in Los Angeles County was estimated to be approximately 69.94 million tons.

At the discretion of the Project contractor, construction and demolition debris generated by the Project would either be taken to the downtown Los Angeles diversion facility or sorted on-site and then trucked to specialized recycling facilities. Construction and demolition debris, such as wood or dirt, would be taken to a specialized recycling facility that accepts that specific material. The contractors and waste haulers providing services to the Project would determine which facility the Project's construction and demolition debris would be taken to. Due to the varying nature of the materials that make up construction and demolition debris (i.e., wood, metal, dirt, concrete, dry wall) they are generally not transported to the same facility.¹⁷³

In addition, the City of Carson currently operates several solid waste diversion programs, such as composting, source reduction, recycling, waste to energy, and material recovery. On an annual basis, the City has met or exceeded the waste diversion goals set forth in AB 939 since the legislation was enacted (i.e., the diversion goal of 50% of the City's waste stream). In reporting year 2003, the City had a diversion rate of 68 percent.¹⁷⁴

3. IMPACT ANALYSIS

a. Methodology

The solid waste analysis estimates the amount of solid waste that would be disposed of at landfills during Project operation and construction.¹⁷⁵ Solid waste disposal during Project

¹⁷¹ Email from Denny Bacon, Waste Management Specialist, City of Carson dated September 9, 2005.

¹⁷² County of Los Angeles, Department of Public Works, 2003 Annual Report on the Countywide Summary Plan and Countywide Siting Element, February 2005.

¹⁷³ *Ibid.*

¹⁷⁴ CIWMB website, <http://secure.ciwmb.ca.gov/juris/ear/summary.asp>, accessed February 28, 2005.

¹⁷⁵ Construction is calculated using U.S. EPA solid waste generation factors. These factors take into account the construction debris that would be generated during Project construction.

operation is estimated for both the Project's commercial and residential components. The amount of solid waste disposal, during Project construction and operations, is then compared with the available capacity at the landfill(s) currently accepting solid waste from the City of Carson.

b. Thresholds of Significance

The proposed Project would have a significant impact if:

- The Project generates solid waste at a level that exceeds the available capacity of the existing and/or planned solid waste facilities (i.e., landfills); and
- The Project conflicts with the solid waste policies and objectives set forth in the Carson Municipal Code, the City's SRRE, and the City's Construction and Demolition Debris Recycling Program.

c. Project Impacts

(1) Construction

Construction and demolition debris would be generated during the construction of the proposed Project. Street improvements in conjunction with the installation of domestic water and sewer infrastructure are planned as part of Project construction activities. Should existing roadways be removed, construction debris would consist primarily of asphalt paving. The installation of water and sewer lines would also generate related construction debris. However, as the Project site is essentially undeveloped, no structures would be demolished during Project construction. Solid waste associated with the above-listed improvements would be disposed of at an unclassified landfill accepting inert waste.

The following calculations are based on an average of 4.02 pounds of construction debris per square foot of commercial construction and 4.38 pounds of construction debris per square foot of residential construction.¹⁷⁶ Construction of the Project's 1,995,125 square feet of commercial development would generate approximately 4,010 tons (8,020,403 pounds) of construction debris. As the exact square footage of development of the Project's 1,550 multifamily residential units is yet to be determined, based on preliminary FAR calculations, an estimate of 3,850,698 square feet will be used to assess the amount of solid waste that would be generated by construction of this portion of the Project. Thus, construction of the Project's residential component would generate approximately 8,433 tons (16,866,057 pounds) of

¹⁷⁶ U.S. EPA, Report No. 530R98010, *Characterization of Building-Related Construction and Demolition Debris in the United States*, June 1998, page A-1.

construction debris. Assuming that no construction debris would be recycled, Project construction would generate a total of roughly 12,443 tons of solid waste. With implementation the City's mandatory Construction and Demolition Debris Recycling Program, a minimum of 50 percent of the Project-generated construction waste would be diverted, and thus, not be disposed of at landfill facilities. With the implementation of the City's Construction and Demolition Debris Recycling Program, the actual total amount of construction debris disposed of at a landfill would be on the order of 6,222 tons.

As of December 31, 2003, the total remaining permitted inert waste capacity in Los Angeles County was estimated to be approximately 69.94 million tons. Based on the average 2003 disposal rate of approximately 1.2 million tons per year, this capacity will be exhausted by about 2065 (i.e., approximately 60 years).¹⁷⁷ As previously discussed, due to the varying nature of construction and demolition debris materials, Project-related construction waste would be distributed to various disposal facilities. As Project construction debris would represent approximately .0009 percent of remaining inert landfill capacity, impacts attributable to the Project's construction debris are concluded to be less than significant.

(2) Operation

Proposed Project operations would generate municipal solid waste from the variety of residential and commercial uses anticipated to locate the Project site. Solid waste disposal rates, as set forth in the CIWMB Solid Waste Characterization Database, are used in this analysis. The estimated amount of solid waste that would be disposed of during Project operations is presented in Table 72 on page 533.

Residential waste disposal rates reflect the amount (tons) of solid waste disposal generated per dwelling unit on an annual basis. The statewide waste disposal rate for multifamily residential units is 0.46 tons per unit per year. As 1,550 units would be constructed, approximately 713 tons of solid waste that requires disposal at a landfill accepting municipal waste would be generated yearly by the residential portion of the Project. Waste disposal rates for the business types anticipated to occur at the Project site are calculated according to the amount (tons) of waste that an employee generates on an annual basis that is anticipated to be disposed of at a landfill that accepts municipal waste. Based on the amount and types of proposed development (1,995,125 square feet), the Project's commercial component would require the disposal of 9,351 tons of solid waste per year. Thus, Project operations would require the disposal of approximately 10,064 tons of solid waste per year. This forecast of solid waste disposal may be greater than actual levels generated by the Project based on the higher level of solid waste diversion that presently occurs in Carson relative to the requirements of AB 939 (i.e., 68% diversion vs. a requirement of 50%).

¹⁷⁷ *County of Los Angeles, Department of Public Works, 2003 Annual Report on the Countywide Summary Plan and Countywide Siting Element, February 2005, page 43.*

Table 72

Solid Waste Disposal During Project Operation

Use Type	Disposal Rate (tons/unit/year) ^a	Amount of Development	Total	
Multifamily Residential	0.46	1,550 dwelling units	713 tons	
Commercial	Disposal Rate (tons/employee/year) ^b	Amount of Development	Employees ^d	Total
Retail	1.9	1,500,000 sq.ft.	4,000	7,600
Recreation & Entertainment	0.9	214,000 sq.ft.	571	514
Restaurant	3.1	81,125 sq.ft.	216	671
Hotel	2.1	<u>200,000 sq.ft.^c</u>	<u>270</u>	<u>567</u>
Total Commercial		1,995,125 sq.ft.	5,057	9,351
Grand Total				10,064 tons/year

^a Based on statewide disposal rate for multifamily residential units published by the CIWMB.

^b Based on CIWMB waste disposal rates for business types

^c Assumes 300 hotel rooms.

^d Derived from factors generated by PCR Services Corporation based on data presented in the Institute of Transportation Engineers, Trip Generation Manual, 6th Edition, 1997.

Source: PCR Services Corporation.

In considering the Project's contribution to the Countywide waste stream it is important to note that the Project's solid waste generation would constitute a very small fraction of the amount of solid waste generated in Los Angeles County on an annual basis. Specifically, the solid waste generated by the proposed Project at buildout would constitute 0.04 percent of the 23.8 million tons of solid waste disposal in Los Angeles County in 2003.

Municipal solid waste generated within the City of Carson is currently disposed of at either the El Sobrante Landfill or the Bradley Landfill. Whereas the Bradley Landfill is nearing capacity and may not be available once the Project is operational in 2010, the El Sobrante Landfill has a remaining life, based on current throughput levels, of 25 years. Even though El Sobrante is anticipated to have capacity through 2030, landfill capacity on a Countywide basis is an ongoing issue of concern. Notwithstanding, as roughly 95 percent of the City's solid waste is disposed of at the El Sobrante Landfill, which has sufficient remaining capacity, impacts associated with the proposed Project would be less than significant.

The Los Angeles County Integrated Waste Management Plan, inclusive of its annual reports, serves as the primary planning documents for the County's waste disposal needs. The 2003 Annual Report, the most recent available report, forecasts conditions over a 15-year

planning horizon. With each subsequent Annual Report, the 15-year planning horizon is extended by one year, thereby providing sufficient lead time to address any future shortfalls in landfill capacity. The 2003 Annual Report clearly concludes that there is enough capacity within permitted solid waste facilities (i.e., landfills) to serve Los Angeles County through the 15-year planning period of 2003–2018. The 2003 Annual Report specifically states that “the County of Los Angeles will protect the health and safety of all residents in the County by ensuring that solid waste disposal service, an essential public service, is provided without interruption through the 15-year planning period and in the long term”.

Furthermore, the Los Angeles County Department of Public Works and the County Integrated Waste Management Task Force submitted the first Five-Year Review Report for the Countywide Integrated Waste Management Plan in June 2004 (the latest available report). The Five-Year Review Report was approved by the California Integrated Waste Management Board in September 2004. The February 2, 2004, transmittal letter for this report states that the “updated disposal capacity need analysis demonstrates that the County of Los Angeles meet the disposal capacity requirements of AB 939 by successfully permitting and developing all in-county landfill expansions, by more extensively utilizing out-of-County disposal capacity, and developing facilities utilizing conversion technologies to the extent technically feasible” (February 2, 2004, letter, page 1). The Five-Year Review Report states that the “remaining landfill capacity and the rate of depletion of that capacity give an indication of the ability of jurisdictions in the County to meet the solid waste disposal needs of their residents and businesses, thereby protecting public health and safety and the environment” (Five-Year Review Report, page 63). This report repeats the conclusion of the 2003 Annual Report that “the County continues to have adequate disposal capacity (i.e., greater than 15 years)” (Five-Year Review Report, page 65). The Five-Year Review Report’s conclusions are based in part upon a survey of all cities within the County regarding their disposal rates and waste diversion programs.

Through a combination of compliance with City requirements regarding recycling, the limited proportion of Countywide solid waste generation attributable to the proposed Project, available capacity within the El Sobrante Landfill, and the ongoing legally required solid waste planning programs, it is concluded that Project operations would have a less than significant impact with regard to landfill disposal capacity. As the Project would comply with City-required recycling programs, Project operations would be consistent with the applicable provisions of the SRRE. As such, a less than significant impact would result.

4. MITIGATION MEASURES

Mitigation Measure J.3-1: All structures constructed or uses established within any part of the proposed Project site shall be designed to be permanently equipped with clearly marked, durable, source sorted recycling bins at all times to facilitate the separation and deposit of recyclable materials.

Mitigation Measure J.3-2: Primary collection bins shall be designed to facilitate mechanized collection of such recyclable wastes for transport to on- or off-site recycling facilities.

Mitigation Measure J.3-3: The Applicant shall coordinate with the City of Carson to continuously maintain in good order for the convenience of patrons, employees, and residents clearly marked, durable and separate recycling bins on the same lot, or parcel to facilitate the deposit of recyclable or commingled waste metal, cardboard, paper, glass, and plastic therein; maintain accessibility to such bins at all times, for collection of such wastes for transport to on- or off-site recycling plants; and require waste haulers to utilize local or regional material recovery facilities as feasible and appropriate.

Mitigation Measure J.3-4: Any existing on-site roads that are torn up shall be ground on site and recycled into the new road base.

Mitigation Measure J.3-5: Compaction facilities for non-recyclable materials shall be provided in every occupied building greater than 20,000 square feet in size to reduce both the total volume of solid waste produced and the number of trips required for collection, to the extent feasible.

Mitigation Measure J.3-6: All construction debris shall be recycled in a practical, available, accessible manner, to the extent feasible, during the construction phase.

5. CUMULATIVE IMPACT

As shown in Table 73 on page 536, development of the identified related projects would generate 23,391 tons of solid waste during construction. As with the proposed Project, pursuant to the City's Construction and Demolition Debris Recycling Program, at least 50 percent of the construction debris generated by the related projects would be required to be recycled. In comparison to a remaining inert landfill disposal capacity of 69.94 million tons, cumulative construction debris, incorporating the conservative assumption that there is no recycling of construction wastes, constitutes 0.03 percent of the remaining inert landfill capacity. Based on this small percentage, cumulative impacts on inert landfill capacity are concluded to be less than significant.

During operations, cumulative solid waste disposal for the related projects is forecasted to be approximately 36,630 tons on an annual basis. It is anticipated that the proposed Project and other related projects would not conflict with solid waste policies and objectives in the City's SRRE or Construction and Demolition Debris Recycling Program. Impacts to solid waste policies and objectives intended to help achieve the requirements of AB 939 from

Table 73

Forecast of Cumulative Waste Disposal

Land Use	Size	Number of Residents/Employees	Waste Disposal		
			Disposal Rate (tons/year) ^a	Total Operation	Construction ^b
Residential	913,500 sq.ft. ^c	2,186 ^d	0.41 ^e	896	2,001
University Expansion	200,000 sq.ft. ^f	1,479	0.41 ^e	606	402
Dormitories	204,000 sq.ft. ^g	240	0.41 ^e	98	447
Retail	1,087,612 sq.ft.	2,900	1.9	5,511	2,186
Office	1,740,070 sq.ft.	6,960	1.7	11,832	3,498
Light Industrial	871,192 sq.ft.	2,178	3.1	6,752	1,751
Churches	30,200 sq.ft.	60	0.9	54	61
Gym	33,000 sq.ft.	66	1.2	79	66
Training Facilities	80,000 sq.ft.	160	0.8	128	161
Hotel	134,000 sq.ft. ^h	222	2.1	466	269
Movie Theater	46,000 sq.ft. ⁱ	15	0.9	14	92
Childcare	7,000 sq.ft. ^j	163 ^k	0.8	130	14
Total Related Projects	5,346,574			26,566	10,948
Proposed Project	<u>5,845,823</u>			<u>10,064</u>	<u>12,443</u>
Total	11,192,397			36,630	23,391^l

^a Based on CIWMB waste disposal rates.

^b Expressed in tons. Factors based on generation rate of 4.02 and 4.38 pounds of debris per 1,000 square feet of commercial and residential construction, respectively (U.S. EPA Report, 530R98010, page A-1, June 1998).

^c Total square footage calculated based on 1,500 square feet per residential unit (609 units).

^d Based on 2000 Census data for Carson which includes an average household size of 3.59 persons.

^e CIWMB per capita disposal rate for Los Angeles County.

^f Total square footage based on information provided by CSUDH: 140,000 square feet of library space and 60,000 square feet for additions to the Student Union (1,479 students).

^g Total square footage calculated based on 850 square feet per bed (240 beds).

^h Total square footage calculated based on 200 hotel rooms.

ⁱ Total square footage calculated based on 23 square feet per seat (2,000 seats).

^j Total square footage based on information provided by CSUDH.

^k Based on student teacher ratio of 12 students per teacher (150 children).

^l Total does not include diversion.

Source: PCR Services Corporation.

implementation of the proposed Project and related projects would not be cumulatively significant. Cumulative annual solid waste generation represents 0.15 percent of the total solid waste generated in Los Angeles County in 2003. Based on this small percentage as well as the City's recycling programs and ongoing planning efforts at a Countywide level assuring 15 years of landfill capacity on an ongoing basis, cumulative impacts on municipal landfill capacity are concluded to be less than significant.

6. SIGNIFICANCE AFTER MITIGATION

The proposed Project would create an increase in solid waste disposal in the City of Carson. Construction of the proposed Project would not result in an increase in inert solid waste generation that would create a need for additional inert solid waste disposal facilities to adequately handle Project-generated inert waste. Thus, construction-related waste would result in a less than significant impact. Operation of the proposed Project would generate an estimated increase of 10 tons per year of Class III solid waste, based on the amount of proposed Project development. As the El Sobrante Landfill has available capacity for the next 25 years, it is anticipated that solid waste generated by the proposed Project could be accommodated at the existing facility. Thus, impacts associated with the Project's solid waste generation are concluded to be less than significant. Furthermore, the County via its established planning programs has concluded that landfill disposal capacity will be available for the next 15 years, and in the long-term.

The proposed Project would not conflict with the solid waste policies and objectives in the SRRE or the City's Construction and Demolition Debris Recycling Program impacts relative to adopted solid waste diversion programs and policies would be less than significant.