4.12 UTILITIES

This section analyzes potential impacts to utility systems, including water supply and conveyance infrastructure, wastewater conveyance and treatment infrastructure, and solid waste disposal systems. The water supply discussion is based on the findings of a Water Supply Assessment (WSA)[1] performed by the Los Angeles Department of Water and Power (LADWP). The WSA is included in its entirety in Appendix H. Storm drain infrastructure is discussed in Section 4.6, *Hydrology and Water Quality*.

4.12.1 Setting

a. Water. A description of the City's current and future water supplies and water conveyance infrastructure follows.

Water Regulatory Setting.

State Water Code. State of California Senate Bill (SB) 610 and 221 became effective January 1, 2002, amending sections 10910- 10915 of the State Water Code, and requiring that counties and cities consider the availability of adequate water supplies for certain new large developments. These statutes require that cities and counties obtain from the local water supplier written verification of sufficient water supply to serve proposed large development projects in their jurisdictions. SB 221 addresses water supply on new residential sub-divisions in non-urban areas. Pursuant to SB 610, projects that are required to obtain Water Supply Assessments include the following:

- *A proposed residential development of more than 500 dwelling units;*
- *A proposed shopping center or business establishment of more than 500,000 square feet of floor space or employing more than 1,000 persons;*
- *A proposed commercial office building of more than 250,000 square feet of floor space or employing more than 1,000 persons;*
- *A proposed hotel or motel of more than 500 rooms;*
- *A proposed industrial, manufacturing, or processing plant or industrial park of more than 40 acres of land, more than 650,000 square feet of floor are, or employing more than 1,000 persons;*
- *A mixed-use project that falls in one or more of the above identified categories; or*
- *A project not falling in one of the above-mentioned categories, but that would demand water equal or greater to a 500 dwelling unit project.*

In addition to the water supply standards identified above, Title 20 (Sections 1604 and 1606) and Title 24 (Sections 2-5307 and 2-5352) of the California Administrative Code (CAC) establish efficiency standards (i.e., maximum flow rates) for all new showerheads, lavatory faucets, and sink faucets. These regulations also prohibit the sale of fixtures that do not comply with the current regulations; prohibit the installation of fixtures unless the manufacturer has certified

[1] *The Los Angeles Board of Water and Power Commissioners adopted Resolution 010 199 approving tthe Water Supply Assessment on January 19, 2010.*

compliance with the flow rate standards; and address pipe insulation requirements that can reduce water used before hot water reaches fixtures.

City of Los Angeles Ordinances. The City of Los Angeles has adopted several ordinances in an effort to reduce water consumption. Specifically, Ordinance No. 172,075 (Chapter XII, Article II of the Los Angeles Municipal Code (LAMC)) requires all building owners to install low-flow showerheads with a maximum flow of 2.5 gallons per minute (GPM); water closets with a maximum of 3.5 GPM; and low flow urinals with a maximum 1.5 gallons per flush prior to obtaining building permits. Ordinance No. 170,978 (Chapter I, Article II of the LAMC) requires numerous water conservation measures in landscape, installation, and maintenance including, but not limited to, the use of drip irrigation and soak hoses in lieu of sprinklers to lower the amount of water lost to evaporation and overspray; setting automatic sprinkler systems to irrigate during the early morning or evening hours to minimize water loss due to evaporation; and watering less in the cooler months and during the rainy season.

Current and Future Water Supplies. The LADWP is the public water system that supplies water to users in the City of Los Angeles. The primary water sources upon which the LADWP relies are the Los Angeles Aqueducts (LAA), local groundwater, purchased water from the Metropolitan Water District of Southern California (MWD), and recycled water. Table 4.12-1 on the following page shows LADWP water supplies over the last ten years from these sources. Overall water supplies have remained fairly constant, though the amount of water derived from individual sources varies from year to year. The various sources used by the City are described below and described in greater detail in the WSA in Appendix H (beginning on page 19 of the WSA).

Los Angeles Aqueducts. Snowmelt runoff from the Eastern Sierra Nevada Mountains is collected and conveyed to the City of Los Angeles via the LAA. LAA supplies come primarily from snowmelt and secondarily from groundwater pumping, and can fluctuate yearly due to the varying hydrologic conditions. In recent years, LAA supplies have been less than the historical average because of environmental restoration obligations in Mono and Inyo Counties. The City holds water rights in the Eastern Sierra Nevada where LAA supplies originate. These supplies originate from both streams and from groundwater. Historically, these supplies were augmented from time to time by groundwater extractions from beneath the lands that the City had purchased in the Owens Valley.

Average deliveries from the LAA system have been approximately 239,100 acre-feet (AF) of water annually over the last five fiscal years. Based on computer modeling results, LADWP projects that the average annual LAA delivery is expected to be between approximately 200,000 AF and 230,000 AF.

Groundwater. LADWP traditionally extracts groundwater from nine wellfields throughout the Owens Valley and four local groundwater basins. LADWP owns about 315,000 acres of property in the Owens Valley. Groundwater pumped by LADWP from beneath its lands in Owens Valley is used in Owens Valley and Los Angeles in accordance with a long-term groundwater management plan. Additionally, LADWP currently exercises its adjudicated extraction rights in three local groundwater basins: San Fernando, Sylmar, and Central.

Table 4.12-1
LADWP Water Supply

Year	Water Source					Total
	Los Angeles Aqueducts	Local Groundwater	MWD	Recycled Water	Transfer, Spread, Spills, and Storage	
1999	309,037	170,660	164,112	1,812	-3,507	649,128
2000	255,183	87,946	336,116	1,998	2,569	678,674
2001	266,923	79,073	309,234	1,675	-1,994	658,899
2002	179,338	92,376	410,329	1,945	-1,405	685,392
2003	251,942	90,835	322,329	1,759	2,528	664,338
2004	202,547	71,831	391,834	1,774	-2,958	670,944
2005	368,839	56,547	185,346	1,401	3,140	608,933
2006	378,922	63,270	188,781	4,890	-1,336	637,199
2007	129,400	89,018	439,436	3,639	1,044	660,449
2008	147,365	60,149	429,110	7,051	1,664	642,011

Source: LADWP, Water Supply Assessment for the Mangrove Estates Mixed Use Development, January 19, 2010.
Note: Units are in acre-feet (AF).

LADWP has extracted the following quantities of groundwater from the Owens Valley in the last five runoff years (April 1 – March 31):

- *2004-2005 - 85,820 AF*
- *2005-2006 - 57,412 AF*
- *2006-2007 - 58,621 AF*
- *2007-2008 - 60,337 AF*
- *2008-2009 - 68,149 AF*

Owens Valley is not identified as an overdrafted basin in the California Department of Water Resources California's Groundwater Bulletin 118 Update 2003. Further, Bulletin 118 Update 2003 does not project the Owens Valley to become overdrafted if present groundwater management conditions continue.

In 1990, the City of Los Angeles and Inyo County as part of the preparation of the long-term groundwater management agreement, prepared the "Green Book for the Long-Term Groundwater Management Plan for the Owens Valley and Inyo County". It contains plans and procedures to prevent overdraft conditions from groundwater pumping as well as to manage vegetation in the Owens Valley.

The San Fernando and Sylmar basins are subject to the judgment in City of San Fernando v. the City of Los Angeles. Pumping is reported to the court-appointed Upper Los Angeles River

Area (ULARA) Watermaster. The Central Basin is also subject to court judgments. Pumping is reported to the DWR, who acts as Watermaster.

The San Fernando Basin is the largest of four basins within ULARA. The basin consists of 112,000 acres of land and comprises 91.2% of the ULARA valley fill. LADWP has accumulated nearly 406,313 AF of stored water credits in the San Fernando Basin as of October 2008 (120,560 AF of stored water credits that are available to be pumped now and 285,753 AF that are held in reserve). This is water LADWP can withdraw from the basin during normal and dry years or in an emergency, in addition to LADWP's approximately 87,000 AF annual entitlement in the basin. The majority of LADWP's groundwater is extracted from the San Fernando Basin. Sylmar Basin is located in the northern part of the ULARA, consisting of 5,600 acres and comprises 4.6% of the ULARA valley fill. LADWP currently has an annual entitlement of 3,405 AF from the Sylmar Basin. LADWP also has adjudicated rights to extract groundwater from the Central Basin. The annual entitlement to the Central Basin is 15,000 AF.

For the period of October 2007 to September 2008, LADWP extracted 50,009 AF, 2,996 AF, and 10,754 AF from the San Fernando, Sylmar, and Central basins, respectively. LADWP plans to continue production from its groundwater basins in the coming years to offset reductions in imported supplies. Extraction from the basins will, however, be limited by water quality and overdraft protection. The objective, over a period of years, is to extract an amount of groundwater equal to the native and imported water that recharges the basin. Extractions by LADWP from the San Fernando, Sylmar, and Central basins for the last available five years are shown in Table 4.12-2.

Table 4.12-2
Local Groundwater Basin Supply

Water Year (Oct-Sep)	San Fernando Basin	Sylmar Basin	Central Basin
2003-2004	68,626	3,033	15,209
2004-2005	49,085	1,110	13,401
2005-2006	38,042	2,175	13,725
2006-2007	76,251	3,919	13,609
2007-2008	50,009	2,997	10,754

Source: LADWP, Water Supply Assessment for the Mangrove Estates Mixed Use Development, January 19, 2010.
Note: Units are in acre-feet (AF).

Metropolitan Water District of Southern California. MWD is the largest water wholesaler for domestic and municipal uses in Southern California. As one of 26 member agencies, LADWP purchases water from MWD to supplement LADWP supplies from local groundwater and the LAA. MWD imports a portion of its water supplies from Northern California through the State Water Project's California Aqueduct and from the Colorado River through MWD's own Colorado River Aqueduct.

All of the MWD's 26 member agencies have preferential rights to purchase water from MWD. Pursuant to Section 135 of the MWD Act, "Each member public agency shall have a preferential right to purchase from the district for distribution by such agency, or any public utility therein empowered by such agency for the purpose, for domestic and municipal uses within the agency a portion of the water served by the district which shall, from time to time, bear the same ratio to all of the water supply of the district as the total accumulation of amounts paid by such agency to the district on tax assessments and otherwise, excepting purchase of water, toward the capital cost and operating expense of the district's works shall bear to the total payments received by the district on account of tax assessments and otherwise, excepting purchase of water, toward such capital cost and operating expense." This is known as a preferential right. As of June 30, 2006, LADWP has a preferential right to purchase 21.16% of MWD's total water supply.

LADWP has worked with MWD in developing a plan for allocating water supplies during periods of shortage. On February 12, 2008, the MWD Board adopted its Water Supply Allocation Plan. LADWP supported the adoption of this plan and intends to work within the plan to acquire its drought supplies from MWD in the future.

MWD has also been developing plans and taking efforts to provide additional water supply reliability for the entire southern California region. Part of this planning effort is the inclusion of a "buffer" supply. MWD's long-term plans to meet its member agencies' growing reliability needs are through water transfer programs, outdoor conservation measures, and development of additional local resources, such as recycling, brackish water desalination, and seawater desalination. MWD also has more than 5.0 million AF of storage capacity available in reservoirs and banking/transfer programs, with approximately 1.08 million AF currently in that storage.

Recent developments regarding the Sacramento-San Joaquin Delta will restrict exports from the Delta. On December 1, 2009, the DWR announced an initial 2010 SWP allocation of 5% of total contracted water deliveries to the SWP contractors. Five percent of 1,911,500 AFY, which is the MWD's contracted water delivery amount, would be 95,575 AFY, which is the lowest initial allocation percentage since the SWP began delivering water in 1967. The initial allocation figure reflects the low carryover storage levels in the state's major reservoirs, ongoing drought conditions and federally mandated environmental restrictions on water deliveries from the Sacramento-San Joaquin Delta to protect endangered fish species. However, the initial allocation is a conservative estimate of what DWP expects it can deliver, and historically the initial allocation increased during the year as supply conditions improved.

In response to these developments, MWD is engaged in planning processes that will identify local solutions that, when combined with the rest of its supply portfolio, will ensure a reliable long-term water supply for its member agencies. In the near-term MWD will continue to rely on the plans and policies outlined in its Regional Urban Water Management Plan (RUWMP) and Integrated Water Resources Plan to address water supply shortages and interruptions (including potential shut downs of SWP pumps) to meet water demands. Campaigns for voluntary conservation, curtailment of replenishment water and agricultural water delivery, and mandatory water allocations for municipal and industrial water use are some of the actions currently being taken by MWD.

Secondary Sources and Other Considerations. Water conservation and recycling will play an increasing role in meeting future water demands. LADWP has implemented conservation and recycling programs with efforts underway to further promote and increase the level of these programs. LADWP is committed to supply a higher percentage of the City's water demand through conservation and recycling.

Integrated planning has also filled an important role in developing secondary sources of supply for Los Angeles. This is an approach that has been taken in southern California with overall water resources planning. The City works closely with MWD, the City's Bureau of Sanitation (wastewater agency), other regional water providers, and various stakeholder groups to develop and implement programs that reduce overall water use. The City has also pioneered community-based job programs to assist in conservation program implementation.

Water Demand Forecast. The basis for LADWP's water demand forecast is the 2005 Urban Water Management Plan (UWMP). The UWMP uses a long-term demographic projection based on such factors as land use, population, and employment. The California Urban Water Management Planning Act requires water suppliers to develop an UWMP every five years to identify short-term and long-term water resources management measures to meet growing water demands during normal, dry, and multiple-dry years.

The UWMP projects yearly water demand to reach 776,000 acre-feet (AF) by 2030, or an increase of 17% from 2005. Water demand projections in five-year increments through 2030 are available in the UWMP for each of the major customer classes, including single-family, multi-family, commercial, governmental, and industrial. Demographic data from the Southern California Association of Government's (SCAG's) 2004 Regional Transportation Plan as well as billing data for each major customer class, weather, and conservation were factors used in forecasting future water demand growth.

The UWMP uses a service area-wide method in developing water demand projections. This methodology does not rely on individual development demands to determine area-wide growth. Rather, the growth in water use for the entire service area was considered in developing long-term water projections for the City of Los Angeles through the year 2030. This process entails, among other requirements, an update of water supply and water demand projections for water agencies. In the 2010 update, LADWP will develop a revised demand forecast that will factor in the water demand for which all Water Supply Assessments have been prepared in addition to future demands. Water supply planning will be based on meeting these long-term demands.

Water Conservation. Efforts are underway to increase water recycling, further conserve local stormwater runoff, and expand LADWP's water conservation program to decrease reliance on imported water for future demand. The City plans to meet all future increases in water demand through a combination of water conservation and water recycling as explained in LADWP's Water Supply Action Plan.

Collaboration between LADWP and the Metropolitan Water District (MWD) is critical in ensuring that the City's anticipated water demands are incorporated into the development of MWD's long-term Integrated Regional Plan (IRP). MWD's IRP directs a continuous regional

effort to develop regional water resources involving all of MWD's member agencies. Successful implementation of MWD's IRP has resulted in reliable supplemental water supplies for the City from MWD.

In response to water supply uncertainties, including those affected MWD, the Mayor and LADWP released a Water Supply Action Plan (Action Plan) on May 17, 2008. The plan, entitled "Securing L.A.'s Water Supply," serves as a blueprint for creating sustainable sources of water for the future of Los Angeles to reduce dependence on imported supplies. It is an aggressive multi-pronged approach that includes: investments in state-of-the-art technology; a combination of rebates and incentives; the installation of smart sprinklers, efficient washers and urinals; and long-term measures such as expansion of water recycling and investment in cleaning up the local groundwater supply. The Action Plan also takes into account the realities of climate change and the dangers of drought and dry weather.

The premise of the Action Plan is that the City will meet all new demand for water due to projected population growth through a combination of water conservation and water recycling. In total, the City will conserve or recycle 32.6 billion gallons of water a year. By the year 2019, half of all new demand will be filled by a six-fold increase in recycled water supplies and by 2030 the other half will be met through ramped-up conservation efforts.

The Action Plan also specifically addresses current and future State Water Project (SWP) supply shortages. The California Department of Water Resources estimates that the December 15, 2008, U.S. Fish and Wildlife Service's Biological Opinion on Delta Smelt will limit MWD exports of their anticipated SWP supply by up to 50% in a normal year. The Action Plan concludes, however, that MWD's actions in response to this threat will ensure continued reliability of its water deliveries. The Action Plan further states that "despite concerns about ongoing water shortages and higher costs, MWD has upheld its pledge to plan for emergencies and natural disasters throughout this region." MWD's calendar year 2009 non-emergency storage was 1,072,000 AF in surface and groundwater storage accounts - including Diamond Valley Lake near Hemet – plus an additional 670,000 AF of storage reserved for emergencies. MWD estimates its calendar year 2010 non-emergency storage is currently projected to be 935,000 AF. In total, this reserve of water supplies will be utilized to buffer the severity of a potential shortage. Furthermore, by focusing on demand reduction, implementation of the Action Plan will ensure that long-term dependence on MWD supplies will not be exacerbated by potential future shortages.

The Action Plan includes a range of key short-term and long-term strategies to secure water supply. These strategies are described in detail in the WSA in Appendix H (beginning on page 11).

Current Onsite Water Demand. The Water Supply Assessment performed by the LADWP estimates current water use on the project site associated with the existing office building and surface parking lot. As indicated in Table 4.12-3 on the following page, demand is currently estimated at 6,570 gallons per day (GPD) or 7 acre-feet per year (AFY).

Table 4.12-3
Current Onsite Water Use

Current Use	Quantity	Unit	Water Use Factor (GPD/unit)	Existing Water Use	
				GPD	AFY
Office	19,500	sf	0.15	2,925	3.28
Surface Parking	182,225	sf	0.02	3,645	4.08
			Total	**6,570**	**7**

Source: LADWP, Water Supply Assessment for the Mangrove Estates Mixed Use Development, January 19, 2010.
sf = square feet
GPD = gallons per day
AFY = acre-feet per year

b. Wastewater. The City of Los Angeles Department of Public Works Bureau of Sanitation Division (LABS) provides sewer conveyance infrastructure and wastewater treatment services to the project site. LABS maintains over 6,500 miles of sewers that serve more than four million residential and business customers in Los Angeles and 29 contracting cities and agencies. These sewers are connected to the City's four wastewater and waterreclamation plants, which process an average of 550 million gallons of wastewater per day (LABS, website, 10/14/09).

The Hyperion Treatment Plan (HTP), located west of Los Angeles International Airport in Playa del Rey, provides treatment capacity for wastewater flows generated in the City. The HTP has a design capacity of 450 million gallons per day (MGD) and currently treats an average dry weather flow of 413 MGD to primary and secondary treatment standards, using three levels of filtration treatment before discharging the treatment wastewater five miles offshore. The remaining capacity at the HTP is 37 MGD, or 8% of its total capacity.

The project site is currently occupied by a 19,500 square foot commercial office building and a 182,225 square foot public surface parking lot. Table 4.12-4 shows that the existing uses on the project site, which generate approximately 6,570 gallons per day (GPD) of wastewater.

Conveyance. Existing sewer lines in the project site vicinity include an 8-inch pipe along Turner Street/Temple Street, two 12-inch pipes along Alameda Street, an 8-inch pipe along 1st Street, and 8- and 12-inch pipes along the abandoned Banning Street through the project site. Sewage flow is conveyed west toward Alameda Street and then south along Alameda Street to outside the project site vicinity.

Wastewater Regulatory Setting. The City's sewer system is subject to Section 201 of the Federal Clean Water Act (CWA). According to the CWA, the City must adopt a facilities plan in accordance with the United States Environmental Protection Agency (USEPA) Rules and Regulations, 40 CFR, Section 35.917. Section 201 specifies the following:

Table 4.12-4
Current Wastewater Generation

Land Use	Size	Water Use Factor (GPD/unit)	Wastewater (GPD)
Office (vacant)	19,500 sf	0.15	2,925
Parking Lot	182,225 sf	0.02	3,645
Total Wastewater Generation			**6,570**

Source: City of Los Angeles CEQA Thresholds Guide.
sf = square feet;
GPD = gallons per day

Facilities planning will demonstrate the need for facilities and, by a systematic evaluation of feasible alternatives, will also demonstrate that the proposed measures represent the most cost-effective means of meeting established effluent and water quality goals while recognizing environmental and social considerations.

The City prepared a Wastewater Facilities Plan (WFP) in 1982 and updated it in 1991. The 1991 WFP update planned for facilities through the year 2010 and currently regulates wastewater facilities in the City. The WFP is focused primarily on developing cost effective construction improvements and analyzes wastewater, water recycling, and storm-water services in the City.

Hyperion Treatment Facilities. As identified above, the HTP serves an area of approximately 515 square miles, 90 percent of which is located within the City of Los Angeles. The HTP is subject to the State Ocean Plan, the Clean Water Enforcement, and Pollution Prevention Act of 1999 (SB 709), and a National Pollution Discharge Elimination System (NPDES) Permit (CA0109991). HTP meets all existing requirements under these regulations, although its NPDES permit expired in 1999. HTP is currently operating under a renewal permit.

Conveyance. The Los Angeles Regional Water Quality Control Board enforces Section 122.41(m) of part 40 of the Code of Federal Regulations (CFR), which prohibits the bypassing of water treatment facilities and sanitary sewer overflows.

In addition to the CFR, the sewer conveyance system is subject to regulation by the South Coast Air Quality Management District, which responds to claims regarding odors.

The City also regulates the sewer conveyance system through the Collection System Settlement Agreement (CSSA) and the ten-year LA Sewers program, which define maintenance and construction project schedules and are currently managing approximately 100 sewer infrastructure improvement projects. The CSSA is a settlement agreement that was reached in 2004 to resolve a lawsuit brought against the City by the Santa Monica Baykeeper and other community organizations after a number of sanitary sewer overflows occurred in the City in February of 1998. The CSSA requires the City to enhance, repair, and update the City's sewer

system and sets specific timelines for the City to complete the upgrades. In addition, the agreement also mandates that the City spend $8.5 million in supplemental environmental enhancement projects. The City must prepare annual progress reports detailing its success at meeting the terms and goals of the agreement. The second annual progress report, the Fiscal Year 2005-2006 progress report published in August 2006, indicates that the City is in full compliance with the CSSA and in many cases has gone beyond the requirements. The 10-year LA Sewers program was put into place in order to carry out the mandates of the CSSA, which has a compliance period of 10 years.

Section 62.105 of the City of Los Angeles Municipal Code requires permits to be obtained for construction in any property, street, or other right-of-way owned by, to be owned by, or under control of the City (e.g., sewers, sidewalks, curbs, gutters, pavement, grading, storm drains, etc.). A type "B" Permit is required for extensive public works improvements, such as the installation of sewer, storm drains, street lighting, and traffic signals. A Type "S" (Sewer) Permit is required to connect a property's sewer line to the City's sewer system or to repair an existing connection.

c. Solid Waste Disposal. Within the City of Los Angeles, solid waste management, including collection and disposal services and landfill operation, is administered by various public agencies and private companies. Refuse generated by single-family residential and limited multi-family residential uses on public streets is collected by the Los Angeles Bureau of Sanitation (LABS) and disposed of at City and County-operated landfills. Waste generated by the majority of multi-family residential sources and all commercial and industrial sources is collected by private contractors. Construction waste is also collected by private contractors. Solid waste is primarily collected in subterranean garages, alleyways, or service driveways within the project site vicinity.

The project site is currently occupied by a vacant commercial office building and a public surface parking lot. Therefore, minimal solid waste is currently generated on the project site.

Landfills are operated by the City and County of Los Angeles, as well as private companies. Transfer stations are also utilized to store debris temporarily until larger hauling trucks are able to transport materials directly to a landfill. Landfill availability is limited by jurisdictional restrictions, tonnage limitations, and the type of waste. Landfill availability is limited by several factors, including: (1) restrictions to accepting waste generated only within a particular landfill's jurisdiction and/or wasteshed boundary, (2) tonnage permit limitations, (3) types of waste, and (4) operational constraints. Planning to serve long-term disposal needs is constantly being conducted at the regional level (e.g., siting new landfills within the County and transporting waste outside the region). Most commonly, the City of Los Angeles is serviced by the Sunshine Canyon Landfill and the Chiquita Canyon Landfill. Both landfills accept residential, commercial, and construction waste.

Sunshine Canyon Landfill. Sunshine Canyon Landfill is owned and operated by Browning-Ferris Industries (BFI) of California. BFI's parent company, Allied Waste, Inc., is the second largest integrated waste management company in the United States and for more than three decades has provided a wide range of residential and commercial waste disposal and recycling services to Los Angeles communities. Sunshine Canyon Landfill is located within two

jurisdictions: the City of Los Angeles and the County of Los Angeles. Over 90% of the solid waste generated in the City is disposed of at Sunshine Canyon Landfill, which presently accepts about 9,000 to 10,000 tons per day on average (www.sunshinecanyonlandfill.com, accessed 10/23/09). Sunshine Canyon Landfill continues to operate six days a week. Saturday waste volumes average less than 3,000 tons due to reduced hours of operation (Kurt Braton, www.sunshinecanyonlandfill.com blog; 11/17/09). The permitted throughput, remaining capacity, and expected closure date for Sunshine Canyon Landfill is identified in Table 4.12-2.

Chiquita Canyon Landfill. Chiquita Canyon Landfill in Santa Clarita is owned and operated by Waste Connections, Inc., and has provided the Santa Clarita Valley and surrounding Los Angeles communities with waste disposal services for more than 30 years. The facility typically accepts between 5,000 and 6,000 tons per day. Landfill permits limit the operation to receive no more than 6,000 tons per day or 30,000 tons per week (all from www.chiquitacanyon.com; accessed 11/17/2009). The permitted throughput, remaining capacity, and expected closure date for the Chiquita Canyon Landfill are identified in Table 4.12-5.

Table 4.12-5
Solid Waste Disposal Facilities

Facility	Permitted Daily Throughput (tons/day)	Estimated Remaining Capacity (CY)	Estimated Closure Date
Sunshine Canyon SLF County Extension	12,100	111,200,000	2037
Chiquita Canyon Landfill	6,000	35,800,000	2019

Source: California Integrated Waste Management Board Website, http://www.ciwmb.ca.gov/Swis, accessed on 10/14/09.
CY = Cubic Yards; SLF = Sanitary Landfill

The LABS operates a Household Hazardous Waste Collection Program in cooperation with the County of Los Angeles Department of Public Works. The program provides a way for private residents to safely dispose of household chemicals such as cleaning products, paint substrates, automotive products, pool chemicals, fertilizers, pesticides, batteries, and fluorescent light bulbs.

Waste generated in the City may be diverted from landfills and recycled. The Bureau of Sanitation's Solid Resources Citywide Recycling Division (SRCRD) develops and implements source reduction, recycling, and composting programs in the City. As of August 2009, the City has a solid waste diversion rate of 65%.

Solid Waste Regulatory Setting. The California Integrated Waste Management Act of 1989 (AB 939) was enacted to reduce, recycle, and reuse solid waste generated in the State to the maximum extent feasible. Specifically, the Act requires city and county jurisdictions to identify an implementation schedule to divert 50 percent of the total waste stream from landfill disposal by the year 2000. The Act also requires each city and county to promote source reduction,

recycling, and safe disposal or transformation. Cities and counties are required to maintain the 50 percent diversion specified by AB 939 by the year 2000.

AB 939 further requires each city to conduct a Solid Waste Generation Study and to prepare a Source Reduction and Recycling Element (SRRE) to describe how it would reach the goals. The SRRE contains programs and policies for fulfillment of the goals of the Act, including the above-noted diversion goals and must be updated annually to account for changing market and infrastructure conditions. As projects and programs are implemented, the characteristics of the waste stream, the capacities of the current solid waste disposal facilities, and the operational status of those facilities are upgraded, as appropriate. California cities and counties are required to submit annual reports to the CIWMB to update it on their progress toward the AB 939 goals (i.e., source reduction, recycling and composting, and environmentally safe land disposal). To date, implementation of AB 939 has proven to be a successful method of reducing landfill waste in the City. Furthermore, the City of Los Angeles Solid Waste Management Policy Plan (CiSWMPP) provides additional goals, objectives, and policies for solid waste management in the City. The Framework Element of the City of Los Angeles General Plan also supports AB 939 and its goals by encouraging "an integrated solid waste management system that maximizes source reduction and materials recovery and minimizes the amount of waste requiring disposal." In its efforts to reach AB 939 goals and conform to the Framework Element, the Bureau of Sanitation prepared the Solid Resources Infrastructure Strategy Facilities Plan in 2000. This plan includes the specific objectives to develop transfer facilities and/or recycling centers; relocate the East Valley Collection Yard and develop a new East Valley collection yard facility; develop permanent year-round Household Hazardous Waste (HHW) drop-off shipping facilities; and continue to research and develop the use of Material Recovery Facilities to preprocess all residual waste prior to delivery to a disposal site.

4.13.2 Environmental Impact Analysis

a. Methodology and Significance Thresholds. The methodology and significance thresholds for each utility are discussed separately below.

Water. The environmental impacts of the onsite development with respect to water were determined through a Water Supply Assessment prepared by the LADWP (December 2009 – see Appendix H). The Water Supply Assessment studied the availability of the water to the City and compared it to the onsite development's water demand.

Appendix G of the CEQA Guidelines. Based on Appendix G of the *CEQA Guidelines*, the onsite development could have a potentially significant water impact if it were to result in one or more of the following:

b) Require or result in the construction of new water facilities or expansion of existing facilities, the construction of which could cause a significant environmental effect.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed.

City of Los Angeles CEQA Thresholds Guide. Based upon criteria established in the *City of Los Angeles CEQA Thresholds Guide*, whether or not the onsite development would have a significant impact is determined on a case-by-case basis considering the following factors:

a) The total estimated water demand for the project;
b) Whether sufficient capacity exists in the water infrastructure that would serve the project, taking into account the anticipated conditions at project buildout;
c) The amount by which the project would cause the projected growth in population, housing, or employment for the Community Plan area to be exceeded in the year of the project completion; and
d) The degree to which scheduled water infrastructure improvements or project design features would reduce or offset service impacts.

Wastewater. The environmental impacts of the onsite development with respect to wastewater are determined based on the proposed increase in wastewater generation and the capacity of existing and proposed wastewater infrastructure. The existing sewer capacity and wastewater generation is compared to the onsite development's wastewater generation and future sewer capacity, including improvements associated with the onsite development. Wastewater generation is estimated based on water demand rates from the Water Supply Assessment prepared by the LADWP (see Appendix H).

Appendix G of the CEQA Guidelines. Based on Appendix G of the *CEQA Guidelines*, the onsite development could have a potentially significant wastewater impact if it were to result in one or more of the following:

- *Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.*
- *Require or result in the construction of a new wastewater treatment facility or expansion of existing facilities, the construction of which could cause significant environmental effects.*
- *Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.*
- *Result in a determination by the wastewater treatment provider which serves or may serve the project that has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.*

City of Los Angeles CEQA Thresholds Guide. As set forth in the *City of Los Angeles CEQA Thresholds Guide,* the determination of significance shall be made on a case-by-case basis, considering the following:

a) The project would cause a measurable increase in wastewater flows at a point where, and a time when, a sewer's capacity is already constrained or that would cause a sewer's capacity to become constrained; or
b) The project's additional wastewater flows would substantially or incrementally exceed the future scheduled capacity of any one treatment plant by generating flows greater than those anticipated in the Wastewater Facilities Plan or General Plan and its amendments.

Solid Waste. The environmental impacts of the onsite development with respect to solid waste are determined based on the proposed increase in solid waste generation and the capacity of existing and proposed solid waste infrastructure. The existing landfill capacities and solid waste generation is compared to the onsite development's solid waste generation and future landfill capacities, including a discussion of recycling programs and design features that would be implemented with the onsite development. Solid waste generation was estimated based on generation rates provided by the *City of Los Angeles CEQA Thresholds Guide* and the California Integrated Waste Management Board (CIWMB) website (accessed 10/23/09).

Appendix G of the CEQA Guidelines. Based on Appendix G of the *CEQA Guidelines*, the onsite development could have a potentially significant solid waste impact if it were to result in one or more of the following:

- *Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs.*
- *Would not comply with federal, State, and local statutes and regulations related to solid waste.*

City of Los Angeles CEQA Thresholds Guide. As set forth in the *City of Los Angeles CEQA Thresholds Guide,* the determination of significance shall be made on a case-by-case basis, considering the following:

a) Amount of projected waste generation, diversion, and disposal during demolition, construction, and operation of the project, considering proposed design and operational features that could reduce typical waste generation rates;
b) Need for additional waste collection route, or recycling or disposal facility to adequately handle project-generated waste; and
c) Whether the project conflicts with solid waste policies and objectives in the SRRE or its updates, CiSWMPP, Framework Element, or the Curbside Recycling Program, including consideration of the land use-specific waste diversion goals contained in volume 4 of the SRRE.

b. Project Impacts and Mitigation Measures.

Impact U-1 Onsite development would generate water demand estimated at 273 acre-feet per year. Because LADWP's Water Supply Assessment has determined that water supplies are adequate to meet this level of demand, impacts related to water supply would be *less than significant*.

The Water Supply Assessment prepared by LADWP and included in Appendix H calculates the water demand increase associated with onsite development. Table 4.12-6 on the following page shows this estimate. As indicated, overall water demand associated with onsite development is estimated at 300 acre-feet per year (AFY). Accounting for the 7 AFY demand associated with existing onsite uses and 20 AFY reduction in demand associated with water conservation measures anticipated to be incorporated into onsite development, the net increase in water demand is projected to be 273 AFY.

Table 4.12-6
Projected Increase in Onsite Water Demand

Proposed Use[a]	Quantity	Unit	Water Use Factor[b] (GPD/unit)	Base Demand (GPD)	Water Efficiency Requirements Ordinance Savings (GPD)	Water Demand	
						GPD	AFY
Bar	22,000	sf	0.50	11,000	637	10,363	11.61
Coffee House	1,467	seat	30.00	44,010	2,548	41,462	46.45
Dancing Area of Bar or Nightclub	20,100	sf	0.60	12,060	358	11,702	13.11
Office Building with Cooling Tower	525,000	sf	0.18	94,500	4,938	89,562	100.33
Restaurant: Full Service – Indoor Seat	1,467	seat	30.00	44,010	2,548	41,462	46.45
Retail	113,900	sf	0.08	9,112	284	8,828	9.89
Commercial/Office Total				**214,692**	**11,313**	**203,379**	**227.83**
Residential Apt – 1 Bedroom	312	du	120.00	37,440	3,805	33,635	37.68
Residential Apt – 2 Bedroom	133	du	160.00	21,280	3,357	17,923	20.08
Residential: Artist Residence	62	du	80.00	4,980	759	4,221	4.73
Residential: Artist Work	21	du	250.00	5,188	253	4,934	5.53
Residential Total				**68,888**	**8,174**	**60,714**	**68.01**
Landscaping[c] Total	**52,490**	**sf**		**3,732**	**0**	**3,732**	**4.18**
					Total Potable Water Demand	**267,825**	**300**
					Less Existing Use (see Table 4.12-3)	-6,570	-7
					Less Additional Conservation[d]	-17,916	-20
					Total Additional Water Demand	**243,339**	**273**

[a] *Estimated breakdown of specific uses based on the general uses described in Section 2.0, Project Description.*
[b] *Based on City of Los Angeles Department of Public Works, Bureau of Sanitation Sewer Generation Rates table. Uses not listed are estimated by the closest type of use available in the table.*
[c] *Landscaping water use is estimated by Landscape Water Management Program v1.4 developed by Irrigation Training and Research Center of California Polytechnic University, San Luis Obispo.*
[d] *Water conservation due to additional conservation commitments agreed by the City of Los Angeles Department of City Planning (see Table II of the Water Supply Assessment in Appendix H).*

According to the LADWP Water Supply Assessment, the anticipated water demand associated with the project falls within the UWMP's projected water supplies for normal, single-dry, and multiple-dry years through the year 2030 and within the UWMP's 25-year water demand growth projection. Therefore, onsite development's water need falls within the scope of the UWMP's projected increase in citywide water demands, while anticipating multi-year dry water supply conditions occurring at the same time. As such, although certain uncertainties remain regarding water supplies in southern California (as discussed in the *Setting*), impacts to water supply would not be significant. In addition, because the project site is in a highly urbanized area with water infrastructure in place, it is not anticipated that onsite development would create the need for new or expanded water distribution infrastructure. Water conservation measures recommended below would further minimize the impact of onsite development on regional water supplies.

Mitigation Measures. Environmental impacts may result from development on the project site due to the increase in demand on the City's water supplies. Standard City and onsite development-specific mitigation measures apply to the onsite development to reduce potential impacts. Mitigation measures are identified below:

U-1 **Water Supply.** Onsite development shall comply with Ordinance No. 170,978 (Water Management Ordinance), which imposes numerous water conservation measures in landscape, installation, and maintenance (e.g, use drip irrigation and soak hoses in lieu of sprinklers to lower the amount of water lost to evaporation and overspray, set automatic sprinkler systems to irrigate during the early morning or evening hours to minimize water loss due to evaporation, and water less in the cooler months and during the rainy season).

If conditions dictate, the Department of Water and Power may postpone new water connections for this onsite development until water supply capacity is adequate.

U-2 **Water Saving Features.** The site developer shall implement the following water conservation measures for the entire development on the project site:

- *High Efficiency Toilets with flush volume of 1.0 gallons of water per flush or less (includes dual flush)*
- *High Efficiency Urinals of 0.5 gallons per flush or less (includes waterless)*
- *High Efficiency Clothes Washers (Residential) – with a water savings factor of 4.0 or less*
- *High Efficiency Clothes Washers (Commercial) with a water savings factor of 7.5 or less*
- *Waterless Urinals*
- *Limit showers to one showerhead per stall*
- *Showerheads with a flow rate of 2.0 gallons per minute or less*
- *High efficiency dishwashers (Energy Star rated) where dishwashers are provided*

- *Single-pass cooling shall be strictly prohibited*
- *Irrigation systems shall meet the following requirements:*
    - *Weather-based irrigation controller with rain shutoff*
    - *Flow sensor and master valve shutoff (large landscapes)*
    - *Matched precipitation (flow) rates for sprinkler heads*
    - *Drip/microspray/subsurface irrigation where appropriate*
    - *Minimum irrigation system distribution uniformity of 75%*
    - *Proper hydro-zoning and turn minimization (groups plants with similar water requirements together)*
    - *Use of landscaping contouring to minimize precipitation runoff*
    - *Rotating Sprinkler Nozzles for Landscape Irrigation with a flow rate of 0.5 gallons per minute or less*
    - *Drought Tolerant Plants must make up at least 40% of total landscaping*
- *Domestic Water Heating System located in close proximity to point(s) of use; use of tank-less and on-demand water heaters as feasible*
- *All dwelling units shall have individual metering and billing for water use*
- *All irrigated landscapes of 5,000 square feet or more shall have separate metering or submetering*
- *Recycled water shall be used where available for appropriate end uses (irrigation, cooling towers, sanitary)*
- *Should it be determined that the existing water main infrastructure is unable to accommodate the estimated water consumption for the project site, the developer shall be required to make special arrangements with LADWP to enlarge the supply lines*
- *Cooling Towers must be operated at a minimum of 5.5 cycles of concentration*
- *Faucets - all indoor faucets (other than City Ordinance No.180822 requirements) with flow rate of 1.5 gallons per minute or less*

The following items are required by City Ordinance No.180822, effective Dec. 1, 2009, and the City of Los Angeles Department of City Planning acknowledges compliance with the following requirements for the proposed project:

- *Faucets:*
    - *Private Use Lavatory Faucets – 1.5 gallons per minute*
    - *Public Use Lavatory Faucets – 0.5 gallons per minute, self-closing*
    - *Pre-rinse Spray Valve installed in Commercial Kitchens – 1.6 gallons per minute*
    - *All Other Faucets – 2.2 gallons per minute*
- *Low-flow Showerheads – maximum flow rate not to exceed 2.0 gallons per minute, except emergency shower heads for health or safety purposes.*
- *All Installed Dishwashers must be Energy Star Rated and in compliance with the following:*
    - *The maximum water use for high efficiency commercial dishwashers shall be in accordance with the following table:*

Type	High-Temperature Maximum gallons per rack	Chemical-Maximum gallons per rack
Conveyer	0.70	0.62
Door	0.95	1.16
Undercounter	0.90	0.98

  - *The maximum water use per washing cycle for high efficiency domestic dishwashers shall be 5.8 gallons.*

- *All cooling towers must operate at a minimum of 5.5 cycles of concentration*
- *Single-pass cooling systems are strictly prohibited for use in devices, processes, or equipment installed in commercial, industrial, or multi-family residential buildings. This prohibition shall not apply to devices, processes, or equipment installed for health or safety purposes that cannot operate safely otherwise.*

Significance After Mitigation. Impacts related to water demand would be less than significant without mitigation. Implementation of the above mitigation measures would further reduce water demand and associated environmental impacts.

Impact U-2 Onsite development would generate an estimated 239,607 gallons of wastewater per day, which would flow to the Hyperion Treatment Plant (HTP). This represents approximately 0.8% of the remaining capacity. Because the HTP has sufficient capacity to treat wastewater generated by onsite development, impacts would be *less than significant*.

Onsite development would increase the generation of wastewater on the project site. Currently, wastewater generated on the project site is estimated at 6,570 GPD. Table 4.12-7 on the following page illustrates onsite development's anticipated wastewater generation.

As indicated in Table 4.12-7, the increase in wastewater associated with onsite development is estimated at 239,607 GPD. This increase was estimated based upon the water demand rates used in the Water Supply Assessment (see Appendix H) and shown in Table 4.12-6 (page 4.12-15). It was assumed that wastewater generation would be identical to indoor water use for onsite development so the estimate of wastewater generation is simply the total water demand minus the water demand associated with landscape irrigation.

The projected increase in wastewater generation represents approximately 0.6% of the remaining 37 MGD capacity at the Hyperion Treatment Plant. Therefore, the Hyperion Treatment Plant has sufficient remaining capacity to accommodate the onsite development. Impacts related to wastewater treatment capacity would not be significant.

At this point, detailed development plans are not available for onsite development. As such, although no local wastewater system deficiencies are known to be present, further detailed gauging and evaluation is needed as part of the City's permitting process. In

Table 4.12-7
Projected Increase in Onsite Wastewater Generation

Proposed Use[a]	Quantity	Unit	Wastewater Generation Factor[b] (GPD/unit)	Base Wastewater Generation (GPD)	Water Efficiency Requirements Ordinance Savings (GPD)	Wastewater Generation (GPD)
Bar	22,000	sf	0.50	11,000	637	10,363
Coffee House	1,467	seat	30.00	44,010	2,548	41,462
Dancing Area of Bar or Nightclub	20,100	sf	0.60	12,060	358	11,702
Office Building with Cooling Tower	525,000	sf	0.18	94,500	4,938	89,562
Restaurant: Full Service – Indoor Seat	1,467	seat	30.00	44,010	2,548	41,462
Retail	113,900	sf	0.08	9,112	284	8,828
Commercial/Office Total				**214,692**	**11,313**	**203,379**
Residential Apt – 1 Bedroom	312	du	120.00	37,440	3,805	33,635
Residential Apt – 2 Bedroom	133	du	160.00	21,280	3,357	17,923
Residential: Artist Residence	62	du	80.00	4,980	759	4,221
Residential: Artist Work	21	du	250.00	5,188	253	4,934
Residential Total				**68,888**	**8,174**	**60,714**
					Less Additional Conservation[c]	-17,916
					Total Onsite Wastewater Generation	**246,177**
					Less Existing Use (see Table 4.12-4)	-6,570
					Total Additional Wastewater Generation	**239,607**

[a] Estimated breakdown of specific uses based on the general uses described in Section 2.0, Project Description.
[b] Based on City of Los Angeles Department of Public Works, Bureau of Sanitation Sewer Generation Rates table. Uses not listed are estimated by the closest type of use available in the table.
[c] Water conservation due to additional conservation commitments agreed by the City of Los Angeles Department of City Planning (see Table II of the Water Supply Assessment in Appendix H).

the event that the public sewer system is found to need upgrades to accommodate the onsite development, the site developer will be required to comply with the City requirements to provide connections for the onsite development. Adherence to City requirements would ensure impacts to wastewater conveyance would not be significant.

Mitigation Measures. Although impacts would be less than significant, standard City and onsite development-specific mitigation measures apply to the onsite development to further minimize the potential for impacts related to wastewater generation, conveyance, and treatment. Mitigation measures are identified below:

U-2(a) Wastewater Reduction. Operation of onsite development shall include the following features to reduce impacts associated with wastewater generation and conveyance:

- *A holding tank large enough to hold three times the onsite development's daily wastewater flow so that the tank would hold all onsite development wastewater during peak wastewater flow periods for discharge into the wastewater collection system during off-peak hours*
- *A grey water system to reuse wastewater from the onsite development*
- *As needed, new wastewater treatment or conveyance infrastructure, or capacity enhancing alterations to existing systems.*

U-2(b) Wastewater Infrastructure. During the plan check, if upgrades or the sewer infrastructure is found to have insufficient capacity by the City of Los Angeles, the developer shall be required to pay a fair share for improvements to upgrade sewer facilities. If necessary, the applicant shall pay these fees prior to the issuance of a building permit.

Significance After Mitigation. Impacts to the wastewater conveyance and treatment system would be less than significant with implementation of standard City mitigation measures.

Impact U-3 Onsite development would generate solid waste, both temporarily during construction and in the long term. Operational solid waste generation is estimated at 5.46 tons of solid waste per day, which is within the existing capabilities of area landfills. Since existing landfills have sufficient capacity to accommodate the onsite development's solid waste, impacts would be *less than significant*.

Both temporary demolition and construction activities and long term operation of the onsite development would generate solid waste. The solid waste collection and disposal needs during the construction and operation of the development on the project site would be met by private waste haulers.

Temporary Construction Impacts. Development of the site would involve the demolition of the existing 19,500 square foot commercial building and surface parking lot. Additionally, construction of onsite development would result in construction debris that would be sent to

area landfills. Demolition and construction debris typically includes concrete, asphalt, wood, drywall, metals, and other miscellaneous and composite materials. Table 4.12-8 indicates that the demolition and construction of the existing uses on the project site would generate approximately 3,923 tons of solid waste, based on national averages.

Table 4.12-8
Onsite Development Demolition/Construction Waste

Land Use	Size	Generation Rate	Solid Waste (tons)
Nonresidential Demolition	19,500 sf	155 lbs/sf	1,511 tons
Nonresidential Construction	1,200,000 sf [a]	4.02 lbs/ sf	2,412 tons
Demolition/Construction Waste Total			**3,923 tons**

Source: Contra Costa County, Construction and Demolition Debris Recovery Program, 2009; US EPA, Characterization of Building-Related Construction and Demolition Debris in the United States, 1998.
[a] Only nonresidential construction was used for the entire project site because the residential component only included single family construction. The nonresidential generation rate included uses such as building, restaurant, and hotels.

As indicated in the *Setting*, the Sunshine Canyon Landfill has a typical excess allowable daily capacity of 2,100 tons per day. It should be noted that the debris generated by demolition and construction would not be sent to landfills on one day, but rather spread out over the demolition and construction time frame. As a result, Sunshine Canyon Landfill would have adequate capacity to accept the demolition and construction debris generated by the development on the project site. Therefore, temporary construction impacts to landfills would be less than significant.

Long-Term Impacts. Operation of onsite development would result in the long-term generation of solid waste. Table 4.12-9 on the following page shows the expected operational solid waste generation associated with onsite development.

As indicated in Table 4.12-9 on the following page, onsite development would generate an estimated 5.46 tons of solid waste per day, or about 1,993 tons of solid waste per year. Onsite development would be required to participate in existing City recycling programs, such as construction material recycling and paper and plastics recycling. These programs are currently achieving a citywide diversion rate of about 65%. Assuming that the current 65% diversion rate is achieved on-site, the amount of solid waste sent to area landfills could be reduced to just under 2 tons per day, or about 698 tons per year.

As indicated in Table 4.12-5 on page 4.12-11, Sunshine Canyon and the Chiquita Canyon landfills may accept up to 18,100 tons per day. Considering the average daily solid waste disposal at these two landfills (16,000 tons per day), the Sunshine Canyon Landfill can accept up to 2,100 additional tons per day. The onsite development's contribution of about 2 tons per day represents approximately 0.1% of the remaining daily capacity at the Sunshine Canyon Landfill. Therefore, the Sunshine Canyon Landfill has sufficient capacity to accept solid waste generated by onsite development. As a result, impacts would be less than significant.

Table 4.12-9
Onsite Development Solid Waste Generation

Land Use	Size	Generation Rate	Daily Solid Waste	Landfilled Solid Waste with Diversion [a]
Office/Commercial/ Retail/Community Center	743,750 sf	0.006 lb/sf/day [b]	4,463 lbs (2.23 tons)	1,562 lbs (0.8 tons)
Residential	528 du	12.23 lbs/du/day [c]	6,457 lbs (3.23 tons)	2,260 lbs (1.1 tons)
		Totals	**10,920 lbs (5.46 tons)**	**3,822 lbs (1.9 tons)**

a Assuming a 65% diversion rate. City of Los Angeles Department of Public Works, Media Advisory, 08/12/09
b CIWMB, Estimated Solid Waste Generation Rates for Commercial Establishments, website, accessed 10/23/09.
c City of Los Angeles CEQA Thresholds Guide.
sf = square feet; du = dwelling unit; lb = pounds

Mitigation Measures. Although significant impacts have not been identified, standard City and project-specific mitigation measures apply to onsite development to reduce potential solid waste impacts. Mitigation measures are identified below.

U-3(a) **Construction Solid Waste Reduction.** The applicant shall ensure that the following features and processes are implemented prior to and during the construction phase:

- *Prior to the issuance of any demolition or construction permit, the applicant shall provide a copy of the receipt or contract from a waste disposal company providing services to the onsite development, specifying recycled waste service(s), to the satisfaction of the Department of Building and Safety. The demolition and construction contractor(s) shall only contract for waste disposal services with a company that recycles demolition and/or construction-related wastes.*
- *To facilitate onsite separation and recycling of demolition and construction-related wastes, the contractor(s) shall provide temporary waste separation bins onsite during demolition and construction. These bins shall be emptied and recycled accordingly as a part of the onsite development's regular solid waste disposal program.*

U-3(b) **Construction Recycling Program.** The applicant shall develop a construction and demolition debris and recycling/salvage program to divert at least 50% material from landfills by either weight or volume. The plan shall identify the materials to be diverted from disposal.

U-3(c) **Operational Solid Waste Reduction.** The onsite development shall incorporate the following feature in the design and shall be reflected in plans, which shall be approved prior to the issuance of a building permit:

- *Recycling bins shall be provided at appropriate locations to promote recycling of paper, metal, glass, and other recyclable material. These bins shall be emptied and recycled accordingly as a part of the onsite development's regular solid waste disposal program.*

Significance after Mitigation. Impacts would be less than significant without mitigation. Implementation of the standard City waste reduction requirements would further reduce impacts.

c. Cumulative Impacts. Cumulative impacts are based on planned and pending development shown in Tables 3-1 and 3-2 in Section 3.0 *Environmental Setting*. Currently planned and pending development would add about 17,417 dwelling units and over 5 million square feet of non-residential development.

Water. Cumulative development in the City will continue to increase water demand. Based on the wastewater generation estimates discussed below (and shown in Table 4.12-10), the planned and pending developments listed in tables 3-1 and 3-2 in Section 3.0, *Environmental Setting*, would generate about 4.2 MGD of wastewater. Cumulative water demand would be this amount plus water needs associated with landscaping. Assuming that landscape water demand associated with cumulative development is proportional to that associated with onsite development (1.4% of total onsite water demand), landscape irrigation would increase the overall cumulative water demand increase to about 4.3 MGD, or about 4,814 AFY.

Water demand associated with planned and pending development is within LADWP forecasts, which project a 17% increase in citywide water demand by 2030. Because LADWP indicates that it anticipates being able to meet this level of demand, cumulative impacts would not be significant. In addition, as discussed in the *Setting*, LADWP and MWD are implementing various programs to provide a reliable supply of water to meet the needs of the City of Los Angeles and the region. Implementation of these programs in addition to water conservation measures on new development (such as mitigation measures U-1(a) and U-1(b) listed under Impact U-1) would further reduce cumulative water demand.

Wastewater. Buildout of the cumulative projects in the City will continue to increase demands on the HTP. It is assumed that all of the projects would rely on the wastewater treatment services provided by the HTP. As discussed in the *Setting*, the design capacity of the HTP is 450 MGD and the HTP currently has 37 MGD of excess capacity. As indicated in Table 4.12-10, cumulative development would generate approximately 4.25 MGD of wastewater. This represents approximately 11% of the remaining capacity at the HTP. Therefore, the existing treatment facilities have sufficient space to accommodate cumulative growth.

The City adopted its updated Integrated Resources Plan and its Facilities Plan in order to identify specific facility improvements, including an expansion of the HTP that would bring the capacity to 550 mgd up from 450 mgd. The choice to expand the facility is based on the demands for service. The facilities plans are based on SCAG's population projections for 2020, which account for the population generated in the project area. Therefore, the cumulative impact of cumulative projects in combination with onsite development on wastewater facilities would not be significant.

Table 4.12-10
Cumulative Projects Wastewater Generation

Land Use	Size	Generation Rate [a]	Total (gallons/day)
Commercial/Retail	2,666,903 sf	80 GPD/1,000 sf	213,352 GPD
Office	1,801,935 sf	150 GPD/1,000 sf	270,290 GPD
Residential	17,417 du	160 GPD/du [b]	2,786,720 GPD
Restaurant	346,433 sf (23,096 seats) [c]	30 GPD/seat	692,880 GPD
Hotel	2,063 rooms	130 GPD/room	268,190 GPD
Institutional	171,426 sf 880 students	20 GPD/1,000 sf [d] 12 GPD/student [e]	3,429 GPD 10,560 GPD
Cumulative Wastewater Generation			**4,245,421 GPD**

sf = square feet; gsf = gross square feet; du = dwelling unit; GPD = gallons per day
[a] Based on the City of Los Angeles CEQA Thresholds Guide.
[b] Based on 2-bedroom apartment generation rate.
[c] Restaurant square footage converted to seats by dividing the square footage by 15 per the Los Angeles Municipal Code, http://lacodes.lacity.org, section 57.33.02. Assumed to be full service restaurants with indoor seating.
[d] Based on museum generation rate.
[e] Based on high school generation rate.

Sewer conveyance for the identified cumulative projects would be provided by the LABS. Each project would need to obtain a final approval from the LABS for a sewer capacity connection permit. The sewer line capacity for each related project would be evaluated on a case-by-case basis and sewer line capacity expansions would be implemented as necessary. Any necessary expansions would not disturb sensitive environmental resources since sewer lines are typically located within existing road rights-of-way. Therefore, cumulative impacts to wastewater conveyance infrastructure would not be significant.

Solid Waste. Onsite development, in conjunction with the related projects, would increase solid waste generation. As indicated in Table 4.12-11, cumulative development would generate approximately 119 tons of solid waste per day.

Additional capacity to accommodate the cumulative disposal needs of onsite development and cumulative projects is the responsibility of local, county, and state solid waste management agencies and may become available as these agencies develop solutions to meet the future disposal needs at a regional level (e.g., expanding landfills, transporting waste to other landfills, converting waste to energy, recycling and waste reduction). However, similar to onsite development, cumulative projects would be subject to the source reduction and recycling requirements established by the City of Los Angeles in accordance with AB 939 (divert 50% of solid waste). Cumulative projects would be required to participate in recycling programs, thus reducing the amount of solid waste to be disposed of at area landfills. Based on the City of Los

Table 4.12-11
Cumulative Projects Solid Waste Generation

Land Use	Size	Generation Rate	Approximate Daily Solid Waste	Landfilled Solid Waste with Diversion [a]
Office/Commercial/ Retail/Community Center	2,240,264 sf	0.006 lb/sf/day	13,442 lbs (7 tons)	4,705 lbs (2 tons)
Residential	17,417 du	12.23 lbs/du/day [c]	213,010 lbs (107 tons)	74,589 lbs (37 tons)
Hotel	2,063 rooms	4 lb/room/day	8,252 lbs (4 tons)	2,888 lbs (1.5 ton)
Restaurant	346,433 sf	0.005 lb/day/sf	1,732 lbs (1 ton)	606 lbs (0.3 tons)
Schools	880 students	1 lb/student/day	880 lbs (0.4 tons)	308 lbs (0.2 tons)
		Totals	**237,316 lbs (119 tons)**	**83,096 lbs (42 tons)**

a Assuming a 65% diversion rate. City of Los Angeles Department of Public Works, Media Advisory, 08/12/09
CIWMB, Estimated Solid Waste Generation Rates for Commercial Establishments, website, accessed 10/23/09.
c City of Los Angeles CEQA Thresholds Guide.
sf = square feet; du = dwelling unit; lb = pounds

Angeles' existing diversion rate of 65%, cumulative development would generate approximately 42 tons of solid waste per day that would be disposed of in area landfills. Given the existing 2,100 ton daily capacity, the Sunshine Canyon Landfill would have the capacity to accept waste generated by cumulative developments. Therefore, cumulative impacts would not be significant.

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