IV. Environmental Impact Analysis

K.3. Utilities—Solid Waste

1. Introduction

This section of the Draft EIR evaluates the Proposed Project's potential impacts on existing solid waste facilities. The analysis describes existing solid waste facilities and their associated capacities, estimates the amount of solid waste to be generated during Project construction and operation, and evaluates whether existing and planned solid waste facilities could accommodate forecasted Project-generated waste. An assessment of the Proposed Project's consistency with applicable solid waste regulations is also included in this section.

2. Environmental Setting

a. Background

The subject of solid waste addresses many different types of materials with widely varying characteristics. Landfills, locations where solid waste is disposed of, are categorized as one of three different classes:

- Class I landfills accept hazardous and non-hazardous wastes.
- Class III landfills accept municipal and other non-hazardous, household waste.
- Class II landfills accept non-hazardous and "designated" wastes, as defined by the State Department of Resources Recycling and Recovery, which cannot be disposed of in a Class III landfill but also are not required to be disposed of at a Class I landfill.

Unclassified landfills are defined as facilities that accept inert materials only, such as soil, concrete, asphalt, and other construction and demolition debris. There are also transfer stations that are used to temporarily store debris and other waste until larger haul trucks are available to transport the materials directly to the landfills.

b. Regulatory Setting

More generally speaking, solid waste is either classified as hazardous or non-hazardous. Given the far-reaching implications associated with hazardous waste (i.e., the potential to contaminate air, land, and water), hazardous wastes are the focus of attention at all regulatory levels (i.e., federal, state, and city). As such, a great deal of the regulatory information pertains to the handling of hazardous waste, although important regulatory information is also applicable with regard to the handling of non-hazardous solid waste. There are numerous federal, state, and local regulations and programs regarding hazardous and non-hazardous wastes that are relevant to and would be implemented by the Proposed Project. These regulations and programs are described in Appendix G of this Draft EIR. As discussed therein, at the federal and state level, these regulations include the Federal and California Occupational Safety and Health Act, the Federal Resource Conservation and Recovery Act, the California Hazardous Waste Control Law, the California Hazardous Waste Source Reduction and Management Review Act of 1989 (Senate Bill 14), the California Uniform Fire Code, the California Integrated Waste Management Act of 1989 (Assembly Bill 939), the California Solid Waste Reuse and Recycling Access Act of 1991 (AB 1327), Public Resources Code Section 42919 (Senate Bill 1374), the Zero Waste California program and the California Green Building Standards. Additionally, at the regional and local level, regulations and plans include the Los Angeles County Integrated Waste Management Plan (CIWMP), the City of Los Angeles Solid Waste Management Policy Plan and Source Reduction Recycling Element, the City's Solid Waste Integrated Resource Plan, the City of Los Angeles General Plan Framework, the City's Solid Resources Infrastructure Strategy Facilities Plan, the RENEW LA Plan, the Green LA Plan, and the Los Angeles Municipal Code (LAMC).

c. Existing Conditions

(1) Countywide Conditions

Demand for landfill capacity is continually evaluated by Los Angeles County (County) through preparation of CIWMP Annual Reports. The most recent ClWMP Annual Report is the 2010 ClWMP Annual Report that was completed by the County of Los Angeles in October 2011 and submitted to the California Integrated Waste Management Board (CIWMB), now known as CalRecycle.[1] As with previous Annual Reports, the 2010 ClWMP Annual Report assesses future landfill disposal needs over a 15-year planning

[1] *CalRecycle is shorthand for the California Department of Resources Recycling and Recovery, a new department within the California Natural Resources Agency that administers programs formerly managed by the State's Integrated Waste Management Board and Division of Recycling.*

horizon, based in part on forecasted waste generation and available landfill capacity. Several factors are used in the 2010 ClWMP Annual Report to determine landfill capacity, including: (1) the expiration of various landfill permits (e.g., land use permits, waste discharge requirements permits, solid waste facilities permits, and air quality permits); (2) restrictions on the processing of waste generated outside given landfills' jurisdictions and/or watershed boundaries; and (3) operational constraints.

Based on each jurisdiction's approved diversion rate by CalRecycle, the 2006 Countywide diversion rate is estimated at 58 percent. For the purpose of long-term disposal capacity planning, a conservative diversion rate of 55 percent was assumed for 2010. Therefore, as 8.77 million tons were sent to a landfill, it is estimated that the County generated approximately 19.5 million tons of solid waste in 2010.[2] As discussed in the 2010 ClWMP Annual Report, without changes in the status quo, a shortage of permitted non-hazardous municipal solid waste disposal capacity at in-County Class III landfills is projected by 2014. This calculated shortage is due in part to a lack of suitable sites for developing new landfills and limited expansion potential of existing landfills. Nonetheless, the 2010 ClWMP anticipates future disposal needs can be adequately met through the next 15 years (i.e., 2025) through scenarios that include some combination of the following: (1) use of existing in-County Class III landfills and transformation facilities; (2) proposed expansion of in-County Class III landfill capacity through construction of new facilities or expansion of existing facilities; (3) use of out-of-County landfills for disposal, including waste-by-rail facilities; (4) use of conversion technologies; (5) expansion of diversion infrastructure; and (6) maximization of waste reduction and recycling.

A short discussion of the County's waste disposal at in- and out-of-County landfills and transformation facilities based on the most recent data available from the ClWMP Annual Report is provided below. Also provided below are existing landfill capacity data and an overview of various technologies currently in use to assist in reducing solid waste disposal.

(2) Waste Disposal by the County of Los Angeles

(a) In-County Landfills

Landfills within Los Angeles County are categorized as either Class III or unclassified landfills. Non-hazardous municipal solid waste is disposed in Class III landfills,

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[2] *Appendix E-2 Table 5 and page 18 of the 2010 ClWMP. Waste generation for 2010 is based on actual in-County and out-of-County transformation and Class III landfill disposal by jurisdictions in Los Angeles County. These tonnages do not include inert waste disposed at permitted inert landfills.*

while construction waste, yard trimmings, and earth-like waste are disposed in unclassified (inert) landfills. Twelve Class III landfills and three unclassified landfills are located within the County.[3] Figure IV.K.3-1 on page IV.K.3-5 provides the locations of these landfills.

(i) Class III Landfills

Based on information provided in the 2010 ClWMP Annual Report, the remaining disposal capacity for the County's Class III landfills is estimated at approximately 123.846 million tons, which includes the recently approved capacity at the City of Los Angeles and County portions of the Sunshine Canyon landfill. In 2010, approximately 6.4 million tons of solid waste was disposed at County Class III landfills. Approximately 99 percent of this solid waste disposal was generated from within the County, with the remaining generated outside the County.

The ClWMP states that there will be a shortage of permitted solid waste disposal capacity at in-County Class III landfills by 2014. As such, the ClWMP provides a variety of scenarios under which adequate disposal capacity could be achieved. For example, as indicated in Table IV.K.3-1 on page IV.K.3-6, Class III landfills within the County that have been proposed for expansion to increase disposal capacity, but have not yet been approved, include the Antelope Valley and Chiquita Canyon landfills.. Of the available Class III landfill capacity in the County of Los Angeles, approximately 90.6 million tons are open to the City of Los Angeles.[4]

(ii) Unclassified Landfills

The County's unclassified landfills generally have sufficient capacity to meet long-term demand. The remaining disposal capacity for unclassified landfills is estimated at approximately 50.8 million tons. In 2010, approximately 0.125 million tons of inert waste (e.g., soil, concrete, asphalt, and other construction and demolition debris) were disposed at the County's unclassified landfills.[5] Based on this annual disposal rate, unclassified landfills serving the County have adequate long-term capacity.

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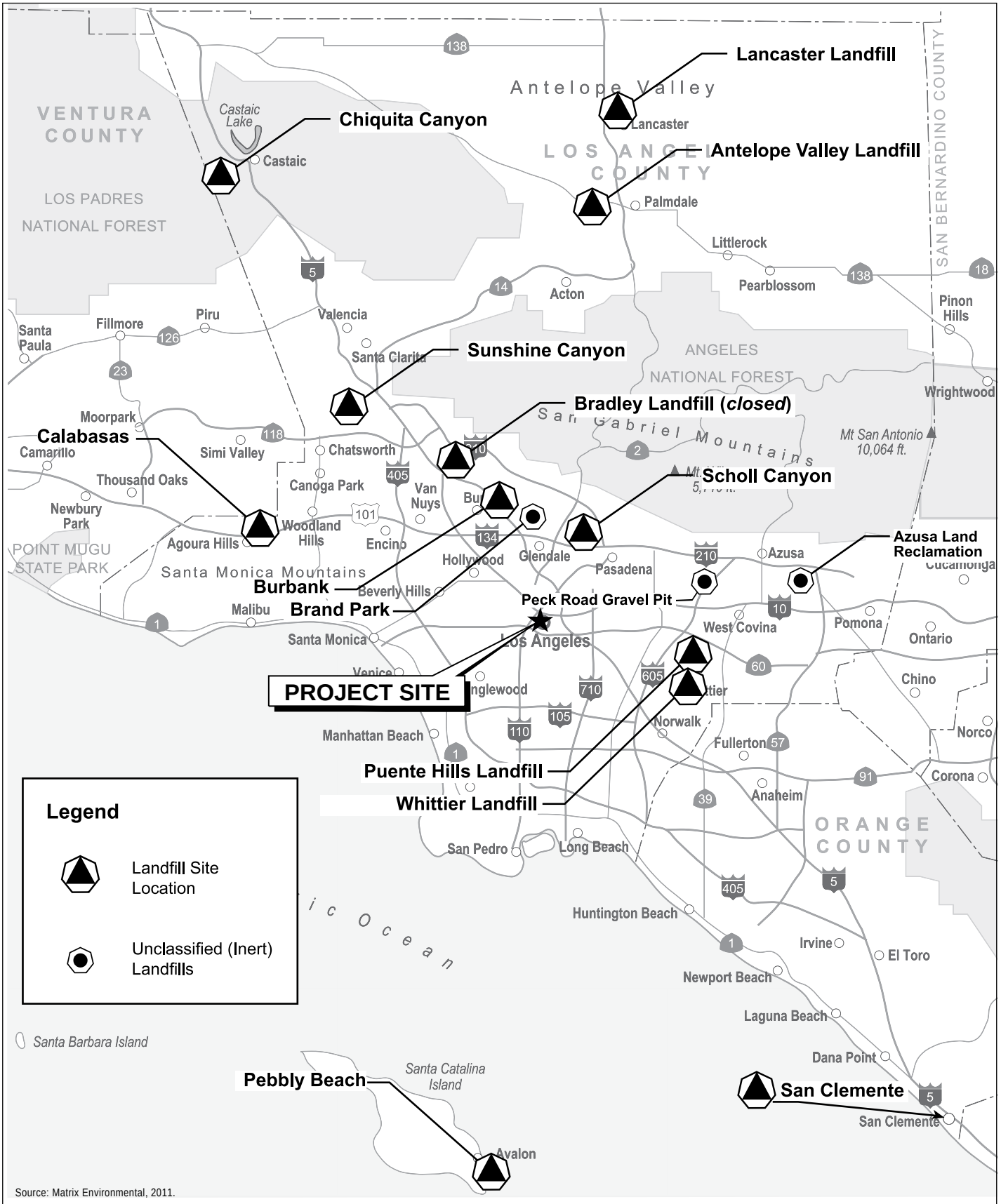
[3] *County of Los Angeles, Department of Public Works; Los Angeles County Integrated Waste Management Plan 2010 Annual Report, October 2011. With the Bradley Landfill closure in April 2007 and the Sunshine Canyon City and Sunshine Canyon County landfills combining in 2008, there are currently 11 operational Class III landfills in Los Angeles County.*

[4] *Total excludes Class III landfills not open to the City of Los Angeles for disposal (i.e., Puente Hills, Scholl Canyon, Whittier, Burbank, Pebbly Beach, and San Clemente). Total excludes the Calabasas Landfill, as its wasteshed does not include the Project Site. Total also excludes the additional expansion that may be provided by the Antelope Valley Recycling and Disposal Facility Expansion and the Chiquita Canyon Landfill Expansion, together totaling approximately 40 million tons, as these expansions are not currently operational.*

[5] *Los Angeles County Countywide Integrated Waste Management Plan 2010 Annual Report October 2011.*



Source: Matrix Environmental, 2011.

matrix environmental

Figure IV.K.3-1
County of Los Angeles Landfills

Table IV.K.3-1
2011 Projected Solid Waste Disposal and Estimated Remaining Capacity for Los Angeles County Landfills[a,b]

Landfill	Location	Maximum Permitted Daily Capacity (tpd)	Expected Average Daily Tonnage	Remaining Capacity at Year's End (million tons)
Class III				
Antelope Valley[c]	Palmdale	1,800	457	6.4
Burbank[d]	Burbank	240	120	2.8
Calabasas[e]	Unincorporated	3,500	754	5.8
Chiquita Canyon[c]	Unincorporated	5,000	3,426	5.2
Lancaster[f]	Lancaster	1,700	716	0.7
Pebbly Beach[g]	Unincorporated	49	10	0.05
Puente Hills[h]	Unincorporated	13,200	5,766	8.2
San Clemente[i]	Unincorporated	10	0.85	0.04
Scholl Canyon[j]	Glendale	3,400	778	3.9
Sunshine Canyon City/ County[k]	Unincorporated	11,000	8,000	78.3
Whittier[l]	Whittier	350	238	3.7
Class III Total Overall		40,249	20,265.85	**115.09**
Class III Total Open to City of Los Angeles[m]		19,500	12,599	**90.6**
Unclassified[n]				
Azusa Land Reclamation	Azusa	500[o]	N/A	N/A
Peck Road Gravel Pit[p]	Monrovia	1,210	N/A	N/A
Unclassified Total Overall[n]				
Unclassified Total Open to City of Los Angeles		1,710	N/A	**50.8**

[a] *Landfills open to the City of Los Angeles are highlighted in gray within the table. However, the Calabasas Landfill is not highlighted in gray, despite being open to the City of Los Angeles, as explained in footnote (d) below.*

[b] *Includes in-County and out-of-County solid waste disposal at each landfill. Waste generation is estimated using the Waste Board's Adjustment Methodology, utilizing population projection, employment, and taxable sales projections from UCLA.[c] Total also excludes the additional expansion that may be provided by the Antelope Valley Recycling and Disposal Facility Expansion and the Chiquita Canyon Landfill Expansion, together totaling approximately 40 million tons, as these expansions are not currently operational.*

[d] *Limited to the City of Burbank crews only.*

[e] *Limited to Calabasas Wasteshed, as defined by Los Angeles County Ordinance No. 91-0003, which is composed of the incorporated cities of Hidden Hills, Agoura Hills, Westlake Village and Thousand Oaks; that portion of the City of Los Angeles bordered by the northerly line of Township 2 North on the north, Interstate Highway 405 on the east, Sunset Boulevard and the Pacific Ocean on the south, and the City boundary on the west; and certain unincorporated areas in the Counties of Los Angeles and Ventura.*

Table IV.K.3-1 (Continued)
2011 Projected Solid Waste Disposal and Estimated Remaining Capacity for Los Angeles County Landfills[a,b]

Landfill	Location	Maximum Permitted Daily Capacity (tpd)	Expected Average Daily Tonnage	Remaining Capacity at Year's End (million tons)
[f] *LUP Expires 8/1/2012.*				
[g] *Due to its location on Santa Catalina Island, only the City of Avalon and adjacent unincorporated County areas have access to this facility.*				
[h] *Does not accept waste generated from the City of Los Angeles outside the County Sanitation District boundary and Orange County. Closure date is October 31, 2013.*				
[i] *Owned and operated by U.S. Navy (does not accept City of Los Angeles waste).*				
[j] *Limited to Scholl Canyon Wasteshed as defined by City of Glendale Ordinance No. 4782.*				
[k] *The combined Sunshine Canyon City/County Landfill became effective December 31, 2008, based on a memorandum of understanding between the City and County of Los Angeles.*				
[l] *Limited to City of Whittier use only.*				
[m] *Total excludes Class III landfills not open to the City of Los Angeles for disposal (i.e., Puente Hills, Scholl Canyon, Whittier, Calabasas, Burbank, Pebbly Beach, and San Clemente).*				
[n] *Unclassified landfill capacity numbers are based on 2010 data based on information from the Los Angeles County Countywide Integrated Waste Management Plan 2010 Annual Report. October2011. In addition the remaining disposal capacity for unclassified landfills is estimated at approximately 50.8 million tons based on the 2010 Los Angeles County Countywide Integrated Waste Management Plan 2010 Annual Report, October 2011.*				
[o] *By court order, on 10/2/96, the California Regional Water quality Control Board- Los Angeles region ordered the Azusa Land Reclamation Landfill to stop accepting Municipal Solid Waste. Permitted daily capacity of 6,500 tpd consists of 6,000 tpd of refuse and 500 tpd of inert waste.*				
[p] *As of 2011, Peck Road Gravel Pit surrendered its Solid Waste Facility Permit and is currently opperating under a notification as an Inert Debris Engineered Fill Operation. No solid waste disposal was recorded for 2010*				
Source: Matrix Environmental 2011, based on information from the Los Angeles County Countywide Integrated Waste Management Plan 2010 Annual Report October 2011 Table Appendix E-4				

(b) Out-of-County Landfills

Solid waste disposal at out-of-County facilities has increased in recent years and is expected to continue to be necessary to meet the County's future disposal needs. As noted above, without out-of-County facilities, conversion technologies or increased diversion rates, the County could have a shortage of in-County solid waste disposal capacity by 2014 due to challenges associated with establishing new landfills and expanding existing landfills.

As shown in Table IV.K.3-2 on page IV.K.3-8, in 2010 (the most recent year for which data is available), approximately 5,900 tons per day of solid waste was disposed at

Table IV.K.3-2
Solid Waste Disposal and Estimated Remaining Capacity for Out-of-County Landfills

Facility Location Owner/Operator	Rail Access	Distance from Los Angeles County[a]	2010 Average Daily Disposal Rate (tpd)	Anticipated Maximum Imports from Los Angeles County (tpd)	2010 Average Los Angeles County Exported Quantity[b] (tpd)	Permitted Daily Capacity (tpd)	Remaining Permitted Disposal Capacity (tons)
El Sobrante Landfill Riverside County Waste Mgmt., Inc.	No	60 miles	8,100	4,000	3,044	16,054	132 million
Frank R. Bowerman Sanitary Landfill Orange County O.C. Integrated Waste Mgmt, Dept.	No	45 miles	4,473	1,500	667	11,500	37 million
Olinda Alpha Sanitary Landfill Orange County O.C. Integrated Waste Mgmt. Dept.	No	30 miles	4,541	1,500	1,001	8,000	14 million
Prima Deshecha Sanitary Landfill[b] Orange County O.C. Integrated Waste Mgmt. Dept.	No	60 miles	1,275	1,500	334	4,000	73 million
Simi Valley Landfill & Recycling Center Ventura County Waste Mgmt., Inc.	No	50 miles	2,243	850	853	3,000	16 million
Mesquite Regional Landfill[c] Imperial County County Sanitation Districts of Los Angeles County	Yes	210 miles	—	12,000	—	20,000	600 million
Avenal Landfill Kings County Madera Disposal Systems, Inc.	Yes	195 miles	2,150	3,000	0	6,000	15 million
Total				**24,350**	5,900[d]		

[a] *Distance is measured from Downtown Los Angeles, California.*
[b] *Estimated quantity based on the Disposal Reporting System information from the respective counties.*
[c] *Not in operation at this time.*
[d] *Waste exported to other Counties (i.e. Kern, Kings, San Bernardino, San Diego, and Stanislaus) account for another 426 tons per day. Total Waste exported is approximately 5,870 tons per day.*

Source: Los Angeles County Countywide Integrated Waste Management Plan 2010 Annual Report, October 2011; and Los Angeles County Department of Public Works, October 2011.

out-of-County landfills. This equates to approximately 1.91 million tons of solid waste disposed on an annual basis.

As also shown in Table IV.K.3-2, waste-by-rail has the potential to create substantial solid waste disposal capacity. Waste-by-rail systems allow the County to transport waste via existing railways to remote out-of-County disposal facilities. They involve the collection of recyclable waste at materials recovery facilities and the loading of remaining non-hazardous wastes into rail-ready shipping containers. These containers are delivered by truck to local rail yard loading facilities where they are then transported to remote landfills designed and permitted to receive waste via rail.

One waste-by-rail landfill is anticipated to be available for use by the County: the Mesquite Regional Landfill in Imperial County, located approximately 210 miles east of Los Angeles, along the Union Pacific Railroad. The Mesquite Regional Landfill has an approved landfill footprint of 2,290 acres and will provide capacity for approximately 600 million tons of solid waste and 100 years of operation at a maximum of 12,000 tons per day.[6] The County of Los Angeles Sanitation District completed acquisition of the facility in 2002 and commenced development of the landfill.

(c) Transformation Facilities

There are two solid waste transformation facilities within Los Angeles County that convert, combust, or otherwise process solid waste for the purpose of energy recovery. The Commerce Refuse to Energy Facility was used to dispose of approximately 101,000 tons of solid waste in 2010 and has a permitted capacity of 2,800 tons per week. The Southeast Resource Recovery Facility, located in the City of Long Beach, was used to dispose approximately 489,000 tons of solid waste in 2010 and has a permitted capacity of 500,000 tons per year. These two facilities are expected to continue operating at their current permitted capacities through the 2010 ClWMP planning period of 2025. The owners and operators of these facilities have indicated that there are no plans to increase the daily capacity at either facility.

(d) Use of Conversion Technologies

The County is exploring the use of conversion technologies to reduce future disposal needs as well as address global climate change. These state-of-the-art technologies encompass a wide variety of processes that convert normal household trash into

[6] *County of Los Angeles, Department of Public Works; Los Angeles County Integrated Waste Management Plan 2010 Annual Report, October 2011.*

renewable energy, biofuels, and other useful products in an environmentally beneficial way. The County has launched the Southern California Conversion Technology Demonstration Project, which seeks to promote, evaluate, and establish a demonstration facility for the conversion of solid waste into clean energy.[7] As part of this effort, the Los Angeles County Board of Supervisors approved a motion to facilitate the development of three demonstration conversion technology projects and initiate a feasibility study for potential conversion technology sites at County landfills and other appropriate locations in the County.

(e) Class I Landfills

The closest Class I landfill to the Project Site is Kettleman Hills Facility located in Kings County. The facility is permitted to accept most types of hazardous wastes as defined by the U.S. Environmental Protection Agency and the State of California. Materials accepted at Kettleman Hills Facility include asbestos debris, petroleum contaminated soils and debris, soils and debris with metal contamination, household hazardous wastes from collection events, baghouse dusts, various ash waste, filter cake, catalyst solids, latex paint, groundwater, stormwater, clarifier water, and various sludges.[8]

(3) Waste Disposal by the City of Los Angeles

As of this date there are no operating waste disposal sites or landfill facilities owned by, or located, in the City of Los Angeles. As such, all solid waste generated within the City is disposed of at privately owned landfill facilities. The City of Los Angeles Bureau of Sanitation annually collects approximately 1.4 million tons of refuse from single and small multi-family residences, as well as approximately 190,000 tons of recyclables and 480,000 tons of yard trimmings in the City.[9] In general, while the Bureau of Sanitation provides waste collection services to single-family and some small multi-family developments, private haulers provide waste collection services for most multi-family residential and commercial developments within the City. Solid waste transported by both public and private haulers is either recycled, reused, transformed at a waste-to-energy facility, or disposed of at a landfill.

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[7] *Southern California Conversion Technologies Demonstration Project, www.socalconversion.org/, accessed June 21, 2011.*

[8] *Kettleman Hills, Waste Management, Fact Sheets, http://kettlemanhillslandfill.wm.com/fact-sheets/index.jsp, June 23, 2011.*

[9] *City of Los Angeles, Department of Public Works, Bureau of Sanitation, General Information, www.lacity.org/san/general_info/about_us/our_services/service_summary.htm, accessed June 21, 2011.*

Several of the County's Class III landfills only accept solid waste generated within their particular jurisdiction, including the Puente Hills, Scholl Canyon, Whittier, Burbank, Pebbly Beach, and San Clemente landfills. As such, not all of the County's Class III landfills listed in Table IV.K.3-3 on page IV.K.3-12 are open to the City of Los Angeles for their disposal needs. The remaining disposal capacity for County Class III landfills open to all or portions of the City of Los Angeles as of December 31, 2011, was estimated at approximately 90.6 million tons, as shown in Table IV.K.3-1 on page IV.K.3-6.[10] As shown in Table IV.K.3-3, in 2010, the City of Los Angeles disposed of approximately 2.292 million tons of solid waste at the County's Class III landfills and approximately 57,091 tons at transformation facilities. This single-year total accounts for approximately 2.5 percent of the total remaining capacity for the County's Class III landfills open to the City.

Several of the County's unclassified landfills also only accept construction and demolition generated waste within their particular jurisdiction. As shown in Table IV.K.3-1, as of 2010, the remaining disposal capacity for unclassified landfills open to the City of Los Angeles is approximately 50.8 million tons.[11] As shown in Table IV.K.3-3, in 2010, the City disposed of approximately 17,594 tons of construction and demolition waste into Azusa Land Reclamation, an unclassified landfill. This amount accounts for less than 0.034 percent of the total remaining capacity at Azusa Land Reclamation.[12]

(4) Recycling Facilities

Source reduction, recycling, and composting programs within the City of Los Angeles are developed and implemented by the Department of Public Works Bureau of Sanitation, Solid Resources Citywide Recycling Division (SRCRD) which provides technical assistance to public and private recyclers, oversees the City's recycling program, manages the Household Hazardous Waste program, and helps create markets for recyclable

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[10] *Total excludes Class III landfills not open to the City of Los Angeles for disposal (i.e., Puente Hills, Scholl Canyon, Whittier, Burbank, Pebbly Beach, and San Clemente). Total excludes the Calabasas Landfill, as its wasteshed does not include the project site. Total also excludes the additional expansion that may be provided by the Antelope Valley Recycling and Disposal Facility Expansion and the Chiquita Canyon Landfill Expansion, together totaling approximately 40 million tons, as these expansions are not currently operational.*

[11] *Based on information from the Los Angeles County Countywide Integrated Waste Management Plan 2010 Annual Report, October 2011.*

[12] *Based on information from the Los Angeles County Countywide Integrated Waste Management Plan 2010 Annual Report, October 2011. As of 2011, Peck Road Gravel Pit surrendered its Solid Waste Facility Permit and is currently operating under a notification as a Inert Debris Engineered Fill Operation. No solid waste disposal was recorded for 2010.*

Table IV.K.3-3
City of Los Angeles 2010 Waste Disposal at Class III Landfills

Class III	2010 Total Disposal (tons per year)
Antelope Valley	1,610.74
Azusa Land Reclamation[a]	17,594.36
Calabasas	153,406.90
Chiquita Canyon	456,114.65
Commerce Refuse-to-Energy[b]	34,397.48
Lancaster	77,750.98
Puente Hills	102,401.83
Scholl Canyon	874.09
Southeast Resource Recovery[b]	22,693.50
Sunshine Canyon City/County	1,500,463.89
Total Received	**2,367,308.42**
Total Disposed of at Class III Landfills	**2,292,623.08**
Total at Unclassified Landfills	**17,594.36**
Total at Transformation Facilities	**57,090.98**

[a] *Unclassified Landfill*

[b] *Transformation Facility*

Source: County of Los Angeles, Department of Public Works, Solid Waste Information System, Annual Waste Disposal Summary Report by Facility By Jurisdictions By Los Angeles (Reporting Period 2010, http://dpw.lacounty.gov/epd/swims/download/rpt_12142011_155957_20289729_16.pdf, accessed December 14, 2011.

materials.[13] The Construction and Demolition Recycling Guide, an SRCRD publication, provides information to the public and private sectors regarding construction waste diversion. This guide provides an alphabetical listing of recyclers and certified mixed-debris processors that serve the greater Los Angeles area, as well as listings of materials accepted (i.e., wood waste, scrap metal, drywall, etc.) in order to assist developers and contractors with their recycling selection.

[13] *City of Los Angeles, Department of Public Works, Bureau of Sanitation, Construction and Demolition Recycling Guide, Revised August 9, 2007, http://san.lacity.org/solid_resources/pdfs/C&D_guide.pdf, accessed June 21, 2011.*

(5) Existing Solid Waste Generation at Project Site

As shown in Table IV.K.3-4 on page IV.K.3-14, the Convention Center generated approximately 1,586.96 tons of waste in 2010, or an average of approximately 4.34 tons per day. When recycling is accounted for, the Convention Center generated 888.7 tons that was disposed of at a landfill. Current recycling efforts at the Convention Center include the food services operator's use of service ware products that can either biodegrade or can be composted, and a food waste diversion program.

Similar to the Convention Center, the STAPLES Center's food service operator uses service ware products that can either biodegrade or be composted. The STAPLES Center also employs a food waste diversion program. As shown in Table IV.K.3-4, approximately 4,676.22 tons of waste were generated by STAPLES Center in 2010, or an average of approximately 12.8 tons per day. However, as a substantial portion of the total waste generated was recycled, only 3,432.84 tons (an average of approximately 9.41 tons per day) of STAPLES Center waste were sent to landfills in 2010.

3. Environmental Impacts

a. Methodology

The analysis of the Proposed Project's solid waste impacts is based on the solid waste anticipated to be generated during both construction and operation of the Proposed Project. The analysis examines the potential for the disposal of inert demolition and construction debris during the Project's construction phase, and solid waste disposal during Proposed Project operation within Class III landfills in the County. Any hazardous wastes generated on the Project Site would continue to be properly transported for treatment off-site at privately owned treatment facilities (refer to Section IV.L, Environmental Hazards, of this Draft EIR for additional information regarding the disposal of hazardous wastes generated by the Proposed Project). The Proposed Project's solid waste generation is forecasted both for the total amount of waste generated by the Project, as well as the amount of solid waste that would actually be disposed of at a landfill (i.e., the total amount of waste minus the materials diverted from landfills via recycling, reuse, or other methods).

Anticipated solid waste generation for the Proposed Project's construction activities is determined using rates provided by the United States Environmental Protection Agency based on the amount and type of land uses proposed for demolition and construction. The total amount of solid waste generated is then divided by the time that the Project would take to construct. The results of these calculations (i.e., the Project's construction solid waste generation) are compared with the available capacity at the landfills that currently accept construction waste from the Project Site, to assess the significance of the Proposed Project's solid waste generation during Proposed Project construction.

Table IV.K.3-4
Existing Solid Waste Generated at the Project Site

Facility	2010 Year (tonnage)
Los Angeles Convention Center	
Net Waste to Landfills	888.70
Waste Recycled[a]	698.26
Total Waste Generated[b]	1,586.96
Staples Center	
Net Waste to Landfills	3,432.84
Waste Recycled	1,243.38
Total Waste Generated	4,676.22
Total Project Site	
Net Waste to Landfills	4,321.54
Waste Recycled	1,941.64
Total Waste Generated	6,263.18

[a] *Diversion rate of 44 percent, based on LACC Recycling, Bureau of Sanitation AB 939 Report for 2000 page 5.10-1.*

[b] *Los Angeles Convention Center Net Waste to Landfills was calculated per utility refuse bills. In order to find the Total Waste Generated, a mathematical equation where the 44 percent diversion rate was used to calculate the gross waste generated (888.7/0.56 = 1,586.96 total waste generated).*

Source: AEG and Los Angeles Convention Center, 2011.

Solid waste generation for the Proposed Project's operational activities is forecasted using existing STAPLES Center solid waste generation rates, Los Angeles Convention Center (Convention Center) solid waste generation rates, and standard factors provided in the City of Los Angeles Department of Public Works' 2000 Waste Characterization & Quantification Study. As the City's 2000 Waste Characterization & Quantification Study does not include factors for Convention Center and arena/stadium uses, solid waste generation rates for the proposed Convention Center and Event Center were calculated based on the existing uses located on the Proposed Project site, including STAPLES Center, to forecast the Event Center's solid waste generation and the existing Convention Center for the future Convention Center. For the new Convention Center and the Event Center, the Proposed Project's solid waste generation was calculated on a per capita basis by dividing existing attendance by existing solid waste generation. These per capita solid waste rates were then applied to projected attendance rates based on use, where STAPLES Center per capita was used to project Spectator Events and Convention Center per capita rates were used to project Convention Center activity, as well as when the Event Center is used for exhibition/meeting room events. Standard factors from the 2000 Waste

Characterization & Quantification Study were used to project solid waste generation rates for ancillary uses proposed to occur at both the Convention Center and the Event Center. Projected Proposed Project daily impacts and projected Proposed Project daily impacts with no on-site existing activity were determined based on the daily attendance of the Project Site multiplied by the existing per capita solid waste generation. Separate calculations were made for both daily and annual operations. The results of these calculations (i.e., the Project's operational solid waste generation) are then compared with the available capacity at the landfills that currently accept waste from the Project Site, as well as other landfills that accept waste, to assess the significance of the Proposed Project's solid waste generation.

b. Thresholds of Significance

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

Would the project:

- Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?
- Comply with federal, state, and local statutes and regulations related to solid waste?

In the context of these questions from Appendix G of the CEQA Guidelines, the *City of Los Angeles CEQA Thresholds Guide* states that the determination of significance with regard to impacts on solid waste shall be made on a case-by-case basis, considering the following factors:

- 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;
- Need for an additional solid waste collection route, or recycling or disposal facility to adequately handle project-generated waste; and
- Whether the project conflicts with solid waste policies and objectives in the Source Reduction and Recycling Element (SRRE) or its updates, the City of Los Angeles Solid Waste Management Policy Plan (CiSWMPP), the City General

Plan Framework Element or the City Curbside Recycling Program, including consideration of the land use-specific waste diversion goals contained in Volume 4 of the SRRE.[14]

Based on these factors, the Proposed Project would have a significant impact if:

- The Project exceeds the capacity of the landfills that can accept solid waste generated within the City of Los Angeles;
- The Project creates a need for an additional solid waste collection route, or recycling or disposal facility to adequately handle Project-generated solid waste;
- The Project conflicts with the solid waste policies and objectives in the City of Los Angeles Source Reduction and Recycling Element or its updates, City of Los Angeles Solid Waste Management Policy Plan, the City of Los Angeles General Plan Framework Element or the Curbside Recycling Program, including consideration of the land use-specific waste diversion goals contained in Volume 4 of the City of Los Angeles Source Reduction and Recycling Element; or
- The Project conflicts with solid waste policies and objectives in the County of Los Angeles Countywide Integrated Waste Management Plan.

c. Project Design Features

The Applicants, in recognition of the importance of the full range of sustainability issues including recycling, have prepared the Convention and Event Center Sustainability Program (see Appendix E of this Draft EIR). A number of the measures and programs set forth in that document pertain to the Proposed Project's solid waste generation during both Project construction and operations. Below are the project design features that would be included in the Proposed Project.

(1) Convention Center

- A minimum of 20 percent of all building materials and products for development will consist of recycled content or will be manufactured regionally while a

[14] *Waste diversion goals have been identified for a limited number of targeted waste generators and materials. Future updates of the SRRE may expand the land uses and materials covered, or modify the current waste diversion goals. Website: www.lacity.org/san/solid_resources/pdfs/rfp-swirp-appendix-b3.pdf, accessed June 2, 2008.*

minimum of 5 percent of all building materials and products for development will be rapidly renewable.

- The Convention Center will divert a combined minimum of 75 percent of construction waste and/or debris from landfill storage for both the demolition and new construction phases.

- The New Hall would divert at least 50 percent of its solid waste during operation.

The construction of the New Hall would include a Construction Waste Management (CWM) Plan to achieve the waste diversion percentages noted above. The New Hall construction would also require a minimum of 20 percent recycled content, thereby reducing impacts from the extraction and processing of virgin materials. To support local industry and reduce environmental impacts associated with the transport of materials a minimum of 20 percent of the overall construction materials would be extracted, processed or manufactured within a 500-mile radius of the Project Site.

(2) Event Center

- 50 percent of solid waste will be diverted during construction and operation of the Event Center. The Event Center will divert waste from landfill through robust recycling, the donation of durable goods, and implementing a front of house composting program that includes sourcing of biodegradable concessions packages.

d. Project Impacts

(1) Construction Impacts

(a) Waste Stream

A variety of scraps and wastes would be generated during demolition, grading/site preparation, and construction activities. For the most part, each individual demolition and construction project creates a one-time impact; therefore, demolition and construction debris generation rates provided by the United States Environmental Protection Agency are based on the overall waste generated during the life of a construction project. As shown in Table IV.K.3-5 on page IV.K.3-18, construction associated with the Proposed Project would include approximately 1,091,764 square feet of Gross Area to be demolished, the new construction of 3,849,192 square feet of Gross Area, and renovation of 47,000 square feet of Gross Area consisting of the New Hall, Event Center, L.A. Live Way Garage, and Bond Street Garage, as well as the renovation of the Convention Center's Concourse Building. As shown in Table IV.K.3-5 on page IV.K.3-18, based on the United States Environmental Protection Agency's rates, the Project would generate approximately 91,331.56 tons of

Table IV.K.3-5
Proposed Project Demolition and Construction Waste Generation[a]

	Gross Square Footage	Generation Rate (tons/sq.ft.)[a]	Total Debris (tons)	Diversion Rate	Net to Landfills
Demolition					
West Hall	538,925[b]	0.0775	41,766.69	75%	10,441.67
Cherry Street Garage	319,584	0.0775	24,767.76	75%	6,191.94
Bond Street Parking Lot	56,627	0.0875[c]	4,954.86	75%	1,238.72
Gilbert Lindsay Plaza	176,628	0.0628[d]	11,092.24	75%	2,773.06
Subtotal	*1,091,764*	*0.0775*	*82,581.55*		20,645.39
New Construction					
Event Center	1,925,000	0.001945	3,744.13	50%	1,827.06
New Hall	531,215	0.001945	1,033.2	75%	258.30
L.A. Live Way Garage	950,000	0.001945	1,847.8	75%	461.94
Bond Street Garage	296,463	0.001945	576.6	75%	144.16
Gilbert Lindsay Plaza	146,514	0.001945	285.0	75%	71.24
Subtotal	*3,849,192*	*0.001945*	*7,486.73*		2,762.70
Renovation					
Concourse Building (construction)	31,490	0.001945	61.25	75%	15.31
Concourse Building (demolition)	15,510	0.0775	1,202.03	75%	300.51
Subtotal	*47,000*		*1,263.28*		*315.82*
Total Construction and Demolition Debris			**91,331.56**		**23,723.91**

[a] *U.S. Environmental Protection Agency, Report No. EPA530-98-010, Characterization of Building-Related Construction and Demolition Debris in the United States, June 1998, pages 2-3, 2-4, and 2-8.*

[b] *Square footage includes Petree Hall.*

[c] *Generation rate is based on asphalt assumed to weigh 175 pounds per cubic foot and a depth of 1 foot to be removed.*

[d] *Generation rate is based on Gilbert Lindsay Plaza consisting of 30 percent landscaping, 35 percent asphalt, and 35 percent concrete. Asphalt and concrete are assumed to weigh 175 and 205 pounds per cubic foot and a depth of 1 foot for these materials that would be removed.*

Source: Matrix Environmental 2011.

demolition and construction debris over the construction life cycle of the Proposed Project. The Proposed Project would be developed over a period of time, with Project development concluding no later than 2017. Assuming approximately 272 days of demolition and not accounting for diversion, the projected total demolition of 83,783.6 tons would result in approximately 308 tons of demolition debris on a daily basis. With regard to construction waste, assuming approximately 1,422 days of construction and not accounting for

diversion, the amount of daily construction waste would be an average of 5.3 tons per day. In addition, on-site grading activities would generate soil export that would be removed from the Project Site. However, this soil export is not included in the volume of construction waste because the soil is not landfill waste, but would be used as cover material at a landfill or imported as fill for other construction projects.

The Applicants would target 50 percent and 75 percent of the non-hazardous construction and demolition debris by weight from construction of new Project buildings for recycling and/or salvaging for reuse. Therefore it is estimated that on an average demolition day approximately 77 tons of demolition waste would be disposed of at regional inert landfills during the Proposed Project's demolition construction phase. In addition, it is estimated that on average construction day approximately 1.95 tons of daily construction waste would be disposed of at regional inert landfills throughout the duration of the Proposed Project's construction phase. It is recognized that this forecast represents a mathematical average, and the actual amount of daily construction debris requiring off-site transport would vary considerably over the course of the Project's construction period.

Based on the forecasted need to dispose of approximately 77 tons per day of demolition over the assumed 272 days, the Project's demolition waste would represent a small percentage (4.5 percent) of the maximum permitted daily capacity of the County's inert landfills open to the City of Los Angeles (1,710 tpd). This same amount of daily demolition waste would represent a small percentage (4.8 percent) of the expected average daily tonnage capacity available at the Chiquita Canyon Landfill (1,574 tpd), which also accepts construction and demolition waste.[15,16,17] In addition, the disposal of approximately 1.95 tons per day of non-demolition construction debris over the course of the Proposed Project's construction period would represent a small percentage (0.11 percent) of the maximum permitted daily capacity of the County's inert landfills open to the City of Los Angeles (1,710 tpd). Furthermore, the amount of daily construction waste would represent a small percentage (0.12 percent) of the expected average daily tonnage capacity at the Chiquita Canyon Landfill (1,574 tpd). While it is unlikely that the quantity of construction and demolition waste sent to area landfills would be distributed evenly throughout the 5-year construction period, even on peak construction days when greater

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[15] *County of Los Angeles Department of Public Works; Los Angeles County Integrated Waste Management Plan 2010 Annual Report, October 2011, Appendix E-2, Table 1,*

[16] *Based on communication with the County Department of Public Works, construction and demolition waste at Chiquita Canyon landfill is used as ground cover for the landfill. Thus, being beneficial, there is no limit of the amount that can be accepted beyond that of the 5,000 tpd of total solid waste. December 2011*

[17] *Although the available capacity at Chiquita Canyon is 5,000 tons per day, for a conservative analysis, the proposed daily demolition is compared to the expected average daily tonnage available at Chiquita Canyon of 1,574 tpd.*

volumes are generated, the amount of daily waste to be landfilled would still only represent a small portion of the daily capacity at County facilities. Since the County's unclassified landfills generally do not face capacity shortages, and the County's unclassified landfills would be able to accommodate Project-generated waste, construction of the Project would not result in the need for an additional disposal facility to adequately handle project-generated waste. Therefore, construction impacts to solid waste facilities would be less than significant.

The Applicants are committed to recycling practices through implementation of project design features throughout the Project's design, construction and operations phases. Specifically, the Applicants would implement a demolition and construction debris recycling plan for all buildings constructed, with the explicit intent of requiring recycling during all phases of site preparation and building construction. Construction debris recycling facilities listed in the County's Construction and Demolition Recycling Guides may be utilized at the discretion of the Applicants. The implementation of these practices would ensure that the construction phase of the Project is consistent with the solid waste objectives and policies of the Countywide Integrated Waste Management Summary Plan, the Countywide Siting Element, the Source Reduction and Recycling Element for the Unincorporated Portions of Los Angeles County, the County of Los Angeles Green Building Standards, the City of Los Angeles Solid Waste Management Policy Plan, the City of Los Angeles Source Reduction and Recycling Element, the City of Los Angeles Solid Waste Integrated Resources Plan, the City General Plan Framework Element, the City Solid Resources Infrastructure Strategy Facilities Plan, the RENEW LA Plan, and City of Los Angeles Municipal Code. Thus, Project construction would result in a less than significant impact with regard to implementation of the City and County solid waste management policies and programs.

(b) Hazardous Waste

Construction activities would require the use of fuel and oils associated with construction equipment, as well as coatings, paints, adhesives, and caustic or acidic cleaners involved in the construction of the proposed structures. Those hazardous materials that are not consumed during the construction process would require proper disposal at a licensed hazardous waste disposal facility in accordance with all of the requirements of applicable regulatory agencies, which could include the Los Angeles Fire Department, City of Los Angeles Department of Public Works, Los Angeles Regional Water Quality Control Board, and/or the California Environmental Protection Agency Department of Toxic Substances Control. In addition, in the event that contaminated soils are unexpectedly encountered during the proposed grading and excavation activities, such soils may be required to be removed and disposed of in accordance with applicable federal, state, and local requirements. Compliance with such requirements, outlined in detail in Section IV.L, Environmental Hazards, of this Draft EIR, would reduce the potential

for a Project impact associated with disposal of construction-related hazardous waste to a less than significant level.

(2) Operational Impacts

(a) Solid Waste Disposal Facilities

Operation of the proposed Convention Center and Event Center uses would generate solid waste during on-going operations once Project construction is completed. Solid waste generation for the Proposed Project's operational activities is forecasted using existing STAPLES Center solid waste generation rates, Convention Center solid waste generation rates, and standard factors provided in the City of Los Angeles Department of Public Works' 2000 Waste Characterization & Quantification Study. The Proposed Project, over its operational life, as shown in Table IV.K.3-6 on page IV.K.3-22 is forecasted to generate approximately 8,391.7 tons of solid waste per year before accounting for recycling. Taking recycling into account, the Proposed Project would generate a net solid waste generation of 4,195.86 tons per year that would require transport to a landfill, and 4,195.86 tons per year that would be recycled.

Project-generated solid waste would be collected by a private solid waste hauler and taken for disposal at one of the County's Class III landfills open to the City of Los Angeles.[18] As shown in Table IV.K.3-1 on page IV.K.3-6, the estimated remaining capacity for County Class III landfills open to the City of Los Angeles is approximately 90.6 million tons as of December 31, 2011.[19,20] Thus, the Project's net increase of 4,195.86 tons of annual solid waste would represent approximately 0.13 percent of the expected average daily tonnage converted to an annual basis as of 2010 (approximately 3.28 million tons[21]). Furthermore, as noted in the County's 2010 Annual Report, it is forecasted that through the use of alternative technologies, successfully permitting the Mesquite Regional Landfill, and gradually increasing the Countywide diversion rate to 65 percent, the County would be able

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[18] *Private solid waste haulers hold individual contracts with landfill operators for the disposal of waste. Thus, it is unknown at this time which landfills would ultimately accept project-generated waste. However, it is anticipated that Project-generated waste would generally be disposed of at a Class III landfill open to the City of Los Angeles.*

[19] *Total excludes Class III landfills not open to the City of Los Angeles for disposal (i.e., Puente Hills, Scholl Canyon, Whittier, Burbank, Pebbly Beach, Calabasas and San Clemente).*

[20] *From the Los Angeles County Integrated Waste Management Plan 2010 Annual Report, Appendix E-4, October 2011. Waste Generation is estimated using the Waste Board's Adjustment Methodology, utilizing population projection, employment, and taxable sales projections from UCLA.*

[21] *Calculated based on expected average daily tonnage of 12,599 tons multiplied by 260 days (5 days/week) to convert to annual disposal.*

Table IV.K.3-6
Annual Proposed Project Impacts

Land Use	Patrons or Employees	Factor (tons/unit)[a]	Total Waste Generated	Recycled Waste (tons/year)[b]	Net to Landfills[c]
Convention Center[d]					
Exhibit/Meeting Rooms (net increase in patrons)	1,308,619	0.0005	654.31	327.16	327.16
Retail (employees)	16	1.5200	24.32	12.16	12.16
Subtotal			*678.63*	*339.32*	*339.32*
Event Center					
Spectator Events (patrons)	4,122,500	0.0016	6,596.00	3,298.00	3,298.00
Exhibition Events(patrons)	1,971,690	0.0005	985.85	492.93	492.93
Office (employees)	36	0.3700	13.32	6.66	6.66
Retail (employees)	56	1.5200	85.12	42.56	42.56
Restaurant (employees)	11	2.9800	32.78	16.39	16.39
Subtotal			*7,713.07*	*3,856.54*	*3,856.54*
Total[e]			8,391.70	4,195.86	4,195.86

[a] *Factors for retail, office, and restaurant uses per the 2000 Waste Characterization Study is based on the number of employees. The factors for exhibit/meeting rooms and Exhibition Events are based on Existing Convention Center Total Waste Generated/Existing Convention Center Attendance (1,586.96/2,712,340=0.0005 tons per capita). The factor for Spectator Events is based on Existing STAPLES Center Total Waste Generated/Existing Staples Center Attendance (4,676.22 tons/2,974,357 patrons= 0.0016 tons per capita) Refer to Section IV.A, Land Use Planning, of this Draft EIR, for calculation of the Project's employment forecast.*

[b] *Total Waste Generated x Recycling Factor = Recycled Waste. Recycling factor for the Proposed Project is based on proposed 50 percent diversion rate.*

[c] *Total Waste Generated – Recycled Waste = Net to Landfills.*

[d] *Restaurant patrons at the Convention Center are included in the total Convention Center patronage numbers.*

[e] *For a conservative analysis sub-totals have been rounded up.*

Source: Matrix Environmental 2012.

to adequately serve future disposal needs through 2025.[22] Additionally, it is anticipated that some of the solid waste generated would be diverted via the project design features outlined above.

Since the Proposed Project has activity levels that change on a virtually daily basis, a mathematical average of daily solid waste generation at the Project Site may not present the most accurate depiction of the Proposed Project's net increase in daily solid waste generation (i.e., annual solid waste/365 days = daily solid waste). The Event Center would

[22] *Los Angeles County Integrated Waste Management Plan 2010 Annual Report, October 2011.*

be host to the following two general types of events: (1) Spectator Events (e.g., sporting events and concerts); and (2) Exhibition Events (e.g., convention center events and meeting room usage). The first step in the analysis of daily solid waste generation is to determine which of these two types of uses would generate a greater amount of daily solid waste. As shown in Table IV.K.3-6 on page IV.K.3-22, solid waste generation at Spectator Events is higher that Exhibition Events and as such would provide a more conservative analysis of the daily solid waste generation resulting from the use of the Event Center. The Event Center during a Spectator Event, coupled with the Event Center's ancillary uses, coupled with Convention Center usage, including its ancillary uses, would constitute the maximum daily solid waste generation level associated with the Proposed Project.

Daily Proposed Project Impacts and Daily Project Impacts with No Existing Convention Center Activity calculations were determined based on the daily attendance of the Project Site multiplied by the existing per capita solid waste generation and industry standard solid waste generation factors for the ancillary uses. As shown in Table IV.K.3-7 on page IV.K.3-24, proposed daily Project impacts would generate 123.716 tons per day of solid waste. Of this total, the Convention Center and its ancillary uses would generate approximately 1.342 tons per day, whereas the Event Center and its ancillary uses would generate approximately 122.374 tons per day.

As shown in Table IV.K.3-8 on page IV.K.3-25, Daily Project Impacts with No Existing Convention Center Activity would generate 132.216 tons per day of solid waste, of which the Convention Center and its ancillary uses would generate approximately 9.842 tons per day, whereas the Event Center and its ancillary uses would generate approximately 122.374 tons per day.

With the incorporation of recycling, these levels of solid waste generation drop to 61.859 tons per day under the Proposed Project with existing Convention Center activity, and 66.11 tons of solid waste under the Daily Project Impacts with No Existing Convention Center Activity scenario.

While in the past solid waste disposal has occurred solely within landfills located in Los Angeles County, the trend in recent years is an increase in solid waste disposal at landfills located outside of the County. Thus, the proper current context within which to view the Project's potential solid waste includes landfills located within, as well as outside of, Los Angeles County. As discussed previously, the existing and planned landfills/ improvements identified in the County Integrated Waste Management Plan 2010 Annual Report would be able to accommodate Project-generated waste through 2025. Various factors, including future County development and/or expansion of landfills, use of new waste-by-rail facilities, development of new conversion technologies, etc, would ultimately determine the future available landfill capacity.

Table IV.K.3-7
Daily Proposed Project Impacts

Land Use	Patrons or Employees	Factor (tons/unit)[a]	Total Waste Generated	Recycled Waste (tons/day)[b]	Net to Landfills[c]
Convention Center					
Exhibit/Meeting Rooms (patrons)	2,550[d]	0.0005	1.275	0.638	0.638
Retail (employees)[e]	16	1.5200	0.067	0.033	0.033
Subtotal			*1.342*	*0.671*	*0.671*
Event Center					
Spectator Events					
Attendance (patrons)	76,250	0.0016	122	61	61
Office (employees)[e]	36	0.3700	0.051	0.026	0.026
Retail (employees)[e]	56	1.5200	0.233	0.117	0.117
Restaurant (employees)[e]	11	2.9800	0.090	0.045	0.045
Subtotal[f]			122.374	61.188	61.188
Exhibition Events					
Attendance (patrons)	64,999	0.0005	32.500	16.25	16.25
Office (employees)[e]	36	0.3700	0.051	0.026	0.026
Retail (employees)[e]	56	1.5200	0.233	0.117	0.117
Restaurant (employees)[e]	11	2.9800	0.090	0.045	0.045
Subtotal			*32.874*	*16.438*	*16.438*
Convention Center and Event Center (Spectator)[g]			123.716	61.859	61.859
Convention Center and Event Center (Exhibition)[g]			**34.216**	**17.109**	**17.109**

[a] *Factors for retail, office, and restaurant uses are based on the 2000 Waste Characterization Study based on the number of employees. The factors for exhibit/meeting rooms and Exhibition Events are based on Existing Convention Center Total Waste Generated/Existing Convention Center Attendance (1,586.96 tons/2,712,340 patrons=0.0005 tons per patron). The factor for Spectator Events is based on Existing STAPLES Center Total Waste Generated/Existing Staples Center Attendance (4,676.22 tons/2,974,357 patrons= 0.0016 tons per patron)*

[b] *Total Waste Generated x Recycling Factor = Recycled Waste. Recycling factors for the Project Site based on proposed 50 percent diversion rate; Total Waste Generated x Recycling Factor = Recycled Waste.*

[c] *Total Waste Generated – Recycled Waste = Net to Landfills.*

[d] *Proposed Project is project to increase daily attendance from 17,000 to 19,500, for a net increase of 2,550 patrons.*

[e] *Event Center office, retail, and restaurant daily waste generation rates are adjusted to conservatively calculate solid waste rates. Office rates are calculated based on a 5-day work week; retail and restaurant rates are calculated based on a 7-day work week.*

[f] *For a conservative analysis totals have been rounded up.*

[g] *For a conservative analysis, daily totals are based on daily peak capacity rates for the Convention Center and Event Center.*

Source: Matrix Environmental 2012.

Table IV.K.3-8
Daily Project Impacts with No Existing Convention Center Activity

Land Use	Patrons or Employees	Factor (tons/unit)[a]	Total Waste Generated	Recycled Waste (tons/day)[b]	Net to Landfills[c]
Convention Center					
Exhibit/Meeting Rooms (patrons)	19,550[d]	0.0005	9.775	4.888	4.888
Retail (employees)[e]	16	1.5200	0.067	0.034	0.034
Subtotal			*9.842*	*4.922*	*4.922*
Event Center[e]					
Spectator Events					
Attendance (patrons)	76,250	0.0016	122	61	61
Office (employees)[e]	36	0.3700	0.051	0.026	0.026
Retail (employees)[e]	56	1.5200	0.233	0.117	0.117
Restaurant (employees)[e]	11	2.9800	0.090	0.045	0.045
Subtotal[f]			*122.374*	*61.188*	*61.188*
Exhibition Events					
Attendance (patrons)	64,999	0.0005	32.500	16.25	16.25
Office (employees)[e]	36	0.3700	0.051	0.026	0.026
Retail (employees)[e]	56	1.5200	0.233	0.117	0.117
Restaurant (employees)[e]	11	2.9800	0.090	0.045	0.045
Subtotal			*32.874*	*16.438*	*16.438*
Convention Center and Event Center with Spectator Events[g]			**132.216**	**66.11**	**66.11**
Convention Center and Event Center with Exhibition Events and Meeting Rooms[g]			**42.716**	**21.36**	**21.36**

[a] *. Factors for retail, office, and restaurant uses are based on the 2000 Waste Characterization Study based on the number of employees. The factors for exhibit/meeting rooms and Exhibition Events are based on Existing Convention Center Total Waste Generated/Existing Convention Center Attendance (1,586.96 tons/2,712,340 patrons=0.0005 tons per capita). The factor for Spectator Events is based on Existing STAPLES Center Total Waste Generated/Existing Staples Center Attendance (4,676.22 tons/2,974,357 patrons= 0.0016 tons per capita)*

[b] *Total Waste Generated x Recycling Factor = Recycled Waste. Recycling factors for Project Site are based on proposed 50 percent diversion rate;*

[c] *Total Waste Generated – Recycled Waste = Net to Landfills.*

[d] *The attendance on days where there is no existing convention center activity is 0 patrons. As the projected attendance from the Proposed Project is 19,550, the incremental increase under this scenario is 19,550 (19,550-0=19,550).*

[e] *Event Center office, retail, and restaurant daily waste factors are adjusted to conservatively calculate solid waste generation rates. Office rates are calculated based on a 5-day work week; retail and restaurant rates are calculated based on a 7-day work week.*

[f] *For a conservative analysis sub-totals have been rounded up.* [g] *For a conservative analysis daily totals are based on daily peak capacity rates for the Convention Center and Event Center.*

Source: Matrix Environmental 2012.

The County would continue to address landfill capacity through the preparation of annual CIWMPs. The preparation of each annual CIWMP provides sufficient lead time (15 years) to address potential future shortfalls in landfill capacity. Furthermore, in future years, it is anticipated that the rate of declining landfill capacity would slow considering the City's SWIRP objective to achieve a 70 percent diversion goal by 2015. While it is anticipated that future iterations of the CIWMPs would provide for improvements beyond 2014 to serve future waste disposal needs, it is conservatively assumed, based solely on existing permitted landfill capacity, that the County may not be able to accommodate the disposal needs of the Project. Therefore, impacts to solid waste disposal facilities at Project development buildout in 2017 are conservatively concluded to be potentially significant.

(b) Consistency with Regulatory Framework

In accordance with City Ordinance No. 171687 on-site recycling facilities would be provided throughout the Project Site. Additionally, the project design features establish solid waste diversion requirements to reduce solid waste generation, including the recycling of construction and demolition debris and the use of recycled-content materials during construction. As a result, the Project would promote source reduction and recycling, consistent with AB 939 and the City's SWIRP, Framework Element, RENEW LA Plan, Green LA Plan, and the LA Green Building Code. Therefore, the Project would not conflict with solid waste policies and objectives. Impacts associated with solid waste policies and objectives would be less than significant and no mitigation measures are required.

(c) Solid Waste Collection Routes

Proposed on-site development would continue to be served by existing solid waste routes both within the Project Site as well as off the Project Site. As such, proposed development within the Convention and Event Center areas would not create a need for additional solid waste collection routes to adequately handle Project-generated solid waste and a less than significant impact would result.[23] Development within the proposed Convention and Event Center areas would include the completion of a new and modified loading dock configuration that would provide easy access to on-site waste collection locations. Once off-site, the transport of solid waste generated within the Convention and Event Center areas to off-site waste management/disposal facilities would continue to use existing solid waste routes of travel and exit points from the Project Site. As mentioned

[23] *Truck trips attributable to solid waste collection are also analyzed in the Project's traffic analysis as a component of the trip-generation rates included in that analysis. The results of the Project's traffic analysis are provided in Section IV.B.1, Transportation, and Appendix I.1 of this Draft EIR.*

above, the transport of solid waste off the Project Site currently occurs via the existing internal roadway system with off-site ingress/egress occurring via Pico Boulevard and Chick Hearn Court. As such, implementation of the Proposed Project within the Convention and Event Center Area would not result in a significant impact since the Proposed Project would utilize existing solid waste collection routes to adequately handle Project-generated solid waste.

4. Cumulative Impacts

Cumulative development in the City of Los Angeles, prior to recycling, would generate approximately 894,694.696 tons of non-hazardous construction debris between 2011 and 2017. As shown in Table IV.K.3-9 on page IV.K.3-28, when the Project's 91,331.56 tons of demolition and construction debris is added to this amount, it brings the total to approximately 986,026.256 tons of cumulative non-hazardous construction debris that would need to be disposed of over the Proposed Project's 5-year construction cycle. A Countywide diversion rate of 50 percent, based on AB 939 for all types of solid waste, including construction and demolition debris, was assumed for cumulative development. As shown in Table IV.K.3-5 on page IV.K.3-18, the Project's net to landfill disposal of 23,723.91 tons of non-hazardous construction debris would account for 5.3 percent of the cumulative non-hazardous construction waste disposed of throughout Los Angeles City during the 5 year construction period for the Project. As the Project's contribution to the depletion of regional inert landfill capacity is not cumulatively considerable, the Project's cumulative construction impacts would be less than significant.

Regarding operational solid waste, as discussed above, the proposed Daily Project Impacts would generate 123.7 tons per day and 132.2 tons per day compared to no on-site existing activity. Existing recycling programs are planned to be extended to apply to the Proposed Project, the actual amount of additional solid waste generated by the Proposed Project that require landfill disposal would be 61.9 tons per day and 66.1 tons per day on days compared to no on-site existing activity as shown in Table IV.K.3-7 on page IV.K.3-24 and Table IV.K.3-8 on page IV.K.3-25, respectively.

As shown in Table IV.K.3-10 on page IV.K.3-29, cumulative development within the City of Los Angeles with a diversion rate of 55 percent would generate 193.1 tons per day in 2017. As detailed in Table IV.K.3-11 on page IV.K.3-29, when the increase in solid waste generated from the Proposed Project is added to the forecasted growth in the City solid waste to be landfilled, the total becomes 254.968 tons per day, of which the Proposed Project's increase would be 61.9 tons per day, or approximately 24.3 percent. On days where the Proposed Project impacts with No Existing Convention Center Activity would occur, the net City waste to be landfilled is 259.219 tons per day, of which the Project would contribute 66.1 tons per day, approximately 25.5 percent.

Table IV.K.3-9
Cumulative Los Angeles City Demolition and Construction Waste Generation

Land Use	Net Development (sf/du)	Generation Rate (tons/sf)	Total (tons)
Demolition			
Commercial	9,039,080 sf[a]	0.077500[b]	700,528.700
Construction			
Residential	74,922,000 sf[c]	0.002190[b]	164,079.180
Non-Residential (Studio, Office, Entertainment, Retail, Hotel)	15,468,800 sf[c]	0.001945[b]	30,086.816
Cumulative L.A. County Demolition/ Construction Waste Generation			**894,694.696**
Project Demolition/ Construction Waste Generation			**91,331.56**
Total Demolition/Construction Waste Generation			**986,026.256**

sf = square feet

du = dwelling unit

Waste generation includes all materials discarded, whether or not they are later recycled or disposed of in a landfill.

[a] *Demolition is assumed to be 10 percent of the total amount of forecasted construction.*

[b] *U.S. Environmental Protection Agency, Report No. EPA530-98-010, Characterization of Building-Related Construction and Demolition Debris in the United States, June 1998, pages 2-3, 2-4, and 2-8. Residential generation rate based on an average unit size of 1,200 square feet.*

[c] *Based on Southern California Association of Governments 2004 Regional Transportation Plan forecasted household and employment growth for Los Angeles County and an average of 3 employees per 1,000 square feet of floor area.*

Source: Matrix Environmental, 2011.

Pursuant to Assembly Bill 939, the CIWMP 2010 Annual Report provides an analysis under seven landfill scenarios for the County. The analysis concludes that the County would be able to provide for its 15-year disposal needs by successfully permitting and developing all in-County landfill expansions, implementing alternative technologies, and disposing waste in landfills outside of the County. For example, in 2010 approximately 21.5 percent of the solid waste generated within the County was disposed of at landfill facilities located outside of Los Angeles County.[24] With successful implementation of

[24] *County of Los Angeles, Department of Public Works, Environmental Programs Division, Los Angeles County Integrated Waste Management Plan 2010 Annual Report on the Countywide Summary Plan and Countywide Siting Element, October 2011, Accessed March 2012.*

Table IV.K.3-10
City of Los Angeles Cumulative Daily Solid Waste Generation

Population	2017 Population Growth	Per Capita Generation (tons/day)	Total Waste Generated (tons/day)	Diversion Rate (percent)	Net Waste to Landfills (tons/day)
Residential	86,994	0.00128	111.353	55%	50.109
Non-Residential	58,957	0.00539	317.778	55%	143.000
Total Cumulative Solid Waste			**429.131**		**193.109**

Source: Matrix Environmental, 2011.

Table IV.K.3-11
Cumulative Landfilled Solid Waste

	Cumulative Proposed Project	Cumulative Proposed Project with No On-Site Existing Activity
Daily 2017 Cumulative Landfilled Solid Waste	193.109	193.109
Daily Project Waste Generation[a]	61.859	66.110
Total Daily Waste Generation	**254.968**	**259.219**
Total Project Percent of Cumulative Landfilled Solid Waste	**24.3%**	**25.5%**
Annual 2017 Cumulative Landfilled Solid Waste[b]	62,905.76	
Annual Project Waste Generation	4,195.86	
Total Annual Waste Generation[a]	**67,101.60**	
Total Project Percent of Cumulative Landfilled Solid Waste	**6.3%**	

[a] *It is appropriate to calculate Proposed Daily Impacts and Proposed Daily Impacts with No On-Site Existing Activity rates separately to account for the differences in the number of people assumed to be at the Los Angeles Convention Center on a daily basis. Annual Project waste generation includes all event days occurring during the year.*

[b] *Annual 2017 Cumulative Landfilled Solid Waste is calculated based on an average 312 days per year for Non-residential uses and 365 days per year for residential uses. Annual data is only calculated under the Proposed Project column as annual analysis accounts for both Proposed Project and Proposed Project with No Existing Convention Center Activity*

Source: Matrix Environmental, 2012.

planned landfill facilities, cumulative impacts would be less than significant. However, as landfill capacity may not be available to meet the cumulative solid waste disposal needs of

the Proposed Project and related projects, it is conservatively concluded that the Proposed Project may make a considerable contribution to a significant cumulative impact with respect to landfill capacity.

It is anticipated that, similar to the Proposed Project, the individual projects that comprise the cumulative growth included in this analysis would not conflict with and instead would act to implement applicable City and County waste diversion goals and polices, including the City's Solid Waste Management Policy Plan, Source Reduction and Recycling Element, Framework Element, Solid Resources Infrastructure Strategy Facilities Plan, and City Municipal Code, as well as the County's Integrated Waste Management Summary Plan, Source Reduction and Recycling Element, and Countywide Siting Element. Thus, cumulative impacts with regard to consistency with solid waste plans, policies, and programs would be less than significant. Furthermore, the cumulative solid waste generation associated with the development of the related projects could create a need for additional solid waste collection routes to adequately handle future solid waste generated by this development, which is considered a potentially significant cumulative impact. However, as no Project impacts would occur, the Project's cumulative impacts with regard to solid waste collection routes are concluded to be less than significant.

5. Project Design Features and Mitigation Measures

a. Project Design Features

Project Design Feature K.3-1: The Applicants will extend the existing on-site solid waste recycling programs to include both the Event Center and the New Hall.

(1) Convention Center

Project Design Feature K.3-2: A minimum of 20 percent of all building materials and products for development will consist of recycled content or will be manufactured regionally while a minimum of 5 percent of all building materials and products for development will be rapidly renewable.

Project Design Feature K.3-3: Divert a combined minimum of 75 percent of construction waste and/or debris from landfill storage for both the demolition and new construction phases.

Project Design Feature K.3-4: The New Hall would divert at least 50 percent of its solid waste during operation.

(2) Event Center

Project Design Feature K.3-5: Fifty percent of solid waste will be diverted during construction and operation of the Event Center. The Event Center will divert waste from landfill through robust recycling, the donation of durable goods, and implementing a front of house composting program that includes sourcing of biodegradable concessions packages.

b. Mitigation Measures

As Project impacts during construction and operations would be reduced to the extent feasible through the above project design features, no mitigation measures are required.

6. Level of Significance After Mitigation

Construction of the Proposed Project would not create a need for additional inert solid waste disposal facilities; thus, construction-related waste would result in a less than significant impact with respect to landfill capacity. Likewise, the Proposed Project would result in a less than significant impact associated with the disposal of hazardous wastes and solid waste collection routes during construction.

Operation of the Proposed Project would involve the continued implementation of on-site waste management and recycling programs to divert solid waste generated at the Project Site from requiring disposal at regional landfills. The CIWMP 2010 Annual Report identifies multiple scenarios in which sufficient and on-going landfill capacity would be available. Should one of these scenarios be realized, then both Project and cumulative impacts would be less than significant. However, due to the uncertainty in the availability of future landfill capacity, it is conservatively assumed that the Project's operational impacts with regard to landfill capacity would remain significant and unavoidable. Likewise, as diversion measures cannot be ensured for related projects, cumulative impacts with regard to regional landfill disposal capacity would also remain significant and unavoidable. It should be noted that the identification of additional landfills is generally addressed at the City and County levels (e.g., through the County's Countywide Siting Element) and, as such, is not under the control of the Applicants. Other than waste minimization and diversion, which are project design features, no other feasible mitigation measures have been identified to address this potential impact.

During construction and operation, the Proposed Project would not conflict with and would act to implement applicable City waste diversion goals and polices, including the City of Los Angeles Solid Waste Management Policy Plan, City of Los Angeles Source

Reduction and Recycling Element, General Plan Framework Element, Solid Resources Infrastructure Strategy Facilities Plan, and City Municipal Code, and as such would result in a less than significant impact with respect to these solid waste plans, policies, and programs.

As the Proposed Project would utilize existing solid waste collection routes, no additional solid waste routes would be needed and a less than significant impact with regard to this issue would occur.