

LOS ANGELES COUNTY COUNTYWIDE SITING ELEMENT

SUMMARY OF REVISIONS

**CHAPTER 4 – CURRENT DISPOSAL RATE AND ASSESSMENT OF DISPOSAL CAPACITY NEEDS**

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## CHAPTER 4 CURRENT DISPOSAL RATE AND ASSESSMENT OF DISPOSAL CAPACITY NEEDS

### 4.1 PURPOSE

The purpose of this Chapter is to quantify the current disposal rate in Los Angeles County (County) and to address the disposal capacity needs of the 88 cities in the County and the County unincorporated communities for a 15-year planning period pursuant to California Code of Regulations (CCR), Title 14, Section 18755.3 (b). The base year for the planning period of this Chapter is 2014.

The specific requirements for the content of this chapter are drawn from CCR, Title 14, Division 7, Chapter 9, Article 6.5, Sections 18755 and 18755.3, and discussed in Section 4.3 of this Chapter.

### 4.2 DEFINITIONS

Below are the definitions of key terms used in this Chapter. For a more complete listing of definitions and acronyms, please refer to the Glossary of Terms and List of Acronyms at the beginning of this document.

#### 4.2.1 Adjustment Method

Refers to a formula for annually estimating jurisdiction solid waste tons generated. Chapter 1292, Statutes of 1992 (Sher, AB 2494) required the California Department of Resources Recycling and Recovery (CalRecycle) to develop a standard methodology so that jurisdictions would have a cost-effective way to estimate how much waste they generate. (See Public Resources Code (PRC) Section 41780.1.) CCR, Title 14, Chapter 9, Article 9.1, requires that population, employment, taxable sales, and Consumer Price Index be used in the adjustment method formula.

#### 4.2.2 Alternative Technology

Refers to a technology, such as conversion technology, transformation, Engineered Municipal Solid Waste conversion, or other emerging technologies, capable of processing residual municipal solid waste (MSW), in lieu of landfill disposal. ~~Refers to a technology capable of processing residual municipal solid waste (MSW), such as conversion technology, transformation, or other emerging technologies, in lieu of land disposal.~~

#### 4.2.3 Available Out-of-County Disposal Capacity

Refers to the amount of solid waste generated in Los Angeles County that can be accepted by the out-of-County Class III landfills potentially available for out-of-County disposal of solid waste from Los Angeles County.

#### **4.2.4 Base-Year Generation**

Refers to the amount of waste generated by a jurisdiction during the calendar year used for a jurisdiction's solid waste generation study. The waste generated by a jurisdiction includes all solid waste disposed or diverted. Base-year generation is the base for CalRecycle's projections and estimates of jurisdiction's future waste generation and diversion rates for the subsequent years.

#### **4.2.5 Class III Landfill Disposal Demand**

Refers to the difference between the total disposal need (excluding inert waste landfills) and the available disposal capacity of the transformation facilities and alternative technology facilities.

#### **4.2.6 Conversion Technologies**

Refers to a wide array of technologies capable of converting post-recycled or residual solid waste into useful products, green fuels, and renewable energy through non-combustion thermal, chemical, or biological processes. Conversion technologies may include mechanical processes, when combined with a non-combustion thermal, chemical, or biological conversion process.

#### **4.2.7 Daily Disposal Capacity Reserve**

Refers to the daily amount of solid waste capacity available in-County and out-of-County in excess of the daily amount of solid waste in need of disposal.

#### **4.2.8 Daily Disposal Capacity Shortfall**

Refers to the daily amount of solid waste in need of disposal in excess of available in-County and out-of-County disposal capacity.

#### **4.2.9 Daily Disposal Demand**

Refers to the amount of solid waste generated less the amount diverted by means of reuse, recycling, or composting based on a six-day-per-week operation at permitted solid waste disposal facilities.

#### **4.2.10 Disposal**

Defined in PRC, Section 40192 as: "(a) Except as provided in subdivisions (b) and (c), 'solid waste disposal,' 'disposal,' or 'dispose' means the final deposition of solid waste onto land, into the atmosphere, or into the waters of the state. (b) ~~For purposes of Part 2 Except as provided in Part 2~~ (commencing with Section 40900), ~~for the purposes of Part 2 (commencing with Section 40900),~~ 'solid waste disposal,' 'dispose,' or 'disposal' means the management of solid waste through landfill disposal, ~~or transformation,~~ or Engineered Municipal Solid Waste (EMSW) conversion, at a permitted solid waste facility, unless the term is expressly defined otherwise. (c) For the purposes of Chapter 16 (commencing with Section 42800) and Chapter 19 (commencing with Section 4500042950) of Part 3, Part 4 (commencing with Section 43000), Part 5 (commencing with Section 45000), Part 6 (commencing with Section 45030), and Chapter 2 (commencing with Section 47901~~0~~) of Part 7, 'solid waste disposal,' 'dispose,' or 'disposal' means the final deposition of solid wastes onto the land. Also defined in CCR, Title 14, Section 18720 (17) as "the management of solid waste through landfilling or transformation at permitted solid waste facility."

#### 4.2.11 Disposal Capacity

Defined in CCR, Title 14, Section 18720 (18) as "the capacity, expressed in either weight in tons or its volumetric equivalent in cubic yards, which is either currently available at a permitted solid waste landfill, or will be needed for the disposal of solid waste generated within the jurisdiction over a specified period of time."

#### 4.2.12 Disposal Facility

Defined in PRC Section 40121 as "any facility or location where disposal of solid waste occurs or an EMSW conversion facility."

#### 4.2.13 Disposal Site

Defined in PRC, Section 40122 as "the place, location, tract of land, area, or premises in use, intended to be used, or which has been used, for the disposal of solid wastes." "Disposal Site" includes solid waste landfills, as defined in PRC, Section 40195.1.

#### 4.2.14 Export Need or Out-of-County Disposal Need

Refers to the difference between the amount of solid waste generated within (and/or imported into) Los Angeles County that needs to be disposed after waste diversion and alternative technology (e.g., conversion technology)

processes have been utilized, and available disposal capacity of permitted in-County landfills and transformation facilities is not sufficient.

#### 4.2.15 In-Place Solid Waste Density or Compaction Rate

Refers to the density in pounds per cubic yard of solid waste (excluding cover materials used) deposited in a landfill after it has been compacted. Throughout the CSE, the compaction rate listed has been provided by the landfill operator. When a site-specific density is not available, an in-place solid waste density/compaction rate of 1,200 pounds per cubic yard is assumed for Class III landfills, 3,000 pounds per cubic yard for inert waste landfills, and 900 pounds per cubic yard for material recovery facilities and transfer stations.

#### 4.2.16 Inert Debris Engineered Fill Operations (IDEFO)

Refers to a disposal activity exceeding one year in duration in which only the following inert debris may be used: fully cured asphalt, uncontaminated concrete (including steel reinforcing rods embedded in the concrete), crushed glass, brick, ceramics, clay, and clay products, which may be mixed with rock and soil. These materials are spread on land in lifts and compacted under controlled conditions to achieve a uniform and dense mass which is capable of supporting structural loading, as necessary, or supporting other uses such as recreation, agriculture, and open space in order to provide land that is appropriate for an end use consistent with approved local general and specific plans (e.g., roads, building sites, or other improvements) where an engineered fill is required to facilitate productive use(s) of the land. (See CCR, Title 14, Section 17388.)

#### 4.2.17 Inert Waste Landfill

Refers to landfills that accept inert waste. CCR, Title 14, Section 18720 (32) defines inert waste as "a non-liquid solid waste including, but not limited to, soil and concrete, that does not contain hazardous waste or soluble pollutants at concentrations in excess of applicable water quality objectives established by a regional water quality board pursuant to division 7 (commencing with section 13000) of the California Water Code and does not contain significant quantities of decomposable solid waste."

#### 4.2.18 Permitted Capacity

Refers to the total quantity of solid waste (in cubic yards and/or tons) which a permitted landfill or permitted transformation facility is allowed to receive in accordance with the terms, conditions, and limitations of the facility's current Solid Waste Facility Permit (SWFP), Land/Conditional Use Permit (LUP/CUP), Waste Discharge Requirements (WDR), and Permit to Operate issued by the

local Air Quality Management/Air Quality Control District, whichever is more restrictive.

#### 4.2.19 Permitted Solid Waste Landfill or Permitted Landfill

Defined in CCR, Title 14, Section 18720 (50) as "a solid waste landfill for which there exists a current [Solid Waste Facilities Permit](#) ~~{(SWFP)}~~ issued by the Local Enforcement Agency ~~{(LEA)}~~ and concurred in by ~~{CalRecycle}~~, or which is permitted under the regulatory scheme of another state."

For the purpose of the CSE and in concert with the requirements of CCR, Title 14, Section 18720, refers to a solid waste landfill facility for which there exists: (1) a current SWFP issued by the LEA and concurred in by CalRecycle, (2) a LUP/CUP issued by the local jurisdiction's land use authority, (3) Waste Discharge Requirements issued by the appropriate California Regional Water Quality Control Board, and if applicable (4) a Permit to Operate issued by local Air Quality Management/Air Pollution Control District.

#### 4.2.20 Planning Period

Refers to the 15-year planning period defined to begin with the year in which the CSE is prepared or revised. For the purpose of the CSE, "Planning Period" refers to the period beginning in the year 2014 and ending in the year 2029.

#### 4.2.21 Solid Waste Disposal

[Defined in PRC, Section 40192 as "\(a\) Except as provided in subdivisions \(b\) and \(c\), "solid waste disposal," "disposal," or "dispose" means the final deposition of solid wastes onto land, into the atmosphere, or into the waters of the state. \(b\) For purposes of Part 2 \(commencing with Section 40900\), "solid waste disposal," "dispose," or "disposal" means the management of solid waste through landfill disposal, transformation, or EMSW conversion, at a permitted solid waste facility, unless the term is expressly defined otherwise. \(c\) For purposes of Chapter 16 \(commencing with Section 42800\) and Chapter 19 \(commencing with Section 42950\) of Part 3, Part 4 \(commencing with Section 43000\), Part 5 \(commencing with Section 45000\), Part 6 \(commencing with Section 45030\), and Chapter 2 \(commencing with Section 47901\) of Part 7, "solid waste disposal," "dispose," or "disposal" means the final deposition of solid wastes onto land. Also defined in CCR, Title 14, Section 18720 \(17\) as "the management of solid waste through landfilling or transformation at permitted solid waste facility."](#) ~~Refers to the final deposition of solid waste onto land, into the atmosphere, or into the waters of the state, as defined in PRC, Section 40192; or the management of solid waste through landfilling or transformation at a permitted solid waste facility, as defined in CCR, Title 14, Section 18720 (17).~~

#### 4.2.22 Solid Waste Disposal Capacity

Refers to the capacity, expressed in either weight in tons (or its volumetric equivalent in cubic yards), which is either currently available at a permitted solid waste landfill, or will be needed for the disposal of solid waste generated within a jurisdiction over a specified period of time.

#### ~~4.2.234 Transformation (Waste-to-Energy) Facility~~

~~Refers to a facility whose principal function is to convert, combust, or otherwise process solid waste by incineration, pyrolysis, destructive distillation, or gasification, or to chemically or biologically process solid wastes, for the purpose of volume reduction, synthetic fuel production, or energy recovery. Transformation facility does not include a composting facility, as defined in CCR, Title 14, Section 18720 (77).~~

#### 4.2.23 Waste-to-Energy Facility

Refers to a transformation facility that engages in the cogeneration of electricity through incineration of residual solid waste, such as the Commerce Refuse-to-Energy Facility located in the City of Commerce and the Southeast Resource Recovery Facility located in the City of Long Beach for the purpose of the CSE.

### 4.3 SPECIFIC REQUIREMENTS

CCR, Title 14, Section 18755.3, requires the following:

- a) Each county and regional agency, with assistance from the local task force, shall include documentation in the countywide siting element providing the following information:
  - (1) The January 1, 1990, permitted disposal capacity in tons and cubic yards established pursuant to CCR, Title 14 Section 18777(b).
  - (2) The existing permitted disposal capacity in tons and cubic yards in the year the Siting Element is prepared; and
  - (3) The disposal capacity in cubic yards and in tons in any year the Siting Element is revised.
- b) The anticipated disposal capacity needs shall be described in tons and cubic yards, on an annual basis and aggregated for a minimum 15-year period, beginning with the year in which the Siting Element is prepared and in any year the Siting Element is revised.

- c) Area(s) shall be selected where solid waste disposal facilities are envisioned to be expanded or sited and constructed for the purpose of meeting a required minimum of 15 years of combined permitted disposal capacity. Each county shall consider the following in determining the areas where solid waste disposal facilities are planned to be expanded or sited and constructed:
  - (1) The total amount of solid waste generated, expressed in tons and cubic yards for volumetric capacity for the required 15-year period.
  - (2) The existing remainder of combined permitted disposal capacity in tons and cubic yards for the required 15-year period.
  - (3) An estimation of the total disposal capacity in tons and cubic yards needed to meet a minimum of 15 years of combined permitted disposal capacity.

#### **4.4 DISPOSAL QUANTITIES AND CAPACITY**

##### **4.4.1 Disposal Quantities and Capacity Methodology**

###### **4.4.1.1 1990 Disposal Quantities and Capacity Study**

In accordance with the requirements of CCR, Title 14, Section 18777, in March 1991, the Los Angeles County Solid Waste Management Committee/Integrated Waste Management Task Force (Task Force) completed a study that quantified the amount of solid waste disposed at landfills and transformation facilities located in the County, and projected the remaining permitted combined capacity of these facilities. A summary of the study was submitted to the former California Integrated Waste Management Board ((CIWMB); currently California Department of Resources Recycling and Recovery (CalRecycle) in a report dated March 28, 1991. A copy of the Report is provided in **Appendix 4-A**.

###### **4.4.1.2 Integrated Solid Waste Management Information System**

Prior to the current Disposal Reporting System (DRS), the County Department of Public Works (Public Works) established the Integrated Solid Waste Management Information System (ISWMIS), for tracking solid waste disposal quantities at landfills and transformation facilities based on the monthly Solid Waste Management Fee invoices the facility operators submitted on a quarterly basis to Public Works. These invoices were audited periodically and compared with the quantities landfill and transformation facility operators report to Local Enforcement Agencies (LEA) and other regulatory agencies.

Solid waste facility operators submitted routing and diversion information from solid waste facilities each month, resulting in thousands of data entry points on a quarterly basis. The information was manually entered into an internal database and resulting reports were mailed to CalRecycle and over 300 governmental agencies involved in the solid waste disposal reporting process.

#### 4.4.1.3 Solid Waste Disposal Reporting System

On October 27, 1994, CalRecycle adopted regulations for the current Solid Waste Disposal Reporting System, pursuant to CCR, Title 14, Sections 18800 through 18813, as amended, and PRC, Section 41821.5. Beginning January 1995, the regulations required all solid waste disposal facility operators/owners to provide information regarding the quantities of waste disposed at their facilities by individual jurisdictions on a quarterly basis to Public Works. Public Works in turn reports the information regarding the amount of waste disposed at each facility during the quarter to each jurisdiction.

The data obtained from the DRS served as the basis for all jurisdictions to measure their individual waste disposal reduction goals. This data was also used in the Countywide Siting Element (CSE) to determine the 2014 disposal quantities (see **Section 4.4.4**) and to project waste generation quantities (see **Section 4.9**) for the 2014-2029 planning period.

#### 4.4.1.4 Solid Waste Information Management System

In 2006, Public Works launched an ~~Internet portal~~ ~~web-based~~ Solid Waste Information Management System (SWIMS) that allows governmental agencies, the public, and ~~private businesses~~solid waste industry to conveniently access ~~solid waste~~ information online (see [www.LACountySwims.org](http://www.LACountySwims.org)) related to solid waste including, solid waste facilities, waste disposal data, and methane producing sites in Los Angeles County. ~~In addition,~~ SWIMS is a tool through which information about solid waste management activities in the County is made readily available to the public. The Information in SWIMS empowers the public to make environmentally sustainable choices in managing waste, provides the public opportunities to gain knowledge and awareness about solid waste management activities impacting their communities, and encourages the public to participate in building sustainable communities. ~~the data gathered is used to assist each jurisdiction to better plan, develop, and monitor waste recycling and diversion programs.~~ Local governments use the information to evaluate the effectiveness of their solid waste diversion programs and efforts, and identify disposal trends to plan for the future of solid waste management. The solid waste industry uses the information to conduct market research and improve waste collection and processing services. In addition, applicants of

land use development projects have also found the information helpful in determining their projects' impacts on solid waste capacities.

Public Works is the local agency responsible for compiling disposal information for the County of Los Angeles, from haulers and solid waste facility operators within the County. Public Works is also responsible for submitting the data to CalRecycle's Disposal Reporting System, and making the information available to local governments. ~~Public Works consulted and worked with CalRecycle to ensure the system's compatibility with CalRecycle's standards.~~

~~Every month, the operators of the current 28 landfills, two waste-to-energy (transformation) facilities, 41 materials recovery facilities (MRFs), 18 transfer stations, and 140 waste haulers, log on to SWIMS website to submit the required solid waste disposal information for their facility.~~

~~Once the solid waste disposal information is submitted, Public Works notifies the respective governmental agencies for verification, and following data verification finalizes the information for publication to approximately 300 cities and counties and to CalRecycle once the data is verified.~~

#### 4.4.2 1990 Disposal Quantities and Capacity

As discussed in Section 4.4.1.1, in March 1991, the Task Force completed a study that quantified the amount of solid waste disposed at landfills and transformation facilities located in the County, and projected the remaining permitted combined capacity of these facilities. An overview of the study is provided below.

##### 4.4.2.1 1990 Disposal Quantities

In 1990, the residents/businesses of the County disposed of approximately 15.9 million tons of solid waste at the then-existing landfills and transformation facilities within the County. Of this amount, approximately 13.5 million tons (85 percent) were disposed at 19 permitted Class III landfills; 0.3 million tons (two percent) were managed by two ~~waste-to-energy~~transformation facilities (excluding 0.15 million tons of residual ash that was landfilled); and 2.1 million tons (13 percent) were disposed at the then “**unclassified landfills**”<sup>1</sup>. A list of the Class III landfill facilities, and disposal quantities for each facility, is provided in the March 28, 1991, report to CalRecycle (see **Appendix 4-A**).

The above quantities translated into a 1990 average disposal rate of approximately 51,000 tons per day (tpd) (six days/week) Countywide; 43,245 tpd (85 percent) at Class III landfills; 1,000 tpd (two percent) at transformation

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<sup>1</sup> “Landfills” previously referred to as “unclassified landfills” are now referred to as “inert waste landfills.”

~~(waste-to-energy)~~ facilities (excluding 500 tons of ash that was landfilled); and 6,755 tpd (13 percent) at a permitted inert waste landfill.

#### 4.4.2.2 1990 Remaining Permitted Disposal Capacity

The Task Force established that the projected remaining permitted disposal capacity for Class III landfills as of January 1, 1991 was at approximately 99 million tons (156 million cubic yards based on the in-place solid waste density/compaction rate provided by landfill operators). The analysis was based on various data collected by Public Works from facility operators and site specific permit criteria established by local land use agencies, LEAs, California Regional Water Quality Control Boards, and CalRecycle. A summary of the data collected and various permit limitations is also shown on **Table 4-1**.

The Task Force established that the estimated remaining permitted disposal capacity of Class III landfills as of January 1, 1990, was at approximately 112.15 million tons (177 million cubic yards), which was the sum of the remaining permitted capacity as of January 1, 1991, and the total quantities disposed during the 1990 calendar year.

#### 4.4.3 1990-2014 Disposal Trends

The reported disposal quantities during this period are summarized on a yearly basis in **Figure 4-1**, and **Tables 4-2** (in tons) and **4-3** (in cubic yards). Since, the export rate for 1990, 1991, 1996, 1997, and 1998, and the import rate for 1990 through 1993 are not available, the amounts were not included in the tables for determining the trends for 1990 through 1993 and 1996 through 1998.

##### 4.4.3.1 1990-1995 Disposal Trends

The reported disposal quantities during this period are summarized on a yearly basis in **Figure 4-1**, and **Tables 4-2** (in tons) and **4-3** (in cubic yards).

A net downward trend in the quantities of solid waste disposed at in-County Class III landfills (see column A of **Tables 4-2** and **4-3**) was observed during the period 1990 through 1995, with no reduction in quantities of solid waste managed at the two transformation facilities (see **column B** of **Tables 4-2** and **4-3**).

There is no available data from 1990 to 1991 on the amount exported by jurisdictions in the County to disposal facilities located outside the County. However, there was a net upward trend in the export amount from 1992 through 1995 (see **column C** of **Tables 4-2** and **4-3**).

Similarly, there is no available data from 1990 through 1993 on the amount imported into the County. However, another trend that developed during this period was a sharp increase in the amount of Municipal Solid Waste (MSW) waste imported from other counties for disposal at Los Angeles County disposal facilities from 1994 (305,000 tons) to 1995 (774,000 tons) (see **column D** of **Tables 4-2** and **4-3**) that originated from neighboring counties such as Orange, Riverside, San Bernardino, San Diego, and Ventura Counties. This trend was attributed to steep increases in disposal costs experienced in those counties and/or the difficulties in permitting new disposal capacity.

Furthermore, the amount disposed by jurisdictions in the County (i.e., the total amount disposed at Class III landfills and transformation facilities including exports and excluding imports) showed a decreasing trend from 1990 to 1995 (see **column G** in **Tables 4-2** and **4-3**). While aggressive waste diversion programs being implemented by jurisdictions throughout the County contributed in substantial measure to the drop in disposal quantities during the period of 1990 through 1995, much of the reduction occurred as a result of the recession experienced in the region between 1990 and 1995.

#### 4.4.3.2 1996-2000 Disposal Trends

The reported disposal quantities during this period are summarized on a yearly basis in **Figure 4-1**, and **Tables 4-2** (in tons) and **4-3** (in cubic yards).

Based on the disposal information from the DRS and SWIMS, a cyclical but net downward trend in the quantities of solid waste disposed was observed at in-County Class III landfills (see **column A** of **Tables 4-2** and **4-3**). However, there was a relatively stable trend in the quantities of solid waste managed at the two transformation facilities.

There is no available data from 1996 to 1998 on the amount exported by jurisdictions in the County to disposal facilities located outside the County. However, the amount exported remained relatively the same from 1999 (732,323 tpd) to 2000 (794,910 tpd).

Also, there was a sharp decline in the amount of MSW imported from other counties such as Orange, Riverside, San Bernardino, San Diego, and Ventura Counties for disposal at Los Angeles County disposal facilities during this period. For example, approximately 801,308 tons (2,568 tpd) of solid waste that originated from outside Los Angeles County were disposed at in-County facilities in 1996, compared to approximately 229,320 tons (735 tpd) in 2000.

Furthermore, the amount disposed by jurisdictions in the County, (i.e., the total amount disposed at Class III landfills and transformation facilities including

exports and excluding imports) showed a decreasing trend from 1996 through 2000 (see **column G** in **Tables 4-2** and **4-3**).

#### 4.4.3.3 2001-2005 Disposal Trends

The reported disposal quantities during this period are summarized on a yearly basis in **Figure 4-1**, and **Tables 4-2** (in tons) and **4-3** (in cubic yards).

A net downward trend in the quantities of solid waste disposed at in-County Class III landfill was observed during the period of 2001 through 2005, with a relatively stable trend in the quantities of solid waste managed at the two transformation facilities.

Conversely, there was a significant net upward trend in the amount of MSW exported for disposal outside the County. Based on available data, approximately 1,095,711 tons (3,512 tpd) was exported out of the County in 2001 and approximately 2,177,097 tons (6,978 tpd) was exported in 2005.

Also, there was a relatively stable amount of MSW imported from other counties such as Orange, Riverside, San Bernardino, San Diego, and Ventura Counties for disposal at Los Angeles County disposal facilities during 2001 through 2004. However, a significant increase in the amount imported from other counties was observed for 2005. Based on available data, approximately 182,832 tons (586 tpd) of solid waste that originated from outside the County were disposed at in-County facilities in 2001 and approximately 235,872 tons (756 tpd) were disposed at in-County facilities in 2005.

Furthermore, the amount disposed by jurisdictions in the County (i.e., the total amount disposed at Class III landfills and transformation facilities including exports and excluding imports), showed a net increasing trend from 2001 through 2005 (see **column G** in **Tables 4-2** and **4-3**).

#### 4.4.3.4 2006-2010 Disposal Trends

The reported disposal quantities during this period are summarized on a yearly basis in **Figure 4-1**, and **Tables 4-2** (in tons) and **4-3** (in cubic yards).

A downward trend in the quantities of solid waste disposed at in-County Class III landfills was observed during the period 2006 through 2010, with a relatively stable trend in the quantities of solid waste managed at the two transformation facilities.

Conversely, there was a net upward trend in the amount of MSW exported for disposal at landfills located outside the County. Based on available data,

approximately 1,782,609 tons (5,713 tpd) was exported out of the County in 2006 and approximately 1,917,993 tons (6,147 tpd) was exported in 2010.

Also, there was a significant decrease in the amount of MSW imported from other counties such as Orange, Riverside, San Bernardino, San Diego, and Ventura Counties for disposal at Los Angeles County disposal facilities during the period 2006 to 2010. For example, approximately 266,448 tons (854 tpd) of solid waste that originated from outside Los Angeles County were disposed at in-County facilities in 2006, compared to approximately 210,521 tons (675 tpd) in 2010.

Furthermore, the total amount disposed by jurisdictions in the County (i.e., the total amount disposed at Class III landfills and transformation facilities including exports and excluding imports), showed a decreasing trend from 2006 through 2010 (see **column G** in **Tables 4-2** and **4-3**).

#### **4.4.3.5 2011-2014 Disposal Trends**

The reported disposal quantities during this period are summarized on a yearly basis in **Figure 4-1** and **Tables 4-2** (in tons) and **4-3** (in cubic yards).

A downward trend in the quantities of solid waste disposed at in-County Class III landfills was observed during the period 2011 through 2014. There was a significant decrease in solid waste disposal between 2013 and 2014 mainly due to the closure of Puente Hills Landfill. A relatively stable trend in quantities of solid waste managed at the two transformation facilities was observed during the period 2010 through 2014.

Conversely, there was a significant upward trend in the amount of MSW exported for disposal at landfills located outside the County. Based on available data, approximately 1,900,757 tons (6,092 tpd) was exported out of the County in 2011 and approximately 3,717,749 tons (11,916 tpd) was exported in 2014.

Also, there was a significant decrease in the amount of MSW imported from other counties such as Orange, Riverside, San Bernardino, San Diego, and Ventura Counties for disposal at Los Angeles County disposal facilities during the period 2011 to 2014. For example, approximately 141,000 tons (452 tpd) of solid waste that originated from outside Los Angeles County were disposed at in-County facilities in 2011, compared to approximately 115,752 tons (371 tpd) in 2014.

Furthermore, the total amount disposed by jurisdictions in the County (i.e., the total amount disposed at Class III landfills and transformation facilities including

[exports and excluding imports](#)), remained relatively stable from 2011 through 2014 (see **column G** in **Tables 4-2 and 4-3**).

#### 4.4.4 2014 Disposal Quantities and Capacity

##### 4.4.4.1 2014 Disposal Quantities

The 2014 disposal quantities are based on SWIMS data for the period of January 1 through December 31, 2014. In 2014, the residents and businesses in the County disposed of about 9.0 million tons of solid waste at existing permitted land disposal and [waste-to-energy transformation](#) facilities located in and out of the County. The disposal quantity distribution among the various types of disposal facilities is as follows (see **Figure 4-2**):

- In-County Class III Landfills
  - Six major landfills 4,420,460 tons
  - Four minor landfills 124,460 tons
- In-County Transformation facilities 512,353 tons
- In-County Permitted inert waste landfill 266,675 tons
- Exports to out-of-County Class III landfills 3,717,749 tons
- **Total amount disposed** **9,041,699 tons**

[It should be noted that the 2014 solid waste disposal quantities calculated above have been adjusted to account for the following:](#)

- [The in-County Class III landfill disposal quantities \*\*exclude\*\* 65,419 tons of solid waste imported from Orange, Riverside, San Bernardino, San Diego, Ventura, and other Counties.](#)
- [The quantities disposed at transformation facilities \*\*exclude\*\* 50,332 tons of solid waste imported from Kern, Orange, Riverside, San Bernardino, San Diego, Ventura and other Counties, along with imports from out-of-State.](#)

The above disposal quantities for solid waste generated in the County translate into a 2014 average disposal rate of approximately 28,980 tpd (six days/week) Countywide (i.e., 14,567 tpd at Class III landfills; 1,642 tpd at [waste-to-energy transformation](#) facilities; 855 tpd at the permitted inert waste landfill; and 11,916 tpd exported to out-of-County Class III landfills). **Table 4-8** lists existing permitted landfills and transformation facilities, and the quantities of

solid waste disposed of originating in the County. In addition, approximately 371 tpd (six days/week) were imported to the County for disposal at Class III landfills, and transformation facilities. Please note that the quantities listed in **Tables 4-2** and **4-8** may differ slightly from the above quantities due to the rounding of numbers.

#### 4.4.4.2 Remaining Permitted Disposal Capacity as of December 31, 2014

As part of the preparation for the revised CSE, Public Works conducted a new study to determine (among other things) the remaining combined permitted disposal capacity, as of December 31, 2014. The study consisted of a written survey of all permitted solid waste disposal facilities in the County, as well as review of site specific permit criteria established by local land use agencies, LEAs, California Regional Water Quality Control Boards, and the South Coast Air Quality Management District. A summary of the data collected and existing permit limitations is provided in Chapter 3, and shown in **Tables 4-4** and **4-8**.

Based on the data provided in **Table 4-8**, as of December 31, 2014, the remaining permitted combined disposal capacity for ~~Class III landfills~~ solid waste disposal facilities ~~and transformation facilities~~ located in the County is estimated as follows:

- Remaining permitted Class III landfill capacity = 112.09 million tons (approximately 163.70 million cubic yards).
- Remaining permitted inert waste landfill capacity = 59.83 million tons (47.86 million cubic yards).
- Remaining permitted average daily transformation facility capacity = 1,770 tons per day.

The above permitted average daily transformation facility capacity is a 7-day/week average based on the SWFP limit of 2,800 tons per week for the Commerce Refuse-to-Energy Facility (CREF) and a United States Environmental Protection Agency (USEPA) limit of 500,000 tons per year, 7-days/week for the Southeast Resource Recovery Facility (SERRF). It should be noted that the ash residuals generated by CREF and 99.8 percent of the ash residual generated by SERRF are currently being diverted for beneficial use. The remaining 0.20 percent of ash residual generated by SERRF is landfilled.

## 4.5 ADEQUACY OF EXISTING REMAINING PERMITTED IN-COUNTY DISPOSAL CAPACITY (AS OF DECEMBER 31, 2014)

### 4.5.1 Class III Landfills

~~As a part of the preparation of the CSE and the 2010 Los Angeles County Countywide Integrated Waste Management Plan Annual Report (Annual Report), Public Works conducted a survey of landfills in the County to update its estimate of remaining combined permitted disposal capacity. Based on the results of the survey and considering permit restrictions and other factors, the remaining permitted Class III landfill capacity in the County as of December 31, 2014, is estimated at 112.09 million tons (163.70 million cubic yards) (see **Table 4-8**). As shown in **Table 4-7**, the cumulative permitted Class III landfill disposal capacity needs at the end of the planning period (approximately 100.01 million tons) will not exceed this existing remaining permitted Class III landfill capacity of 112.09 million tons (with Puente Hills Landfill (PHL)) by the year 2021.~~

However, as discussed below, this simple comparison does not accurately predict when a shortfall in daily permitted disposal capacity may be experienced. Rather, it is necessary to compare the maximum permitted daily capacity available with the County's daily disposal needs, with full consideration of the facilities' constraints to determine when the shortfall in permitted daily capacity will occur.

Additionally, waste generation and disposal quantities must be adjusted to account for waste imported from adjacent counties, waste exports to out-of-County facilities, and waste generated as a result of natural disasters together with the time necessary to develop additional permitted daily capacity and permitted landfill capacity to enable jurisdictions to project when a disposal capacity need may occur.

#### 4.5.2 Inert Waste Landfills

As of December 31, 2014, there were 12 inert waste landfills in the County (see **Table 4-4**). The total inert waste (including imports) disposed in the inert waste landfills in 2014 is 4.68 million tons. Pursuant to the Construction and Demolition Waste and Inert Debris Disposal Phase II Tiered Regulation<sup>2</sup>, only inert waste landfills falling under the Full and Registration permit tiers (of the Solid Waste Facility Permit tier) are considered "permitted" disposal facilities.

##### **Permitted Inert Waste Landfill**

Azusa Land Reclamation is the only permitted inert waste landfill in the County that falls under the Full or Registration tiers. The remaining disposal capacity for the permitted inert waste landfill is estimated at 59.83 million tons (47.86 million cubic yards) as shown in **Table 4-8**. In the 2014 average rate of disposal

<sup>2</sup> The current classification of inert waste landfills is primarily governed by the State's Construction and Demolition Waste and Inert Debris Disposal Phase II Tiered Regulation (CCR, Title 14, Sections 17387 through 17390). These regulations placed inert waste landfills into four regulatory tiers, namely, Full Solid Waste Facility Permit, Registration Permit, Enforcement Agency Notification, and Excluded Operations.

of 855 tpd ( 0.32 million tons per year), this total permitted inert waste landfill capacity would be exhausted in 436 years, or 31 years based on the current Solid Waste Facility Permit estimated closure date. Accordingly, the County has adequate permitted inert waste landfill capacity at this time.

### **Inert Debris Engineered Fill Operations**

There are 11 inert debris engineered fill operations (IDEFO)<sup>3</sup> in the County, namely: Atkinson Brick Company, Chandler's Palos Verdes Sand and Gravel, Durbin Inert Debris Engineered Fill Site, Hanson Aggregates (Livingston-Graham), Lower Azusa Reclamation Project, ~~Manning's Pit~~, Montebello Land and Water Company, Nu-Way Arrow Reclamation, ~~Nu-Way Live Oak Reclamation~~, Peck Road Gravel Pit, Reliance Landfill, Sun Valley Landfill, ~~Strathern Landfill~~, and United Rock Products. These operations handled approximately 4.35 million tons of inert waste in the County in 2014 (see **Table 4-4**).

#### **4.5.3 Transformation ~~(Waste-to-Energy)~~ Facilities**

Currently, two transformation ~~(waste-to-energy)~~ facilities operate in the County (Commerce Refuse-to-Energy Facility (CREF) and Southeast Resources Recovery Facility (SERRF)) and have a combined maximum permitted daily capacity of 3,240 tons (seven days/week average, based on a maximum permitted annual capacity). It is expected that these two facilities will operate at their current permitted daily capacity during the planning period (2014 through 2029). The owners/operators of these facilities have indicated that there are currently no plans for increasing the permitted daily capacity of these facilities.

The disposal capacity need analysis (see **Section 4.10**) assumes the average permitted daily capacity of 1,770<sup>4</sup> tpd as the estimated permitted remaining capacity for the two existing transformation facilities ~~(i.e., their combined maximum permitted daily capacity, equivalent to approximately 645,528 tons per year)~~, toward satisfying the daily disposal needs of the jurisdictions in the County through the 15-year planning period. The remaining daily disposal needs must be handled by the in-County Class III landfills, out-of-County landfills, and utilizing other strategies.

#### **4.5.4 Conversion Technology Facilities**

Currently, there are no conversion technology facilities in the County. However, in order to encourage their development, the Los Angeles County Department

<sup>3</sup> Inert debris engineered fill operations are inert waste landfills under the Enforcement Agency (EA) Notification Tier, and are excluded from the disposal capacity analysis as a result of changes in State law.

<sup>4</sup> Based on the SWFP limit of 2,800 tons per week (expressed as a daily average, seven days/week) for the CREF, and a USEPA limit of 500,000 tons per year (expressed as a daily average, seven days/week) for SERRF.

of Public Works (LACDPW) is working with the Alternative Technology Advisory Subcommittee (ATAS) of the Task Force to investigate feasibility of and promote conversion technologies, including actively pursuing the development of one or more demonstration facilities in Southern California.

This process began with Phase I, in which the County and ATAS conducted a preliminary evaluation, screening, and ranking of conversion technology companies and identification of Material Recovery Facilities and Transfer Stations (MRF/TS) that could potentially host a conversion technology facility. The findings resulted in the development of the "Conversion Technology Evaluation Report for the County of Los Angeles Department of Public Works and the Los Angeles Solid Waste Management Committee/Integrated Waste Management Task Force's Alternative Technology Advisory Subcommittee", (also known as the "Phase I Report"), adopted by the Task Force in 2005.

Phase II consisted of a detailed evaluation of selected technology and MRF/TS sites. The Task Force also adopted the "Los Angeles County Conversion Technology Report for the County of Los Angeles Department of Public Works and the Los Angeles Solid Waste Management Committee/Integrated Waste Management Task Force's Alternative Technology Advisory Subcommittee: Phase II Assessment" in 2007, which identifies four viable conversion technology suppliers and four suitable locations for potential development of a demonstration project. Following Phase II, Public Works issued a Request for Offers in 2008 to the recommended companies and sites, which resulted in the establishment of three public-private project development teams that connected a conversion technology company with a local MRF operator and site owner.

~~On April 20, 2010, the County Board of Supervisors unanimously approved three Memoranda of Understanding (MOU) for three conversion technology demonstration projects and awarded a contract for consultant services for Phase III and Phase IV of the Southern California Conversion Technology Demonstration Project to develop solid waste alternatives to landfills within the County. At that time, the County Board of Supervisors also instructed the Director of Public Works, in coordination with appropriate stakeholders, to: assess the feasibility of developing a conversion technology facility at one or more County landfills, identify other potentially suitable sites within the County, and report back Public Works' findings to the County Board of Supervisors in six months.~~

~~Sixteen potential host sites for a conversion technology facility were submitted to the County. These sites are discussed in the "Los Angeles County Conversion Technology Project, Preliminary Siting Assessment," which was submitted to the County Board of Supervisors on October 20, 2010. In subsequent updates to the County Board of Supervisors, additional sites were added to that list.~~

~~During Phase IV, the County will work with various key stakeholders that include cities, solid waste facility owners and operators, and conversion technology companies, to encourage the development of mutually beneficial projects within the County. Similar to the Phase III demonstration projects, the County would support for the Phase IV project by providing technical assistance of a consultant contract and assistance with permitting grant, and loan procurement, while maximizing private-sector investment.~~

~~Concurrently, the City of Los Angeles is also conducting its own evaluation with the goal of developing conversion or other alternative technology facilities to manage the City of Los Angeles' waste stream. The City of Los Angeles' effort is highlighted by the adoption of a Resource Management Blueprint called RENEW LA (which stands "Recovering Energy Natural Resources and Economic Benefits from Waste for Los Angeles"), which promotes alternative technologies. In 2011, the City of Los Angeles Board of Public Works authorized the City of Los Angeles Bureau of Sanitation to enter into contract negotiations with a waste-to-energy company with the purpose of developing the first Alternative Technology facility in the City of Los Angeles. The proposed project would be a waste-to-energy facility in the City of Los Angeles that can manage up to 1,100 tpd. The facility would include an upfront preprocessing system (recovery of recyclables) followed by a waste to-energy system (a second generation waste-to-energy). Negotiations are underway.~~

In addition to the projects led by the County and City of Los Angeles, the County Board of Supervisors approved a CUP in 2008 for development of a \$30 million dollar cellulosic waste-to-ethanol plant adjacent to the Lancaster Landfill, in the unincorporated County area near the City of Lancaster. The proposed project, spearheaded by California-based BlueFire Renewables, Inc. (BlueFire), would consist of a commercial scale plant that would convert grass cuttings, wood chips, and other source-separated waste into ethanol. The plant would be capable of converting 170 tpd of source-separated cellulosic materials such as green waste and wood waste, into approximately three million gallons of ethanol per year, using an acid hydrolysis and fermentation conversion technology process. The project is currently on hold; however, BlueFire is developing a similar project in Mississippi, which is funded by a \$40 million grant from the United States Department of Energy,

It should be noted that at this time, the regulatory status of conversion technologies is still uncertain due to lack of legislative support on whether conversion technologies should be categorized as solid waste disposal facilities, or need to be included and listed in a CSE.

A detailed discussion of conversion technologies is included in **Chapter 5** ("Alternative Technologies") and **Chapter 7** ("Proposed In-County Facility Locations and Descriptions") of the CSE.

#### ~~4.5.5 Biomass Processing Facilities~~

~~There are no existing or proposed new biomass processing facilities in the County.~~

## 4.6 OUT-OF-COUNTY DISPOSAL

### 4.6.1 Introduction

While the goal of jurisdictions in the County is to provide in-County disposal capacity to serve the needs of their residents, past and current experience in expansions of existing landfills underscores the magnitude of the challenge facing the County. Since no new Class III landfills are expected to be sited in the County in the foreseeable future, and since more than 15 years advance planning is required to maintain appropriate disposal capacity in the County, all available disposal options must be maximized in the event that planned capacity does not materialize.

One of these options is the disposal of County-generated waste at out-of-County facilities through rail and/or truck transport. Jurisdictions throughout the County have recognized the need for out-of-County disposal capacity to complement and extend the life of in-County disposal capacity in the present as well as in the future, even if most of the potential disposal capacity identified in the CSE is permitted.

### 4.6.2 Available Out-of-County Disposal Capacity

Based on the disposal information from DRS reports in SWIMS, from 2000 to 2014<sup>5</sup>, on the average, approximately 80 percent of the residual solid waste generated in the County (that is destined for disposal) was disposed in the County. The remaining 20 percent was exported for disposal at out-of-County Class III landfills. The majority of the 20 percent average waste export was to surrounding counties. For example, in 2014, Orange, Riverside, [San Bernardino](#), ~~and~~ [Ventura](#) Counties, ~~and other surrounding counties~~ [respectively](#), received 41 percent, 27 percent, 21 percent, and nine percent of waste exports respectively. The remaining two percent of the exports was sent to landfills in ~~Alameda~~ Fresno, Kern, Kings, ~~San Bernardino~~, San Diego, [San Luis Obispo](#), Solano, and Stanislaus Counties combined.

<sup>5</sup> In 2014, approximately 3,717,749 tons (11,916 tpd) of solid waste were exported to out-of-County facilities for disposal.

A list of the out-of-County landfills (in the respective counties) currently receiving waste exported from the County is shown in **Chapter 9, Table 9-1**. ~~Additionally, a list of all the out-of-County landfills that are potentially viable for exporting the County waste during the 15-year planning period is provided in Chapter 9, Table 9-1.~~

### ~~Avenal Regional Landfill~~

~~Avenal Regional Landfill is located in Kings County, owned by the City of Avenal, and operated by Madera Disposal System. The Landfill is permitted to accept 6,000 tpd with a remaining capacity of 16 million tons as of December 31, 2010. This Landfill received an average of 2,150 tpd in 2010, of which about 119 tpd were imported from Los Angeles County.~~

### ~~Eagle Mountain Landfill, Riverside County~~

~~Eagle Mountain Landfill is located in Riverside County, owned by Kaiser Eagle Mountain, LLC, and operated by Mine Reclamation Corporation. The Landfill is permitted to accept 10,000 tpd for the first 10 years with the option of increasing the daily limit to 20,000 tpd after a review of environmental performance. Its permitted capacity of 460 million tons and total capacity of 708 million tons would give the Landfill an approximate lifespan of 100 years as well. Due in part to pending Federal litigation and a bankruptcy filing by the landfill developer, the County Sanitation Districts of Los Angeles County (CSD) has not closed escrow on the purchase of the Landfill. Therefore, its capacity is not included in this Chapter's analysis of the disposal capacity need during the planning period.~~

### ~~El Sobrante Landfill, Riverside County~~

The El Sobrante Landfill in Riverside County has a remaining capacity of 170 million tons<sup>6</sup>; is permitted to receive 70,000 tons per week (with 16,054 tpd limits of waste for disposal); and has a permit expected to expire in 2045. This Landfill received an average of 16,054 tpd in 2014, of which about 2,989 tpd were imported from the County. ~~Optimistically, the Landfill could receive up to 4,000 tpd from the County through the 15-year planning period.~~

### ~~Frank R. Bowerman Sanitary Landfill, Olinda Alpha Sanitary Landfill, and Prima Deshecha Sanitary Landfill, Orange County~~

Collectively, these Landfills received 4,863 tpd from Los Angeles County in 2014. Orange County currently has waste importation agreements with various entities in Los Angeles County that are expected to expire in 2016. ~~It is~~

<sup>6</sup> Remaining capacity of 106 million tons for El Sobrante Landfill is based on 2014 Annual Report.

~~assumed that these Landfills could receive up to 4,500 tpd from Los Angeles County through Orange County's waste importation agreements with various entities in Los Angeles County.~~

### **Mesquite Regional Landfill, Imperial County**

Mesquite Regional Landfill is Class III landfill located in Imperial County with a maximum permitted capacity of 20,000 tpd. The CSD closed escrow on the fully permitted Landfill in December 2002. Since then, the CSD has completed long-term site planning, followed by design and construction of all the infrastructure needed for site operations. The Landfill has been capable of receiving refuse since the end of 2008. By the end of 2011, the rail yard and spur were completed and capable of receiving refuse by rail.

Mesquite Regional Landfill has a disposal capacity of 1.1 billion cubic yards (660 million tons) and an approximate lifespan of 100 years at the 20,000 tpd daily rate. Southern California communities can transport 20,000 tpd to the Landfill by a combination of rail or truck (as described below), with up to 1,000 tpd of that capacity reserved for use by Imperial County jurisdictions.

In 2011, CUP #1036-91 was amended to allow 4,000 tpd of out of county waste to be trucked to the Landfill. Additionally, the Landfill can receive 600 tpd of non-hazardous incinerator ash from Los Angeles County. Rail operations are most efficient when unit trains are loaded with 4,000 tons of refuse. The amendment to allow waste delivery by truck avoids inefficient and costly rail operations transporting fragments of a unit train. See **Tables 9-1** and **9-2**, **Fact Sheet 9-1** and **Figure 9-1** for more detailed information on the Landfill.

### **Simi Valley Landfill and Recycling Center, Ventura County**

The Simi Valley Landfill and Recycling Center in Ventura County, has a combined permitted capacity of 9,250 tpd for all incoming materials, which may include both MSW and recyclables with a remaining capacity of 53 million tons. More specifically, the Landfill is limited to 6,000 tpd of MSW and 3,250 tpd of recyclables. Currently, Simi Valley Landfill and Recycling Center receives an average of 1,072 tpd from Los Angeles County.

### **Other Out-of-County Landfills**

Additionally, other existing and proposed new out-of-County landfills located in California that could accept solid waste from the County also exist (see **Chapter 9, Table 9-1**).

Based on the analysis in the Scenario **Tables 4-10** to **4-16**, the current and future available disposal capacity provided by the out-of-County landfills (listed

in **Table 9-1 of Chapter 9**), will provide adequate out-of-County disposal capacity to cover the Class III landfill export need and permitted daily capacity need during the 15-year planning period. However, this conclusion takes into consideration the following assumptions:

- a) The amount of export capacity (i.e., out-of-County disposal capacity) available for the County would continue to be available as indicated in **Chapter 9, Tables 9-1 and 9-4**.
- b) The amount of current exports will steadily increase in concert with closure of in-County landfills as anticipated.
- c) In-County alternative technology (e.g., conversion technology) facilities will be developed and sited.

#### 4.7 IN-COUNTY TRANSFER AND PROCESSING FACILITIES' CAPACITY

As of 2014, there are approximately 77 [large volume transfer and processing facilities operating in the County that transports MSW inside and outside the County. Of these 77 facilities, 30 are materials recovery facilities \(MRFs\) and 19 transfer and processing stations \(TS\); 8 are construction, demolition, and inert \(CDI\) debris processing facilities<sup>7</sup>; and 20 are composting/chipping and grinding facilities.](#) ~~operating in the County that transport MSW inside and outside the County.~~ The permitted capacity for the 30 MRFs, 19 TSs, 8 CDI debris processing facilities, [and 20 composting/chipping and grinding facilities](#) is approximately 47,907 tpd, 21,364 tpd, 6,893 tpd, [and 5,532 tpd](#) respectively. The total combined permitted capacity for the 16 MRFs, 30 TSs, and 7 CDI debris processing facilities is about 81,696 tpd. ~~The average daily intake for the 47 MRFs, 19 TSs, and 6 CDI debris processing facilities is approximately 14,000 tpd, 200 tpd, and 800 tpd, respectively. The total combined average daily intake is approximately 15,000 tpd. In the status-quo scenario (see **Table 4-10**), the daily export need based on available daily disposal capacity is approximately 24,000 tpd.~~

~~For the major MRFs, TSs, and CDI debris processing facilities only, currently there are approximately 26 MRFs, 2 TSs, and 4 CDI debris processing facilities operating in the County that transport MSW inside and outside the County. The permitted capacity for the 26 MRFs, 2 TSs, and 4 CDI debris processing facilities is approximately 62,000 tpd, 300 tpd, and 3,000 tpd, respectively. The total combined permitted capacity for the 41 MRFs, 18 TSs, and 6 CDI debris processing facilities is 65,300 tpd. The average daily intake for the 26 MRFs, 2 TSs, and 4 CDI debris processing facilities is approximately 26,000 tpd, 300 tpd, and 1,500 tpd, respectively. The total combined average daily intake is~~

<sup>7</sup> The CDI debris processing facility's capacity discussed in this Chapter does not include recycling centers (per CalRecycle 3-part test) and source separated C&D Waste Recycling facilities.

approximately 27,800 tpd.

~~In the status quo scenario based on the disposal capacity need analysis (see **Table 4-10**), the total maximum daily disposal need for the entire County (for both in-County and out-of-County disposal) during the planning period (2010–2025) is approximately 38,000 tpd, and the maximum export need for out-of-County disposal is 24,000 tpd, both of which occur in 2025.~~

~~Assuming, conservatively, that the total permitted capacity in the County will be provided mostly by the major MRFs, TSSs, and CDI debris processing facilities is 65,300 tpd. Since the total combined permitted transfer and processing capacity of the MRFs, TSSs, and CDI debris processing facilities located in the County is greater than the maximum amount (39,000 tpd) of waste generated in the entire County during the planning period that needs to be disposed, by default, there is adequate in-County transfer and processing capacity to handle any amount of waste (e.g., 18,000 tpd) that needs to be exported to out-of-County landfills.~~

It should be noted that even though the amount of permitted transfer or processing capacity of the MRFs, TSSs, and CDI debris processing facilities in the County is adequate, the distribution of these facilities countywide is not adequate because the vast majority of the MRFs, TSSs, and CDI debris processing facilities are located in the South Bay area of the County with only two facilities located in the northern part of the County (Antelope Valley and Santa Clarita Valley areas). To maximize the recycling of waste generated in the county, more MRF's, TSSs, and CDI debris processing facilities are needed countywide.

However, as local waste disposal capacity options diminish within the County and with the development of Puente Hills Intermodal Facility by CSD, MRF operators may also elect to utilize rail transport to ship waste to out-of-County landfills for disposal (see **Chapter 9, Table 9-4**).

Waste-by-truck remains a viable and economical option to transport waste to other out-of-County and remote landfills, particularly for distances less than 200 miles. Other proposals for transporting waste out of the County are discussed in detail in Chapter 9 of the CSE (see **Chapter 9, Section 9.5**).

## **4.8 DISPOSAL CAPACITY NEED ANALYSIS**

### **4.8.1 Disposal Capacity Need Analysis**

The disposal capacity need analysis allows a comparison of the projected date when a shortfall in the daily permitted disposal capacity is expected to occur for the various scenarios. To accurately predict when a shortfall in total disposal

capacity will be experienced, it is necessary to compare the maximum permitted daily capacity available with the County's daily disposal requirements, with full consideration of the facilities' restrictions/constraints.

The disposal capacity need analysis is presented in seven scenarios described in **Section 4.10** and analyzed in **4.10.1** through **4.10.7**, and summarized in **Sections 4.11**, **Table 4-9**, and **Figure 4-4**. The analysis considers factors listed and discussed in this Chapter, the disposal capacity needs for the County as a whole, and the total disposal capacity at all disposal facilities countywide. ~~Also, as previously indicated, the two transformation facilities in the County are expected to continue operating through the 15-year planning period, and there is currently adequate inert debris/waste landfill capacity in the County. Therefore, the disposal capacity need analysis primarily evaluates the need for additional Class III landfill capacity.~~

#### 4.8.2 Disposal Capacity Need Analysis Methodology

The disposal capacity need analysis methodology involves multiple steps and various factors. The major steps and factors are as follows:

- **Base year:** Determine the base year (2014) based on the best available data and information (e.g., SWIMS, latest available landfill survey, and 2014 Annual Report data).
- **Planning period:** Determine the planning period (2014-2029) based on the best available data and information (e.g., SWIMS, latest available landfill survey, and 2014 Annual Report data). For the purpose of the CSE, the planning period begins in the year 2014 and ends in the year 2029.
- **Base year waste disposal:** Determine the amount of solid waste generated within the County that is: (1) disposed at in-County Class III landfills and transformation facilities (excluding disposal at inert waste landfills), and (2) disposed at out-of-County disposal facilities. (See **Section 4.5.1**, **Tables 4-5** and **4-8**.)
- **Base year solid waste generation:** Determine the amount of solid waste generated in the County in the base year (i.e., 70,313 tpd in 2014) using the actual base year disposal rate (excluding disposal at inert waste landfills), assuming 60 percent diversion rate, and excluding imports. (See **Table 4-5**.) ~~Based on the latest CalRecycle-approved per capita waste generation rate of 15 tpd (for unincorporated areas only), and 2010 population of 9,836,100, the base year solid waste generation rate is 62,467 tpd.~~ There is no CalRecycle approved countywide per capita generation rate; therefore, for the purposes of the CSE, the solid waste generation rate of 70,313 tpd is being used.

- **Solid waste generation projection factors:** Determine the solid waste projection generation factors based on the latest University of California, Los Angeles (UCLA) Anderson Long-Term Forecast for Los Angeles County (dated July 2014) for population, employment, and taxable sales; or other approved indices and forecasts. (See **Section 4.5.3, Table 4-6** and **Figure 4-3.**)
- **Solid waste generation projection:** Determine the amount of solid waste that would be generated for each year during the planning period using the CalRecycle-approved Adjustment Methodology. (See **Sections 4.9.2** and **4.9.3** and **Table 4-6.**)
- **Solid waste disposal capacity requirement:** Determine the Class III landfill cumulative annual disposal capacity requirements (see **Table 4-7**) during the planning period, and the year the remaining permitted combined disposal capacity of existing solid waste disposal facilities in the County would be exhausted, assuming 60 percent diversion rate, in-place density/conversion factor of 1,200 pounds per cubic yard, and subtracting the available transformation facility capacity. (See **Section 4.5** and **Table 4-8.**)
- **Daily solid waste generation rate:** Determine the daily solid waste generation rate for each year during the planning period, based on the annual waste generation tonnage, and assuming 312 operating days per year (i.e., 6-day per week average). (See **Tables 4-6** and **4-7.**)
- **Disposal capacity need analysis scenarios:** Determine the various disposal capacity analysis scenarios. (See **Section 4.10, Scenario Nos. 1** to **7, Tables 4-10** through **4-16.**)
- **Total daily disposal demand:** For each scenario, determine the total daily disposal demand based on the daily solid waste generation rate and the assumed diversion rates for the scenario.
- **Class III landfill daily disposal demand:** For each scenario, determine the Class III landfill remaining daily disposal capacity demand from the total daily disposal need by: (1) adding daily waste import rate, (2) subtracting the maximum daily transformation facility capacity, ~~and~~ (3) subtracting the maximum available daily alternative technology capacity, and (4) subtracting the out-of-County exports.
- **Total in-County Class III landfill available capacity:** For each scenario, determine the total available capacity from existing Class III landfills in the County by: (1) adding the daily disposal rate for all the existing landfills

(using average disposal rate for landfills with wasteshed and maximum permitted daily disposal rate for the rest of the landfills), (2) assuming 312 operating days per year (i.e., 6-day per week average), and (3) taking into consideration all landfill expansions and closures. (See **columns 1 to 11 of Tables 4-10 to 4-14**)

- **Remaining capacity at year's end:** For each scenario, determine the remaining capacity in each year during the planning period for the existing Class III landfills in the County by: (1) adding the remaining permitted landfill capacity for the existing Class III landfills in the County, and (2) taking into consideration all landfill expansions and closures (see **columns 1-11 of Tables 4-10 to 4-14**). The total expected remaining permitted landfill capacity for the subsequent years is determined by using the maximum permitted daily disposal rate and assuming 312 operating days per year (i.e., 6-day per week average).
- ~~**Daily export need:** For each scenario, determine the daily export need by subtracting the total expected daily disposal capacity from the Class III landfill disposal need. (See **Tables 4-10 to 4-18** and **Figure 4-14**.)~~
- **Additional out-of-County disposal capacity:** Determine additional available out-of-County disposal capacity (i.e., ~~export capacity~~potential waste-by-rail capacity) ~~by summing up all the current and projected future export rates to the current out-of-County Class III landfills located in California that are potentially available to accept waste from jurisdictions within the County~~ during the planning period. (See **Chapter 9, Table 9-1**.)
- **Class III landfill daily disposal capacity shortfall (reserve):** For each scenario, determine the daily disposal capacity shortfall (reserve) by subtracting the Class III landfill daily disposal demand ~~export need~~ from the total in-County Class III landfill available capacity ~~available out-of-County disposal capacity~~. (See **Tables 4-10 to 4-14**)

### 4.8.3 Class III Landfill Restrictions

Factors that severely hinder the accessibility of available Class III landfill permitted disposal capacity include: expiration of the LUP, WDR Permit, SWFP, and Air Quality Permits; restrictions on the acceptance of waste generated outside jurisdictional and/or wasteshed boundaries; permit restrictions on the amount of waste that can be accepted daily and/or weekly; geographic barriers; and/or limitations on the amount of waste that can be handled by a facility on a daily basis due to the lack of manpower and equipment.

One of the critical limiting factors is the wasteshed restrictions, including restriction on origin of waste by the host jurisdiction. For example, as discussed

in Chapter 3 and further summarized in **Table 4-8**, Savage Canyon Landfill can only receive solid waste generated within the City of Whittier; Burbank Landfill only accepts waste generated within the City of Burbank, which is collected by City of Burbank crews; ~~Puente Hills Landfill is prohibited from receiving any waste originating from the City of Los Angeles and Orange County.~~ Moreover, Calabasas and Scholl Canyon Landfills only accept solid waste generated within their defined wastesheds, and San Clemente Landfill is not open to the public.

Other critical factors that greatly impact a landfill operation include the daily quantity of solid waste that a landfill facility can accept (permitted daily capacity), and permitted disposal capacity as established by local jurisdictions/regulatory agencies. Under these circumstances, if no expansions of existing facilities occur or alternative technology facilities are developed, and waste disposal continues to increase, the County will experience shortfalls in permitted daily disposal capacity.

**4.8.4 California Senate Bill 1016 (SB 1016)**

With the implementation of California Senate Bill 1016 (SB 1016), CalRecycle no longer calculates diversion rate based on actual disposal and estimated annual generation using its Adjustment Methodology. Instead, per capita disposal equivalent is calculated using an approved jurisdiction-specific average of per capita generation rates of years 2003 to 2006.

**4.9 DISPOSAL NEED PROJECTIONS FOR THE PLANNING PERIOD (2014 – 2029)**

CCR, Title 14, Section 18755.3 (b) requires a description of the anticipated disposal capacity needs for the 15-year planning period beginning with the year the CSE is prepared, and in any year the CSE is revised.

**4.9.1 Base Year Waste Generation and Disposal**

The year 2014 is used as the base year for projecting future waste generation quantities because it is the year for which the most current and complete disposal data is available.

In 2014 the approximate total disposal quantity distribution (of solid waste originating within the County) among the various types of disposal facilities were as follows (see **Figure 4-16**):

In-County Class III landfills	4,610,340	tons
In-County Transformation facilities	562,685	tons
In-County Permitted Inert Waste	315,884	tons

landfill Exports to out-of-County Class III landfills	3,717,749	tons
<b>Total Disposed</b>	<b>9,206,659</b>	tons

In summary, jurisdictions within the County disposed of approximately 8,890,775 tons of solid waste at transformation facilities and Class III landfills located in and out of the County (excluding inert waste disposed at a permitted inert waste landfill). **Table 4-5** shows the 2014 disposal quantities for solid waste disposed at in-County Class III landfills and transformation facilities. Out-of-County exports to Class III landfills are also taken into consideration. The 2014 solid waste generation of 21,937,559 tons (the basis of the solid waste generation projections) was calculated assuming a diversion rate of 60 percent. This estimate of waste generation excludes disposal at the inert waste landfills that do not have Full or Registration tier SWFPs.

The above disposal quantities for solid waste generated in the County translate into a 2014 average disposal rate of approximately 28,496 tpd (six days per week) Countywide (i.e., 14,777 tpd at Class III landfills, 1,803 tpd at transformation facilities, and 11,916 tpd exported to out-of-County Class III landfills). The disposal quantities at the permitted inert waste landfill, translate to approximately 1,012 tpd. **Table 4-8** lists existing permitted landfills and transformation facilities, and the quantities of solid waste disposed that originated within the County.

In addition, approximately 371 tpd (6 days per week) were imported for disposal at in-County Class III landfills, the permitted inert waste landfill, and transformation facilities.

In order to determine the 2014 solid waste generation quantities, a diversion rate must be either quantified or assumed. Since there is currently no accurate method of measuring waste diversion, the total diversion amount was assumed as a percentage of total waste generated.

The latest (i.e., 2006) CalRecycle–approved diversion rate for the entire County was 58 percent. However, for the purposes of the disposal capacity need analysis in this Chapter, ~~various scenarios are analyzed including: (1) a conservative 55 percent diversion rate by 2020; (2) a medium 65 percent diversion rate; and (3) an optimistic 75 percent diversion rate~~ was assumed for the planning period (2014 to 2029).

#### 4.9.2 Waste Generation Projection Methodology

A number of alternatives were considered for use in projecting Countywide waste generation for the 2014-2029 planning period. These include use of the

waste generation growth factors from each jurisdiction's Source Reduction and Recycling Element (SRRE), an adaptation of CalRecycle's Adjustment Methodology, and waste generation growth rates based on population growth projections.

The use of growth factors from each jurisdiction's SRRE was not selected because of the complexity involved in projecting waste generation for 89 individual jurisdictions. In many instances, the jurisdiction's projections were based on jurisdiction-specific population and economic growth projections that are either difficult to emulate or that may now be outdated.

Other methodologies, such as the projection of per capita waste generation in conjunction with population trends, were not used because they fail to consider the impact that changes in economic conditions has on waste generation. As discussed later in this section, nearly three-fifths of all solid waste generated in the County can be attributed to economic activity (i.e., about 73 percent of all waste generated in the County was generated by commercial/industrial sources). Major changes in economic activity would have a significant impact on waste generation; however, population-based methods do not consider this important factor. For example, linearly projecting the per capita waste generation data for 2006 through 2010 (a recessionary period) and using the projected per capita waste generation figures to project total waste generation, incorrectly assumes that the recession of the late 2000s would continue into the future without any economic recovery.

The use of growth rates based on population growth projections was considered since population projections are available from the California Department of Finance through the year 2029. However, projections based on population growth fail to account for economic downturns or a resumption of strong economic growth, which may have a significant effect on solid waste generation. Therefore, this alternative was not selected.

The projection methodology selected for use in the CSE consists of projecting solid waste generation using CalRecycle's Adjustment Methodology, which is described below.

#### **4.9.2.1 Description of the Adjustment Methodology**

PRC, Section 41780.1(c), mandates that before measuring compliance with the solid waste diversion goal of 50 percent for the years 1995 and 2000, respectively, each jurisdiction must use a CalRecycle-approved standard Adjustment Methodology when calculating their maximum allowable disposal quantity for the year

The CalRecycle-approved Adjustment Methodology measures how increases or decreases in population, employment, inflation-adjustable taxes sales, and special events (such as natural disasters) affect waste generation amounts. The Adjustment Methodology provides jurisdictions with a tool to measure their progress in reducing solid waste disposal and to estimate future disposal quantities.

The Adjustment Methodology formula uses a combination of ratios of base year to target year population, employment, and taxable sales to calculate target year solid waste generation, and maximum allowable disposal amounts based on established diversion goals. Since population, employment, and taxable sales influence residential waste generation rates differently than waste generated by non-residential sectors (i.e., commercial, industrial, etc.), the formula also provides correction factors to address these variances. As such, residential waste quantities are calculated separately from non-residential solid waste and then combined.

The Adjustment Methodology formula as adopted by CalRecycle is expressed as follows:

**Estimated Solid Waste Generation for the Reporting Year =**

$$= [(B-Y RWG) (RAF)] + [(B-Y NWG) (NAF)]^8$$

Where:

- B-Y RWG** = Base-Year Residential Waste Generation
- B-Y NWG** = Base-Year Non-residential Waste Generation
- RAF** = Residential Adjustment Factor =  $\{(PR/PB) + [ER/EB + (CB/CR * TR/TB)]/2\}/2$
- NAF** = Non-residential Adjustment Factor =  $[ER/EB + (CB/CR * TR/TB)]/2$
- PR** = Population in the Reporting Year
- PB** = Population in the Base Year
- ER** = Employment in the Reporting Year
- EB** = Employment in the Base Year
- CR** = Consumer Price Index in the Reporting Year
- CB** = Consumer Price Index in the Base Year
- TR** = Taxable Sales in the Reporting Year
- TB** = Taxable Sales in the Base Year

Also note:

- Population is based on Countywide Population Projection<sup>9</sup>;

<sup>8</sup> The Estimated Solid Waste Generation for the Reporting Year formula and the variables in the formula are similar and consistent with the CalRecycle Adjustment Method Formula.

<sup>9</sup> Source: UCLA Anderson Long-Term Forecast of Los Angeles County, July 2014.

- Employment is based on Countywide Employment Projection (which only accounts for non-farm employment)<sup>10</sup>;
- Consumer Price Index ratio for the purpose of the CSE is considered as 1.0; and
- Taxable Sales is based on Countywide Real Taxable Sales (which is considered the real dollar value)<sup>11</sup>.

It can be seen that the Adjustment Methodology predicts that increases/decreases in employment and taxable sales would have an impact on non-residential waste generation and, to a lesser extent, residential waste generation. Also, it can be seen that increases in population would have a direct impact on residential waste generation only. This does not mean, however, that changes in population would have no effect on non-residential waste generation, since employment and taxable sales are intrinsically related to population.

It should be noted that when jurisdiction-specific data is not available, or when state-supplied data is not considered to be truly representative of a jurisdiction's situation, the Adjustment Methodology allows the jurisdiction to develop and use locally-developed alternative data, countywide data, or other data that the jurisdiction deems representative of its situation.

### 4.9.3 Waste Generation Projection Factors

Projections of solid waste generation for the 15-year planning period were calculated using CalRecycle's Adjustment Methodology. The Adjustment Methodology was adopted for projecting waste generation by utilizing projections of future population, employment, and taxable sales. The graph in **Figure 4-3** shows the resulting projections for population, employment, and taxable sales.

The use of the Adjustment Methodology requires knowledge of the distribution of waste generation by sector (residential and non-residential). The use of the Adjustment Methodology to project waste generation requires projections of the above factors through the year 2029. The following discusses the best available data and how it was applied using the Adjustment Methodology.

#### 4.9.3.1 Distribution of Waste Generation by Sector

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<sup>10</sup> See Footnote 409.

<sup>11</sup> See Footnote 409.

No data is available on the distribution of waste generation by sector for 2006 and future years. However, the proposed new generation-based study year (2005) data provided in each jurisdiction's SRRE for the base year (2005) is used to determine the 2014 countywide waste generation distribution by sector. The distribution is as follows:

- Residential Waste Generation = 30 percent<sup>12</sup> of total waste generation
- Non-Residential Waste Generation = 70 percent<sup>13</sup> of total waste generation

The proposed generation-based study represents the current efforts by both the public and private sectors to divert generated materials from landfill disposal. The proposed diversion rate more accurately reflects the diversion taking place as a result of the countywide implementation of new and enhanced waste diversion, recycling, and education programs that has enhanced the waste diversion capabilities of the County.

#### 4.9.3.2 Population Projections

The population projections for the County are available from the California Department of Transportation (CalTrans) and UCLA for each year during the planning period. The UCLA Anderson Long-Term Forecast of Los Angeles County, which indicates an approximate increase in population of 10.1 percent toward the end of the 15-year planning period, was used to yield slightly more conservative projections. The graph in **Figure 4-3** shows the resulting projections for population, employment, and taxable sales.

#### 4.9.3.3 Employment

The employment projections are available from the CDT and UCLA for each year during the planning period. However, the CDT projections and UCLA projections are nearly identical, with UCLA projecting an employment increase of approximately 15 percent by the end of the 15-year planning period. UCLA projections were used because the data has been recently updated, when compared to the data from the CDT. The graph in **Figure 4-3** shows the resulting projections for population, employment, and taxable sales.

#### 4.9.3.4 Taxable Sales

Countywide taxable sales projections are available from the UCLA Anderson

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<sup>12</sup>Residential percentage means that portion of a jurisdiction's waste stream created by single-and multi-family residences. The percentage of residential versus non-residential waste to the total waste generation used herein, is based on California 2008 Statewide Waste Characterization Study; however, all data and percentages are subject to change as new information becomes available.

<sup>13</sup>See Footnote 12 .

Long-Term Forecast for Los Angeles County, for each year during the planning period. The figures were available in constant dollars and do not need to be further adjusted for inflation. The graph in **Figure 4-3** shows the resulting projections for population, employment, and taxable sales.

#### 4.9.4 Waste Generation Projections for the Planning Period (2014-2029)

The resulting projections in waste generation, diversion, and disposal for each year of the 15-year planning period are shown in **Table 4-6**. This table also shows the needed Class III landfill disposal capacity for each year of the planning period. The analysis assumes that the County will be responsible for management of solid waste generated in the County. As such, the analysis does not take credit for that portion of solid waste that is exported out-of-County and neither does it consider any capacity for imported solid waste to the County.

#### 4.10 DISPOSAL CAPACITY NEED ANALYSIS SCENARIOS

The disposal capacity need analysis presented below considers seven scenarios (see **Tables 4-10** to **4-16**), which are briefly described and summarized in **Tables 4-9** and graphed in **Figures 4-4** through **4-6**.

The following major assumptions are made in all seven scenarios:

- The base year is 2014.
- The planning period is 2014-2029.
- The disposal need analysis period is 2014-2029.
- The existing Class III landfill capacity is based on the permitted capacity as determined in the permit (e.g., SWFP and CUP/LUP, ~~WDR, and AQMD~~).
- Termination of landfill capacity is based on the most restrictive of the following factors: (1) exhaustion of permitted capacity, (2) completion of approved fill design, (3) expiration of permit (e.g., CUP/LUP, SWFP, WDR, and AQMD), and (4) the closure date. Both the closure date due to exhaustion of capacity (CC) and closure date due to permit expiration (CP) are shown in the disposal capacity need analysis table for all scenarios. (See **Tables 4-10** through **4-16**.)
- The permitted inert waste landfill and Inert Debris Engineered Fill Operations are not included in the disposal capacity need analysis.
- No new Class III landfill within the County during the planning period.

- Full implementation of California Assembly Bill 939 (AB 939) waste diversion programs and the achievement of the waste diversion mandate of 50 percent during the planning period. In addition, a potential increase in diversion rate is assumed in all scenarios upon considering that all jurisdictions in the County are required to comply with new state laws such as the mandatory commercial recycling (Assembly Bill 341) and diversion of organic waste from landfills (Assembly Bill 1826). Also, the potential development of composting and anaerobic digestion processing facilities in response to these laws is assumed to contribute to the increase in diversion rate. ~~However, based on the recent countywide diversion rate, a 55 percent diversion rate is assumed.~~
- The 2014 average daily import rate is approximately 371 tpd. The import quantities for subsequent years are assumed at 500 tpd through the end of the planning period in 2029.
- Transformation facilities are assumed to operate at their average permitted daily capacity and their combined total capacity is shown in the scenario analysis tables.
- Expected daily tonnage rates for the Antelope Valley, Chiquita, Lancaster, ~~Puente Hills,~~ and Sunshine Landfills are based on permitted daily disposal capacity; and for Burbank, Calabasas, Pebbly Beach, San Clemente, Scholl, and Whittier (Savage) Landfills are based on the average daily disposal tonnages for the period of January 1, 2014 to December 31, 2014.
- ~~Export need is considered part of the Class III landfill disposal need.~~
- The Class III landfill remaining capacity at year's end is determined based on the expected average daily tonnage during the planning period. ~~Comparison of the total Class III landfill remaining capacity for all scenarios is presented in Figure 4-6.~~
- The 2014 remaining permitted capacity for each of the Class III landfill are based on data presented in **Table 4-8**.
- ~~The daily export need and the~~ daily disposal capacity shortfall (reserve) are determined based on maximum permitted daily disposal capacity. However, for the purpose of the analysis, the average daily disposal capacity is used as the maximum permitted daily disposal capacity for landfills with washed restrictions. ~~The summary of export need (see Figures 4-7) and Class III landfill daily disposal capacity shortfall (reserve) (see Figure 4-8) is shown for comparison.~~

- The amount of waste exported to out-of-County landfills in 2014 was approximately 11,916 tpd. The available out-of-County disposal capacity for subsequent years is assumed at 12,000 tpd through the end of the planning period (2029). The solid waste exports from the County will continue during the planning period regardless of the adequacy of in-County disposal capacity.
- The units of tons per day are assumed as the average daily tonnage, operating six days per week.

The portions of the disposal capacity need analysis scenario tables (see **Tables 4-10 to 4-16**) dealing with (1) in-County Class III landfills' maximum permitted, average daily, and remaining capacity; (2) total available capacity from Class III landfills; ~~(3) export need;~~ (3) available out-of-County disposal capacity; and (4) Class III landfill daily disposal capacity shortfall (reserve), are organized as follows:

- **Columns 1 through 10**, under the "in-County Class III landfills", list the daily permitted capacity, average daily rate, and remaining daily capacity projected for each existing in-County Class III landfill for each year during the planning period.
- **Column 11** shows the total in-County Class III landfill available permitted daily capacity at the end of each year of the planning period for all in-County Class III landfills. The total permitted daily capacity is calculated based on the maximum permitted daily capacity (for landfills without restrictions) and the average daily rate (for landfills with restrictions).
- ~~**Column 13** shows the export need at the end of each year of the planning period. The export need analysis is calculated based on the maximum permitted daily capacity (for landfills without restrictions) and the average daily rate (for landfills with restrictions). The export need is shown as a positive "(+)" value when there is a need for export, and a negative "(-)" value when there is no need for export.~~
- ~~**Column 14** shows the available out-of-County disposal capacity. This amount is based on current and projected future available out-of-County disposal capacity (i.e., export capacity) to the current out-of-County Class III landfills located in California that are potentially available to accept waste from jurisdictions within the County during the planning period.~~
- The last column shows the projected Class III landfill daily disposal capacity shortfall (reserve). The Class III landfill daily disposal capacity shortfall (reserve) analysis is calculated based on the maximum permitted daily capacity (for landfills without restrictions) and the average daily rate (for

landfills with restrictions). The projected Class III landfill daily disposal capacity shortfall is shown as a positive value when there is a shortfall in the remaining daily disposal capacity, and a negative value (in parenthesis) when there is a reserve (excess) in the remaining daily disposal capacity.

#### 4.10.1 Scenario I – Utilization of Existing In-County Disposal Capacity

Scenario I assumes the following during the planning period: (1) all solid waste disposed will be managed by existing permitted in-County disposal infrastructure only (excluding disposal at inert waste landfills); (2) continued jurisdiction's diversion efforts (increasing countywide diversion rate to 75 percent by 2020 and thereafter); and (3) no expansions of existing in-County landfills. The analysis for Scenario I is presented in Table 4-10 and Figures 4-4 and 4-5.

Based on these assumptions, reliance on existing permitted in-County disposal capacity alone would be insufficient to meet long-term needs. Therefore, a disposal capacity shortfall would be expected to occur during the planning period.

#### 4.10.2 Scenario No. II - Status Quo Scenario

Scenario II assumes the following during the planning period: (1) use of existing in-County permitted disposal facilities (excluding disposal at inert waste landfills); (2) continued jurisdiction's diversion efforts (increasing countywide diversion rate to 75 percent by 2020 and thereafter); (3) utilization of current exports to out-of-County landfills; and (4) no proposed expansions of existing Class III landfills and/or transformation facilities. The analysis for Scenario II is presented in **Table 4-11** and **Figures 4-4** and **4-5**.

Based on these assumptions, a disposal capacity shortfall is not expected to occur during the planning period.

#### 4.10.3 Scenario III - Meeting CalRecycle's Statewide Disposal Target of 2.7 pounds per person per day (ppd)

Scenario III assumes the following during the planning period: (1) use of existing in-County permitted disposal facilities (excluding disposal at inert waste landfills); (2) aggressive jurisdiction's diversion efforts (increasing countywide diversion rate to 78 percent by 2020) in order to achieve CalRecycle's Statewide disposal target of 2.7 PPD<sup>14</sup>; (3) utilization of current exports to out-of-County landfills; and (4) no proposed expansions of existing Class III landfills and/or transformation facilities. The analysis for Scenario III is presented in **Table 4-12** and **Figures 4-4** and **4-5**.

<sup>14</sup> The 2.7 ppd disposal target is based on CalRecycle's Statewide disposal target described in CalRecycle's State of Disposal and State of Recycling in California reports released in March 2015.

Based on these assumptions, a disposal capacity shortfall is not expected to occur during the planning period.

#### **4.10.4 Scenario IV - In-County Class III Landfill Expansions**

Scenario IV assumes the following during the planning period: (1) use of existing in-County permitted disposal facilities (excluding disposal at inert waste landfills); (2) continued jurisdiction's diversion efforts (increasing countywide diversion rate to 75 percent by 2020 and thereafter); (3) utilization of current exports to out-of-County landfills; and (4) development of all proposed in-County Class III landfill expansions. The analysis for Scenario IV is presented in **Table 4-13**, and **Figures 4-4** and **4-5**.

Based on these assumptions, a disposal capacity shortfall is not expected to occur during the planning period.

#### **4.10.5 Scenario V – Utilization of Additional Alternative Technology Capacity**

Scenario V assumes the following during the planning period: (1) use of existing in-County permitted disposal facilities (excluding disposal at inert waste landfills); (2) continued jurisdiction's diversion efforts (increasing countywide diversion rate to 75 percent by 2020 and thereafter); (3) utilization of currently available out-of-County landfill disposal capacity; (3) no proposed expansions of existing Class III landfills and/or transformation facilities within the planning period; and (4) utilization of additional alternative technology capacity (e.g., conversion technology, other alternatives to landfilling). The analysis for Scenario V is presented in **Table 4-14** and **Figures 4-4** and **4-5**.

Based on these assumptions, a disposal capacity shortfall is not expected to occur during the planning period.

#### **4.10.6 Scenario VI – Increase in Exports to Out-of-County Landfills (including potential waste-by-rail capacity)**

Scenario VI assumes the following during the planning period: (1) use of existing in-County permitted disposal facilities (excluding disposal at inert waste landfills); (2) continued jurisdiction's diversion efforts (increasing countywide diversion rate to 75 percent by 2020 and thereafter); (3) increase in exports to out-of-County landfills (including additional disposal capacity through the waste-by-rail system); and (4) no proposed expansions of existing Class III landfills and/or transformation facilities within the planning period. The analysis for Scenario VI is presented in **Table 4-15** and **Figures 4-4** and **4-5**.

Based on these assumptions, a disposal capacity shortfall is not expected to occur during the planning period.

#### 4.10.7 Scenario VII –All Solid Waste Management Options Considered Become Available

Scenario VII assumes the following during the planning period: (1) use of existing in-County permitted disposal facilities (excluding disposal at inert waste landfills); (2) continued jurisdiction's diversion efforts (increasing countywide diversion rate to 75 percent by 2020 and thereafter); (3) increase in exports to out-of-County landfills (including additional disposal capacity through the waste-by-rail system); (4) utilization of additional alternative technology capacity; and (5) development of all proposed in-County Class III landfill expansions . The analysis for Scenario V is presented in **Table 4-16** and **Figures 4-4** and **4-5**.

Based on these assumptions, a disposal capacity shortfall is not expected to occur during the planning period.

#### 4.10.8 Impact of ~~Closure of Puente Hills Landfill's Green Waste as~~ Alternative Daily Cover ~~Program~~ on the Disposal Capacity Need Analysis

Due to the closure of Puente Hills Landfill (PHL), in October, 2013, jurisdictions that once depended on the facility to recycle their green waste as alternative daily cover (ADC) looked to other sites to recycle or compost their green waste. In 2013, approximately 363,975 tons of green waste ADC was used at in-County landfills. PHL alone accepted 49 percent, or 176,577 tons, which is equivalent to an average of 514 tons per day (tpd). In 2014, approximately 251,738 tons of green waste ADC was used at in-County landfills. Cities, the County, and the waste management industry have been working towards developing alternatives for the management of green waste. There are many challenges associated with green waste management, such as inadequate green waste management capacity in the County due to difficulties in permitting and developing composting facilities, limited markets for compost made from green waste, costs for long-distance transportation to out-of-County facilities and operations, as well as the need to work closely with California Department of Food and Agriculture (CDFA) and U.S. Department of Agriculture (USDA).

In addition, Assembly Bill 1594 (AB 1594 - Williams), which was signed by Governor Brown on September 28, 2014, provides that on and after January 1, 2020, green waste used as ADC will no longer receive diversion credit and will be considered disposal for purposes of AB 939. The passage of this bill presents the cities, the County, and the waste management industry with an additional incentive to develop alternatives for the management of green waste.

~~Upon closure of Puente Hills Landfill (PHL) in 2013, the green waste that is diverted (e.g., 296,305 tons in 2010) under the PHL's Alternative and Intermediate Daily Cover (ADC) Program may have to re-enter into the waste~~

~~stream and count as disposal tonnage, unless an alternative diversion program is developed to handle the green waste. Consequently, the in-County disposal need and daily disposal capacity shortfall (reserve) may increase by a proportional amount.~~

~~Based on the historical data of green waste intake at PHL for ADC and other beneficial use since 1990, the current intake of 296,305 tons per year in 2010 is projected to increase to 419,442 tons per year by 2025.~~

~~Similarly, a comparison of the projected daily disposal capacity shortfall (reserve) in the status quo scenario of 17,814 tpd or 5.6 million tons per year by 2025, establishes that in the status quo scenario, the closure of PHL's ADC program would increase the disposal shortfall in the County by an average of seven percent.~~

~~Therefore, t~~The impact of ~~termination of PHL's ADC program~~[AB 1594](#) on the overall in-County daily disposal capacity shortfall (reserve) and the County's disposal strategy would not be significant. As such, no Disposal Capacity Shortfall Analysis Scenario is devoted to this impact in this Chapter.

~~As closure of PHL<sup>45</sup> in 2013 draws near, jurisdictions that currently depend on the diversion credit derived from using green materials as ADC in PHL must come up with other solutions to meet their diversion goals. As a result, affected jurisdictions would have to devise alternative means of recycling the green waste, such as by supporting the development and use of conversion and other alternative technology facilities within the region.~~

~~However ironic, the effect of losing PHL may result in stimulating the development of organics diversion facilities including, but not limited to, enhancing the chipping and grinding and compost industry, for the green materials that will soon have no place to go. It may also provide the impetus for jurisdictions to take a more proactive approach to finding alternative ways of managing green waste materials.~~

#### 4.11 SUMMARY OF SCENARIO ANALYSES

The preceding section analyzed the County's disposal need under seven scenarios. This Section summarizes the analyses and their findings:

The description of the variables in each scenario is summarized in **Tables 4-9**.

<sup>45</sup> Puente Hills Landfill claimed nearly half of the green material ADC in the County in 2010. Of the 484,568 tons of greenwaste ADC used in in-County landfills, Puente Hills Landfill alone claims 61 percent, or 296,305 tons, which is equivalent to an average of 950 tpd. (Source: 2010 Annual Report, Los Angeles County Countywide Integrated Waste Management Plan.)

Except for Scenario I, as demonstrated by most of the scenarios, the County would be able to meet the disposal needs of all jurisdictions through the 15-year planning period.

In order to avert a disposal capacity shortfall and meet the CSE requirement of providing 15-years of adequate disposal capacity., jurisdictions in the County would have to manage disposal of solid waste by a combination of various means such as expanding existing landfill capacity provided it can be done in a technically feasible and environmentally safe manner, increasing the diversion rate, developing alternative (e.g., conversion) technology facilities, and continued exports to out-of-County landfills.

#### 4.12 CONCLUSIONS

The preceding discussions demonstrated that the combination of an increase in diversion rate, development of alternative technologies, potential expansions of existing in-County Class III landfills, and use of out-of-County Class III landfills (identified in **Chapters 3, 5, 7, and 9**) would address the disposal need of all the jurisdictions in the County for the 15-year planning period (2014-2029).

However, based on past and current experiences in siting new or expanding existing solid waste management facilities, it must be recognized that many (or all) of the facilities identified may encounter strong opposition during the permitting process, and that not all of the facilities may be approved; and that even if a facility is successfully permitted, the total approved capacity and daily capacity may be substantially less than its capacity requested by the project proponent.

Based on the Disposal Capacity Need analyses and the foregoing discussion, the following can be concluded:

- The planning process must incorporate adequate reserve daily capacity to handle unanticipated disposal needs, as well as daily and seasonal variations in waste quantities.
- The planning process should include a variety of alternatives that will ensure that the provision of solid waste disposal services remain uninterrupted during the planning period and beyond. This must include increased recycling and other diversion efforts, creation/expansion of markets for the recycled materials and products with recycled content, development of alternative facilities (e.g., conversion technology and other alternative technology facilities), feasibility studies on potential development of a new in-County landfill, out-of-County disposal facilities, and development of the in-County/out-of-County infrastructure necessary for access to out-of-

County disposal facilities including MRFs, intermodal facilities, waste-by-rail systems, and other transportation modes.

- The anticipated disposal needs of the County cannot be met by pursuing a single alternative (i.e., landfill expansions, transformation technologies, out-of-County disposal, etc.). Jurisdictions in the County must work on all fronts simultaneously in order to avert the daily disposal capacity shortfall (reserve) in the short, medium, and long term. As a part of this effort, economic incentives must be formulated to promote development of conversion technologies, other viable alternatives to landfill technology industries to reuse and recycle materials recovered from waste stream into new products, and markets for those products.
- Since it takes up to 15 years or more to fully permit a new or expand an existing landfill, the planning process must begin now in order to ensure the uninterrupted availability of solid waste disposal services, at reasonable cost, to serve the disposal need of all residents and businesses in the County.

#### 4.13 TABLES AND FIGURES

This section includes tables of: (1) Remaining Permitted Combined Disposal Capacity of Existing Solid Waste Class III Landfills in Los Angeles County (**Tables 4-1 and 4-8**); (2) Summary of Yearly Solid Waste Disposal Quantities in Los Angeles County (**Tables 4-2 and 4-3**); (3) Disposal Capacity of Inert Waste Landfills located in Los Angeles County (**Table 4-4**); (4) Solid Waste Generation by Los Angeles County Jurisdictions in 2014 (**Table 4-5**); Los Angeles County Solid Waste Generation Projections (**Table 4-6**); (5) Los Angeles County Solid Waste Disposal Capacity Requirements for the Planning Period (**Table 4-7**); (6) Summary of Description of Scenarios (**Table 4-9**); (7) Disposal Capacity Need Analysis Scenarios (**Tables 4-10 through 4-16**).

Also, this section includes figures of: (1) Graph of Los Angeles County Population and Solid Waste Disposal Trend (1990-2014) (**Figure 4-1**); (2) Los Angeles County Solid Waste Disposal Distribution in 2014 (**Figure 4-2**); (3) Graph of Population, Employment, Taxable Sales, and Solid Waste Generation Projection in Los Angeles County (**Figure 4-3**); (4) Graphs of Solid Waste Disposal Capacity Projections for each Disposal Capacity Need Analysis Scenario for the Planning Period (**Figure 4-4**); and(5) Charts showing Projected Solid Waste Disposal in 2029 for each Disposal Capacity Need Analysis Scenario for the Planning Period (**Figure 4-5**).

#### 4.14 APPENDIX

This section includes **Appendix 4-A** (Los Angeles County Solid Waste Management Committee/Integrated Waste Management Task Force's Report (dated March 28, 1991) to the California Integrated Waste Management Board – on the Remaining Permitted Disposal Capacity of Solid Waste Facilities in Los Angeles County).

TABLE 4-1

**REMAINING PERMITTED COMBINED DISPOSAL CAPACITY OF EXISTING SOLID WASTE  
CLASS III LANDFILLS IN LOS ANGELES COUNTY  
(As of January 1990 and January 1991)**

Class III Landfills	SWFP No.	Days in Operation (per week)	Jan. 1991 SWFP Daily Capacity	CUP/LUP Daily Capacity	1990 Average Daily Tonnage (6 days/wk)	Quantity of Municipal Solid Waste Disposed in Year 1990	Projected Remaining Permitted Capacity (effective Jan. 1, 1991)		Estimated Remaining Capacity (effective Jan. 1, 1990)	
			Tons	Tons	Tons	Tons (Millions)	Tons (Millions)	Cubic Yards <sup>(d)</sup> (Millions)	Tons (Millions)	Cubic Yards <sup>(d)</sup> (Millions)
Antelope Valley	19-AA-0009	7	350	-	400	0.125	0.925	2.6	1.05	3
Azusa Land Reclamation	19-AA-0013	6	6,500	6,500	2,756	0.86	0	0	0.86	1.23
BKK	19-AF-0001	6	12,000 <sup>(a)</sup>	-	9,744	3.04	15.96	23.8	19	28.3
Bradley West	19-AR-0008	6	7,000	9,500	1,923	0.6	11.8	19.7	12.4	20.7
Brand Park	19-AA-0006	5	104	-	48	0.015	0.306	0.875	0.321	0.918
Burbank	19-AA-0040	5	240	-	196	0.061	11.44	22	11.3	22.1
Calabasas	19-AA-0056	6	3,500	-	2,724	0.85	15.155	21.6	16.005	22.8
Chiquita Canyon	19-AA-0052	7	5,000	-	1,763	0.55	1.78	2.2	2.33	2.9
Lancaster	19-AA-0050	6	450	-	295	0.092	0.15	0.5	0.24	0.8
Lopez Canyon	19-AA-0820	5	4,100 <sup>(b)</sup>	4,000	3,109	0.97	4.2	7	5.2	8.6
Pebble Beach	19-AA-0061	6	30	-	10	0.003	0.097	0.16	0.1	0.16
Pitchess Honor Rancho	19-AA-0057	5	23	-	17	0.0054	2.24	3.73	2.25	3.74
Puente Hills San Clemente	19-AA-0053	6	12,000	13,200	11,859	3.7	7.5	10.7	11.2	0.16
Schott Canyon	19-AA-0063	5	1	-	1	0.002	0.024	0.034	0.026	0.037
Spadra	19-AA-0012	6	3,400	-	2,179	0.68	13.32	19	14	20
Spadra	19-AA-0015	6	3,000	-	2,724	0.85	6.95	9.93	7.8	11.14
Sunshine Canyon	19-AR-0002	6	7,000	6,000	3,141	0.98	0.4	1.64	1.4	5.66
Whittier (Savage Canyon)	19-AA-0062	5	3.5	-	3.5	0.000088	0.0073	0.0104	0.0074	0.0105
Whittier (Savage Canyon)	19-AH-0001	6	350	-	353	0.11	6.39	10.6	6.5	10.8
<b>TOTAL</b>			<b>63,950<sup>(c)</sup></b>		<b>43,245</b>	<b>13.49</b>	<b>98.65</b>	<b>156.08</b>	<b>112.15</b>	<b>177.42</b>

**Footnotes:**

<sup>(a)</sup> Daily capacity established in June 1990; Notice and Order as amended by the City of West Covina's Local Enforcement Agency.

<sup>(b)</sup> Daily capacity established by Report of Disposal Site Information and Courts.

<sup>(c)</sup> Average daily tonnage, Monday through Friday.

<sup>(d)</sup> Based on in-place solid waste density provided by landfill operators.

**Notes:**

1. Table 4-1 is based on a table that is included in the Task Force's March 28, 1991, report to the CIWMB, (See Appendix 4A).

2. "SWFP" means Solid Waste Facility Permit. SWFP No. is same as the Solid Waste Information System (SWIS) Number.

3. "CUP" means Conditional Use Permit.

4. "LUP" means Land Use Permit.

Source: Los Angeles County Department of Public Works.

**TABLE 4-2  
SUMMARY OF YEARLY SOLID WASTE DISPOSAL QUANTITIES<sup>1</sup> (IN TONS) FOR LOS ANGELES COUNTY  
FROM 1990 TO 2014**

Year	In-County Disposal at Class III Landfills	In-County Disposal at Transformation Facilities	Exports	Imports	Disposal at in-County Permitted Inert Waste Landfills	Total Disposal at Class III Landfills and Transformation Facilities, Including Exports	Total Disposal at Class III Landfills and Transformation Facilities, Including Exports and Excluding Imports	Total Disposal at Class III Landfills, Transformation Facilities, and Inert Waste Landfills, Including Exports and Excluding Imports
	A	B	C	D	E	F = A+B+C	G = A+B+C-D	H = A+B+C+E-D
1990	13,492,000	312,000	N/A <sup>2</sup>	N/A	2,108,000	[13,804,000]	[13,804,000]	[15,912,000]
1991	12,230,000	465,000	N/A	N/A	867,000	[12,695,000]	[12,695,000]	[13,562,000]
1992	11,922,000	523,000	22,000	N/A	867,000	12,467,000	[12,467,000]	[13,334,000]
1993	11,300,000	518,000	122,000	N/A	739,000	11,940,000	[11,940,000]	[12,679,000]
1994	11,590,000 <sup>3</sup>	526,000	128,000	305,000	522,000	12,244,000	11,939,000	12,461,000
1995	11,646,000	573,000	52,000	774,000	530,000	12,271,000	11,497,000	12,027,000
1996	11,356,744	497,735	N/A	801,308	1,100,405	[11,854,479]	[12,655,787]	[13,756,192]
1997	10,389,210	439,673	N/A	374,318	869,542	[10,828,883]	[11,203,201]	[12,072,743]
1998	11,212,563	427,725	N/A	339,762	1,197,460	[11,640,288]	[11,980,050]	[13,177,510]
1999	9,950,602	455,245	738,323	210,600	1,010,000	11,144,170	10,933,570	11,943,570
2000	10,078,989	510,455	794,910	229,320	1,332,572	11,384,354	11,155,034	12,487,606
2001	9,825,357	547,466	1,095,711	182,832	1,296,425	11,468,534	11,285,702	12,582,127
2002	8,973,755	539,542	2,009,845	158,496	1,045,960	11,523,142	11,364,646	12,410,606
2003	9,152,334	539,188	2,207,873	153,504	919,600	11,899,395	11,745,891	12,665,491
2004	9,110,298	548,249	2,308,181	156,000	1,247,500	11,966,728	11,810,728	13,058,228
2005	9,574,072	535,225	2,177,097	235,872	85,678	12,286,394	12,050,522	12,136,200
2006	9,583,227	537,733	1,782,609	266,448	101,748	11,903,569	11,637,121	11,738,869
2007	8,898,527	521,620	1,980,421	238,962	151,784	11,400,568	11,161,606	11,313,390
2008	7,908,376	520,776	1,914,153	208,079	173,651	10,343,305	10,135,226	10,308,877
2009	6,778,746	537,012	1,779,290	189,956	87,390	9,095,048	8,905,092	8,992,482
2010	6,313,263	539,129	1,917,993	210,521	54,964	8,770,385	8,559,864	8,614,828
2011	6,258,131	524,021	1,900,757	141,000	71,854	8,682,909	8,541,909	8,613,763
2012	6,239,143	528,765	1,844,175	141,145	89,142	8,612,083	8,470,938	8,560,080
2013	6,117,080	534,021	2,087,368	116,089	142,845	8,738,469	8,622,380	8,765,225
2014	4,544,921	512,353	3,699,963	115,752	266,675	8,757,237	8,641,485	8,908,161

**Footnotes:**

<sup>1</sup> See Chapter 4, Sections 4.4 for discussion.

<sup>2</sup> "N/A" means not available. There is no record per SWIMS.

<sup>3</sup> Excludes debris generated as a result of Northridge Earthquake

**Notes/Assumptions:**

Column A: Total disposal at Class III landfills in Los Angeles County. Data for the period 1990-1995 includes waste imported from jurisdictions outside the County. Data for the period 1996-2014 does not include waste imported from jurisdictions outside the County.

Column B: Column B: Total disposal at transformation facilities in the County. Data for the period 1990-1995 includes waste imported from jurisdictions outside the County. Data for the period 1996-2014 does not include waste imported from jurisdictions outside the County. 1990 excludes 500 tons/day of ash which were landfilled; for other years, ash has been diverted from disposal.

Column C: Waste exported by jurisdictions in the County to disposal facilities located outside the County. Data for the period 1996-1998 is not available.

Column D: Waste that originated outside the County but disposed at Class III landfills and transformation facilities located in the County which originated outside the County.

Column E: Total inert waste disposed by jurisdictions in the County at permitted (i.e., Registration and Full Solid Waste Facility Permit tier), inert waste landfills

Column F: Includes disposal by jurisdictions in the County at in-County Class III landfills and transformation facilities, and the waste exported to disposal facilities located outside the County. At this time, data for the period 1996-1998 does not include waste exported to jurisdictions outside the County, and will be updated when data becomes available.

Column G: Includes disposal by jurisdictions in the County at Class III landfills, transformation facilities, and the waste exported to disposal facilities located outside the County. For 1994 and 1995, the total excludes waste imported from jurisdictions outside the Los Angeles County. At this time, data for the period 1996-1998 does not include waste exported to jurisdictions outside the County, and will be updated when data becomes available. Data for the period 1999-2014 does not include waste imported from jurisdictions outside the County.

Column H: Includes disposal at Class III landfills, transformation facilities, permitted inert waste landfills, and the waste exported for disposal at landfills outside the County. For 1994 and 1995, the total excludes waste imported from jurisdictions outside the County. At this time, data for the period 1996-1998 does not include waste exported to jurisdictions outside the County. Data for the period 1999-2014 does not include waste imported from jurisdictions outside the County.

"[ ]": Disposal quantities affected by the missing data (shown as "N/A" and "TBD") in columns C and D are shown in brackets

Source: Los Angeles County Department of Public Works.

**TABLE 4-3  
SUMMARY OF YEARLY SOLID WASTE DISPOSAL QUANTITIES<sup>1</sup> (in CUBIC YARDS) FOR LOS ANGELES COUNTY  
FROM 1990 TO 2014**

Year	In-County Disposal at Class III Landfills	In-County Disposal at Transformation Facilities	Exports	Imports	Disposal at in-County Permitted Inert Waste Landfills	Total Disposal at Class III Landfills and Transformation Facilities, Including Exports	Total Disposal at Class III Landfills and Transformation Facilities, Including Exports and Excluding Imports	Total Disposal at Class III Landfills, Transformation Facilities, and Inert Waste Landfills, Including Exports and Excluding Imports
	A	B	C	D	E	F = A+B+C	G = A+B+C-D	H = A+B+C+E-D
1990	22,486,667	520,000	N/A <sup>2</sup>	N/A	3,513,333	[23,006,667]	[23,006,667]	[26,520,000]
1991	20,383,333	775,000	N/A	N/A	1,445,000	[21,158,333]	[21,158,333]	[22,603,333]
1992	19,870,000	871,667	36,667	N/A	1,445,000	20,778,333	[20,778,333]	[22,223,333]
1993	18,833,333	863,333	203,333	N/A	1,231,667	19,900,000	[19,900,000]	[21,131,667]
1994	19,316,667 <sup>3</sup>	876,667	213,333	508,333	870,000	20,406,667	19,898,333	20,768,333
1995	19,410,000	955,000	86,667	1,290,000	883,333	20,451,667	19,161,667	20,045,000
1996	18,927,907	829,558	N/A	1,335,513	1,834,008	[19,757,465]	[21,092,978]	[22,926,986]
1997	17,315,350	732,788	N/A	623,863	1,449,237	[18,048,138]	[18,672,001]	[20,121,238]
1998	18,687,605	712,875	N/A	566,270	1,995,767	[19,400,480]	[19,966,750]	[21,962,517]
1999	16,584,337	758,742	1,230,538	351,000	1,683,333	18,573,617	18,222,617	19,905,950
2000	16,798,315	850,758	1,324,850	382,200	2,220,953	18,973,923	18,591,723	20,812,677
2001	16,375,595	912,443	1,826,185	304,720	2,160,708	19,114,223	18,809,503	20,970,212
2002	14,956,258	899,237	3,349,742	264,160	1,743,267	19,205,237	18,941,077	20,684,343
2003	15,253,890	898,647	3,679,788	255,840	1,532,667	19,832,325	19,576,485	21,109,152
2004	15,183,830	913,748	3,846,968	260,000	2,079,167	19,944,547	19,684,547	21,763,713
2005	15,956,787	892,042	3,628,495	393,120	142,797	20,477,323	20,084,203	20,227,000
2006	15,972,045	896,222	2,971,015	444,080	169,580	19,839,282	19,395,202	19,564,782
2007	14,830,878	869,367	3,300,702	398,270	252,973	19,000,947	18,602,677	18,855,650
2008	13,180,627	867,960	3,190,255	346,798	289,418	17,238,842	16,892,044	17,181,462
2009	11,297,910	895,020	2,965,483	316,593	145,650	15,158,413	14,841,820	14,987,470
2010	10,522,105	898,548	3,196,655	350,868	91,607	14,617,308	14,266,440	14,358,047
2011	10,430,218	873,368	3,167,928	235,000	119,757	14,471,515	14,236,515	14,356,272
2012	10,398,572	881,275	3,073,625	235,242	148,570	14,353,472	14,118,230	14,266,800
2013	10,195,133	890,035	3,478,947	193,482	238,075	14,564,115	14,370,633	14,608,708
2014	7,574,868	853,922	6,166,604	192,919	444,459	14,595,394	14,402,475	14,846,934

**Footnotes:**

<sup>1</sup> See Chapter 4, Sections 4.4 for discussion. A conversion factor of 1,200 pounds per cubic yard was assumed for converting quantities from tons to cubic yards.

<sup>2</sup> "N/A" means not available. There is no record per SWIMS.

<sup>3</sup> Excludes debris generated as a result of Northridge Earthquake.

**Notes/Assumptions:**

Column A: Total disposal at Class III landfills in Los Angeles County. Data for the period 1990-1995 includes waste imported from jurisdictions outside the County. Data for the period 1996-2014 does not include waste imported from jurisdictions outside the County.

Column B: Column B: Total disposal at transformation facilities in the County. Data for the period 1990-1995 includes waste imported from jurisdictions outside the County. Data for the period 1996-2014 does not include waste imported from jurisdictions outside the County. 1990 excludes 500 tons/day of ash which were landfilled; for other years, ash has been diverted from disposal.

Column C: Waste exported by jurisdictions in the County to disposal facilities located outside the County. Data for the period 1996-1998 is not available.

Column D: Waste that originated outside the County but disposed at Class III landfills and transformation facilities located in the County which originated outside the County.

Column E: Total inert waste disposed by jurisdictions in the County at permitted (i.e., Registration and Full Solid Waste Facility Permit tier), inert waste landfills.

Column F: Includes disposal by jurisdictions in the County at in-County Class III landfills and transformation facilities, and the waste exported to disposal facilities located outside the County. At this time, data for the period 1996-1998 does not include waste exported to jurisdictions outside the County, and will be updated when data becomes available.

Column G: Includes disposal by jurisdictions in the County at Class III landfills, transformation facilities, and the waste exported to disposal facilities located outside the County. For 1994 and 1995, the total excludes waste imported from jurisdictions outside the Los Angeles County. At this time, data for the period 1996-1998 does not include waste exported to jurisdictions outside the County, and will be updated when data becomes available. Data for the period 1999-2014 does not include waste imported from jurisdictions outside the County.

Column H: Includes disposal at Class III landfills, transformation facilities, permitted inert waste landfills, and the waste exported for disposal at landfills outside the County. For 1994 and 1995, the total excludes waste imported from jurisdictions outside the County. At this time, data for the period 1996-1998 does not include waste exported to jurisdictions outside the County. Data for the period 1999-2014 does not include waste imported from jurisdictions outside the County.

[ ]: Disposal quantities affected by the missing data (shown as "N/A" and "TBD") in columns C and D are shown in brackets.

Source: Los Angeles County Department of Public Works.

**TABLE 4-4  
SUMMARY OF EXISTING INERT DEBRIS DISPOSAL SITES IN LOS ANGELES COUNTY (AS OF DECEMBER 31, 2014)**

Facility	SWIS No.	Location	Operation days/week	EAN Maximum Daily Capacity		2014 Average Daily Disposal <sup>1</sup>		2014 Annual Disposal <sup>2</sup>	
				(cubic yards) <sup>3</sup>	(tpd) <sup>3</sup>	(cubic yards)	(tpd)	(million cubic yards)	(million tons)
Atkinson Brick Company <sup>4</sup>	N/A	Los Angeles	6	N/A	N/A	10	13	0.00	0.00
Chandler's Palos Verdes Sand & Gravel	19-AE-0004	Rolling Hills Estates	5	2,923	3,654	347	433	0.11	0.14
Durbin Landfill	19-AA-1111	Irwindale	5	3,840	4,800	505	631	0.16	0.20
Hanson Aggregates West, Inc.	19-AA-0044 <sup>5</sup>	Irwindale	6	526	657	0	0	0.00	0.00
Lower Azusa Reclamation Project (Arcadia Reclamation Inc.)	19-AA-0868	Arcadia	6	3,205	4,006	3,497	4,371	1.09	1.36
Manning Pit <sup>6</sup>	N/A	Irwindale		N/A	N/A	N/A	N/A	N/A	N/A
Montebello Land & Water Co.	19-AA-0019	Montebello	5	1	1	1	1	0.00	0.00
Nu-Way Arrow Reclamation	19-AA-1074	Irwindale	6	2,000	2,500	4,741	5,926	1.48	1.85
Peck Road Gravel Pit	19-AA-0838	Monrovia	7	1,120	1,400	0	0	0.00	0.00
Reliance Pit II Inert Debris Engineered Fill Site	19-AA-0854	Irwindale	5	6,729	8,412	277	346	0.09	0.11
Sun Valley Landfill	19-AR-1160	Los Angeles	5	1,458	1,823	1,769	2,211	0.55	0.69
United Rock Products Pit #2	19-AA-0046	Irwindale	6	3,077	3,846	0	0	0.00	0.00
<b>TOTAL</b>				<b>24,879</b>	<b>31,098</b>	<b>11,146</b>	<b>13,933</b>	<b>3.48</b>	<b>4.35</b>

**NOTES:**

1. Disposal quantities for 2014 are based on actual tonnages reported by owners/operators through the Solid Waste Management Fee invoice receipt.
2. Conversion factor based on in-place solid waste density if provided by landfill operators, otherwise a conversion factor of 2,500 lb/cy was used.
3. Derived from the permit values noted in the CalRecycle Website as of June 2015.
4. Facility closed as of March 2014.
5. Operator submitted an Inactive Notification to LEA on August 2007. The facility was still in-active based on the January 23, 2013 inspection.
6. Manning Pit is unclassified as of December 31, 2014.

Source: Los Angeles County Department of Public Works, August 2015

**TABLE 4-5  
SOLID WASTE GENERATION BY LOS ANGELES COUNTY JURISDICTIONS IN 2014  
BASED ON CLASS III LANDFILLS AND TRANSFORMATION FACILITIES' DISPOSAL QUANTITIES  
(Excluding Inert Waste Landfills)**

Year	In-County Disposal		Out-of County Class III Landfills (Exports) TONS	Total Disposal A+B+C* TONS	Countywide Diversion Rate %	Calculated 2014 Solid Waste Generation TONS
	Class III Landfills	Transformation Facilities				
	TONS	TONS				
2014	4,544,921	512,353	3,699,963	8,757,237	60	21,893,092

\* Data from permitted inert waste landfills is excluded from these calculations.

Column A Total disposal at Class III landfills in Los Angeles County. Does not include waste imported from jurisdictions outside the county.

Column B Total disposal at transformation facilities in Los Angeles County. Does not include waste imported from jurisdictions outside the county.

Column C Waste exported by jurisdictions in Los Angeles County to disposal facilities located outside the county.

Column D Columns A + B + C

Column E Countywide Diversion Rate of 65 percent is assumed based on "State of Disposal in California" report by CalRecycle as Statewide diversion rate.

Column F Column D ÷ Column E. This estimate is used to project the County's Class III landfill and transformation disposal needs through the year 2028.

Source : Los Angeles County Department of Public Works

**Table 4-6  
LOS ANGELES COUNTY SOLID WASTE GENERATION PROJECTIONS FOR THE PLANNING PERIOD (2014-2029)**

YEAR	POPULATION		EMPLOYMENT		REAL TAXABLE SALES		B-YRWG	B-YNWG	RAF	NAF	TOTAL GENERATION (TONS)
2014	10,095,000	10.1	4,196,200	4.196	\$132,400,000,000	132	6,567,928	15,325,165			21,893,093
2015	10,170,000	10.2	4,297,400	4.297	\$135,100,000,000	135	6,567,928	15,325,165	1.014842162	1.022254904	22,331,635
2016	10,241,000	10.2	4,380,500	4.381	\$138,500,000,000	139	6,567,928	15,325,165	1.029729602	1.044996599	22,777,935
2017	10,313,000	10.3	4,436,600	4.437	\$142,000,000,000	142	6,567,928	15,325,165	1.043246795	1.064898741	23,171,719
2018	10,383,000	10.4	4,481,700	4.482	\$144,500,000,000	145	6,567,928	15,325,165	1.054121357	1.079713738	23,470,184
2019	10,446,000	10.4	4,519,600	4.520	\$147,000,000,000	147	6,567,928	15,325,165	1.064220252	1.093670817	23,750,408
2020	10,508,000	10.5	4,554,700	4.555	\$149,100,000,000	149	6,567,928	15,325,165	1.073347514	1.105783686	23,995,987
2021	10,571,000	10.6	4,586,300	4.586	\$149,700,000,000	150	6,567,928	15,325,165	1.079483457	1.111814858	24,128,716
2022	10,639,000	10.6	4,618,600	4.619	\$150,800,000,000	151	6,567,928	15,325,165	1.08685286	1.119817657	24,299,762
2023	10,707,000	10.7	4,650,500	4.651	\$153,200,000,000	153	6,567,928	15,325,165	1.096653115	1.132682159	24,561,280
2024	10,774,000	10.8	4,679,800	4.680	\$156,100,000,000	156	6,567,928	15,325,165	1.107193048	1.147125075	24,851,845
2025	10,842,000	10.8	4,705,800	4.706	\$156,300,000,000	156	6,567,928	15,325,165	1.112487716	1.150978403	24,945,673
2026	10,911,000	10.9	4,732,300	4.732	\$159,800,000,000	160	6,567,928	15,325,165	1.12409282	1.167353544	25,272,846
2027	10,979,000	11.0	4,761,300	4.761	\$162,900,000,000	163	6,567,928	15,325,165	1.135042052	1.182516	25,577,127
2028	11,049,000	11.0	4,795,000	4.795	\$165,700,000,000	166	6,567,928	15,325,165	1.145803893	1.197105556	25,871,398
2029	11,115,000	11.1	4,827,100	4.827	\$168,400,000,000	168	6,567,928	15,325,165	1.156083469	1.21112682	26,153,791

**Footnotes:**

<sup>1</sup>"TPD" means tons per day (6-day per week average)

**Notes:**

**Population: Countywide Population Projection (UCLA, Long Term Forecast of Los Angeles County, July 2014)**

**Employment: Countywide Employment Projection (UCLA, Long Term Forecast of Los Angeles County, July 2014)**

Employment data from UCLA only accounts for non-farm employment.

**Real Taxable Sales: Countywide Taxable Sales (Source of information is UCLA, Long Term Forecast of Los Angeles County, July 2014).**

Real Taxable Sales data from UCLA considers the real dollar value. **(Real Taxable Sales)**

**B-Y RWG** = Base Year Residential Waste Generation. Calculation based on California 2008 Statewide Waste Characterization Study. Single-family and multifamily residential waste together account for 30 percent of the state's waste stream.

**B-Y NWG** = Base Year Non-Residential Waste Generation. Calculation based on California 2008 Statewide Waste Characterization Study (All other sources account for 70 percent of the state's total waste stream).

**RAF** = Residential Adjustment Factor =  $\frac{((PR/PB)+[ER/EB+(CB/CR*TR/TB)]/2)}{2}$

**NAF** = Non-Residential Adjustment Factor =  $\frac{[ER/EB+(CB/CR*TR/TB)]}{2}$

The Adjustment Methodology Formula as adopted by the CIWMB is expressed as follows:

**Estimated Reporting Year Solid Waste Generation =  $\{[(B-Y RWG) (RAF)] + [(B-Y NWG)(NAF)]\}$**

PR= Reporting Year Population

PB= Base Year Population

ER= Reporting Year Employment

EB= Base Year Employment

CR= Reporting Year Consumer Price Index

CB= Base Year Consumer Price Index

TR= Reporting Year Taxable Sales

TB= Base Year Taxable Sales

Source: Los Angeles County Department of Public Works

**TABLE 4-7**  
**LOS ANGELES COUNTY SOLID WASTE DISPOSAL CAPACITY REQUIREMENTS FOR THE PLANNING PERIOD (2014-2029)**  
(Excluding Disposal Capacity Provided By Permitted Inert Waste Landfills)

A YEAR	B TOTAL GENERATION TONS	C PERCENT DIVERSION (ASSUMED)	D TOTAL DIVERSION TONS	E PROJECTED TRANSFORMATION & CLASS III LANDFILL DISPOSAL (TONS)	F AVAILABLE CAPACITY TONS	G, H, I, J CLASS III LANDFILL DISPOSAL NEED			
						ANNUAL		CUMULATIVE (YEAR'S END)	
						G TONS	H CUBIC YARDS	I TONS	J CUBIC YARDS
2014	21,893,093	60%	13,135,856	8,757,237	645,600	8,111,637	13,519,394	8,111,637	13,519,394
2015	22,331,635	61%	13,622,298	8,709,338	645,600	8,063,738	13,439,563	16,175,374	26,958,957
2016	22,777,935	63%	14,350,099	8,427,836	645,600	7,782,236	12,970,393	23,957,611	39,929,351
2017	23,171,719	66%	15,293,334	7,878,384	645,600	7,232,784	12,054,641	31,190,395	51,983,991
2018	23,470,184	69%	16,194,427	7,275,757	645,600	6,630,157	11,050,262	37,820,552	63,034,253
2019	23,750,408	72%	17,100,294	6,650,114	645,600	6,004,514	10,007,524	43,825,066	73,041,777
2020	23,995,987	75%	17,996,990	5,998,997	645,600	5,353,397	8,922,328	49,178,463	81,964,105
2021	24,128,716	75%	18,096,537	6,032,179	645,600	5,386,579	8,977,632	54,565,042	90,941,736
2022	24,299,762	75%	18,224,821	6,074,940	645,600	5,429,340	9,048,901	59,994,382	99,990,637
2023	24,561,280	75%	18,420,960	6,140,320	645,600	5,494,720	9,157,867	65,489,102	109,148,504
2024	24,851,845	75%	18,638,884	6,212,961	645,600	5,567,361	9,278,936	71,056,464	118,427,439
2025	24,945,673	75%	18,709,255	6,236,418	645,600	5,590,818	9,318,031	76,647,282	127,745,470
2026	25,272,846	75%	18,954,635	6,318,212	645,600	5,672,612	9,454,353	82,319,893	137,199,822
2027	25,577,127	75%	19,182,846	6,394,282	645,600	5,748,682	9,581,136	88,068,575	146,780,959
2028	25,871,398	75%	19,403,548	6,467,849	645,600	5,822,249	9,703,749	93,890,825	156,484,708
2029	26,153,791	75%	19,615,344	6,538,448	645,600	5,892,848	9,821,413	99,783,673	166,306,121

**NOTES:**

1. Waste generation (Column B) is calculated using CalRecycle's Adjustment Methodology, utilizing employment, population, and taxable sales projections from UCLA Anderson Long-term Forecast (July 2014).
2. Waste generation for 2014 is based on actual in-County and out-of-County transformation and Class III landfill disposal by jurisdictions in Los Angeles County. A 60 percent diversion rate is assumed. These tonnages DO NOT include inert waste disposed at permitted inert landfills.
3. The 2014 transformation and Class III landfill disposal quantity (first figure under Column E) is based on tonnages reported by permitted solid waste disposal facility operators in Los Angeles County and export quantities reported by other counties to County of Los Angeles Department of Public Works as part of the 2014 Disposal Quantity Reporting data.
4. Columns H and J are based on Columns G and I, respectively, using an in-place waste density of 1,200 lb/cy.

Source: Los Angeles County Department of Public Works

**TABLE 4-8  
REMAINING PERMITTED DISPOSAL CAPACITY OF EXISTING SOLID WASTE DISPOSAL FACILITIES IN LOS ANGELES COUNTY**

Facility	Solid Waste Facility Permit Number	Location City or Unincorporated Area	Permitted Operation days/week	SWFP Maximum Daily Capacity Tons	LUP/CUP Maximum Daily Capacity Tons	2014 Annual Disposal (Million Tons) (See Note 1)			2014 Average Daily Disposal tpd-6 (See Note 1)			Estimated Remaining Permitted Capacity (as of December 31, 2014) (See Note 2)		Remaining Life (b) Years	Comments
						In-County	Out-of-County	Total	In-County	Out-of-County	Total	Million Tons	Million (a) Cubic Yards		
Antelope Valley	19-AA-5624	Palmdale	6	1,800	1,800	0.441	0.006	0.447	1,415	18	1,433	14.94	22.99	27	The City of Palmdale approved the expansion and combined Antelope Valley Landfills #1 & #2 on September 19, 2011.
Burbank	19-AA-0040	Burbank	5	240	---	0.031	0.000	0.031	100	0	100	2.92	5.30	39	Limited to the City of Burbank use only.
Calabasas	19-AA-0056	Unincorporated Area	6	3,500	3,500	0.221	0.013	0.233	707	41	748	6.53	14.55	14	Limited to the Calabasas Wasteshed as defined by Los Angeles County Ordinance No. 91-0003.
Chiquita Canyon	19-AA-0052	Unincorporated Area	6	6,000	6,000	1.064	0.046	1.110	3,411	147	3,558	1.83	2.11	2	CUP expires November 24, 2019 or when the maximum capacity is reached, whichever is sooner. Proposed expansion pending. CUP limits waste disposal to 30,000 tons per week or 5,000 tpd-6.
Lancaster	19-AA-0050	Unincorporated Area	6	5,100	5,100	0.096	0.001	0.097	307	4	311	12.01	14.30	13	
Pebble Beach	19-AA-0061	Unincorporated Area	7	49	49	0.003	0.000	0.003	11	0	11	0.05	0.07	14	LUP expires July 29, 2028.
San Clemente	19-AA-0063	San Clemente Island	2	9.6	---	0.0004	0	0.0004	1	0	1	0.040	0.32	18	Landfill owned and operated by the U.S. Navy.
Scholl Canyon	19-AA-0012	Glendale/ Unincorporated Area	6	3,400	---	0.233	0.000	0.233	745	0	745	3.82	7.88	16	Limited to the Scholl Canyon Wasteshed as defined by City of Glendale Ordinance No. 4780.
Sunshine Canyon City/County	19-AA-2000	Los Angeles/ Unincorporated Area	6	12,100	12,100	2.366	0.000	2.366	7,582	0	7,582	64.69	87.42	19	
Whittier (Savage Canyon)	19-AH-0001	Whittier	6	350	---	0.089	0.000	0.089	286	0	286	5.26	8.76	41	Limited to use by City of Whittier and waste haulers contracted with the City of Whittier.
<b>TOTAL</b>					28,549	4.545	0.065	4.610	14,567	210	14,777	112.09	163.70	--	
<b>Permitted Inert Landfills</b>															
Azusa Land Reclamation	19-AA-0013	Azusa	6	6,500	---	0.267	0.049	0.316	1,026	189	1,215	59.83	47.86	31	By Court Order, on October 2, 1996, the California Regional Water Quality Control Board, Los Angeles region ordered the Azusa Land Reclamation Landfill to stop accepting Municipal Solid Waste.
<b>TOTAL</b>				6,500		0.267	0.049	0.316	1,026	189	1,215	59.83	47.86		
<b>Transformation Facilities</b>												<b>Available Average Daily Capacity (tpd)</b>			
Commerce Refuse To-Energy Facility	19-AA-0506	Commerce	7	1,000	---	0.096	0.008	0.104	309	24	333	400	(c)		
Southeast Resource	19-AK-0083	Long Beach	7	2,240	---	0.416	0.043	0.459	1,333	137	1,470	1,370	(d)		
<b>TOTAL</b>				3,240		0.512	0.050	0.563	1,642	161	1,803	1,770	(e)		
<b>Out-of-County Disposal</b>	Los Angeles County Waste Exported in 2013 to Out-of-County Class III Disposal Facilities = 3,699,963 tons or 11,859 tpd-6														

**NOTES:**

- Disposal quantities are based on actual tonnages reported by owners/operators of permitted solid waste disposal facilities to the Los Angeles County Department of Public Works' Solid Waste Information Management System (www.LACountySWIMS.org.)
- Estimated Remaining Permitted Capacity is based on landfill owner/operator's response in a written survey conducted by Los Angeles County Department of Public Works in June 2015 as well as site-specific permit criteria established by local land use agencies, Local Enforcement Agencies, CalRecycle, California Regional Water Quality Control Board, and the South Coast Air Quality Management District

**Abbreviation:**

- LUP Land Use Permit
- SWFP Solid Waste Facility Permit
- CUP Conditional Use Permit

**FOOTNOTES:**

- Conversion factor based on in-place solid waste density is provided by landfill operators, otherwise a conversion factor of 1,200 lb/cy was used for Class III landfills
- Remaining Life is based on either the 2014 average daily disposal tonnage, maximum permitted capacity, or the facility's permit expiration date.
- Based on the Solid Waste Facility Permit limit of 2,800 tons per week, expressed as a daily average, seven days per week.
- Based on EPA limit of 500,000 tons per year, expressed as a daily average, seven days per week.
- Tonnage expressed as a daily average, six days per week.

Source: Los Angeles County Department of Public Works, May 2015

**TABLE 4-9**  
**Summary of Description of Disposal Capacity Need Analysis Scenarios**  
**Assuming AB 939 Diversion is Fully Implemented and No New Class III Landfills in Los Angeles County during the Planning Period**

Scenario No.	Existing Permitted In-County Class III Landfill Capacity	Diversion Rate (75 percent by 2020) <sup>1</sup>	Exports to Out-of-County Landfills	Proposed Expansions of In-County Class III Landfills	Utilization of Additional Alternative Technology Capacity	Increase in Exports to Out-of-County Landfills
I Utilization of Permitted In-County Disposal Capacity Only	✓	✓				
II Status Quo Scenario	✓	✓	✓			
III Meeting CalRecycle's Statewide Disposal Target of 2.7 PPD - (Status Quo Scenario)	✓	✓	✓			
IV Proposed In-County Class III Landfill Expansions	✓	✓	✓	✓		
V Utilization of Additional Alternative Technology Capacity	✓	✓	✓		✓	
VI Increase in Exports to Out-of-County Landfills	✓	✓	✓			✓
VII All Solid Waste Management Options Considered Become Available	✓	✓	✓	✓	✓	✓

<sup>4</sup> Scenario III assumes an increase in diversion rate (78 percent by 2020) in order to meet CalRecycle's Statewide Disposal Target of 2.7 pounds per person per day.

Source: Los Angeles County Department of Public Works

**LOS ANGELES COUNTY COUNTYWIDE SITING ELEMENT  
DISPOSAL CAPACITY NEED ANALYSIS (EXCLUDING INERT WASTE LANDFILLS)**

**TABLE 4-10  
SCENARIO I - UTILIZATION OF EXISTING IN-COUNTY DISPOSAL CAPACITY ONLY**

• Existing In-County Class III Landfills and Transformation Facilities

• Diversion Rate (75% by 2020)

• No Utilization of Out-of-County Disposal Capacity

Year	Waste Generation Rate <sup>1</sup>	Diversion Rate	Total Daily Disposal Demand	Imports from Other Counties	Daily Available Capacity from Transformation Facilities <sup>2</sup>	Exports to Out-of-County Landfills <sup>3</sup>	Class III Landfill Daily Disposal Demand	IN-COUNTY CLASS III LANDFILLS										Total In-County Class III Landfill Available Capacity <sup>4</sup> (tpd-6)	Class III Landfill Daily Disposal Capacity Shortfall (Reserve)	
								1	2	3	4	5	6	7	8	9	10			11
								Antelope Valley	R Burbank	R Calabasas	Chiquita	Lancaster	Pebble Beach	R San Clemente	R Scholl	Sunshine City/County Combined	R Whittier (Savage Canyon)			Total
A (tpd-6)	B	C=A(1-B) (tpd-6)	D (tpd-6)	E (tpd-6)	F (tpd-6)	G=C+D-E-F (tpd-6)	Maximum Permitted Daily Capacity (tpd-6) Expected Average Daily Tonnage (tpd-6) Remaining Capacity at Year's End (Million Tons)										H (tpd-6)	I=G-H (tpd-6)		
2014	70,170	60%	28,068	371	1,642	11,859	14,938	1,800	240	3,500	6,000	3,000	49	10	3,400	11,000	350	23,651	--	
								1,415	100	707	3,411	307	11	1	745	7,582	286			
								14.9	2.9	6.5	1.8	12.0	0.1	0.04	3.8	64.7	5.3	112		
2015	71,576	61%	27,915	500	2,000	12,000	14,415	1,800	240	3,500	6,000	3,000	49	10	3,400	11,000	350	23,586	(9,172)	
								1,600	97	682	4,000	296	11	1.27	719	9,000	276			
								14.4	2.9	6.3	0.6	11.9	0.05	0.04	3.6	61.9	5.2	107		
2016	73,006	63%	27,012	500	2,000	0	25,512	1,800	240	3,500	6,000	3,000	49	10	3,400	11,000	350	23,482	2,030	
								1,700	91	642	4,500	500	10	1.19	678	10,000	260			
								13.9	2.9	6.1	CC	11.8	0.05	0.04	3.4	58.8	5.1	102		
2017	74,268	66%	25,251	500	2,000	0	23,751	1,800	240	3,500		3,000	49	10	3,400	11,000	350	17,366	6,385	
								1,800	85	598		600	9	1.11	631	11,000	242			
								13.4	2.8	5.9		11.6	0.04	0.04	3.2	55.3	5.0	97		
2018	75,225	69%	23,320	500	2,000	0	21,820	1,800	240	3,500		3,000	49	10	3,400	11,000	350	17,239	4,581	
								1,800	78	549		700	9	1.02	580	11,000	222			
								12.8	2.8	5.8		11.4	0.04	0.04	3.0	51.9	4.9	93		
2019	76,123	72%	21,314	500	2,000	0	19,814	1,800	240	3,500		3,000	49	10	3,400	11,000	350	17,106	2,708	
								1,800	71	499		800	8	0.92	527	11,000	202			
								12.2	2.8	5.6	CP	11.1	0.04	0.04	2.8	48.5	4.9	88		
2020	76,910	75%	19,228	500	2,000	0	17,728	1,800	240	3,500		3,000	49	10	3,400	11,000	350	16,969	759	
								1,800	63	446		900	7	0.83	471	11,000	181			
								11.7	2.8	5.5		10.8	0.04	0.04	2.7	45.0	4.8	83		
2021	77,336	75%	19,334	500	2,000	0	17,834	1,800	240	3,500		3,000	49	10	3,400	11,000	350	16,976	858	
								1,800	64	449		1,000	7	0.83	474	11,000	182			
								11.1	2.7	5.3		10.5	0.04	0.04	2.5	41.6	4.8	79		
2022	77,884	75%	19,471	500	2,000	0	17,971	1,800	240	3,500		3,000	49	10	3,400	11,000	350	16,985	986	
								1,800	64	452		1,100	7	0.84	478	11,000	183			
								10.5	2.7	5.2		10.2	0.03	0.04	2.4	38.2	4.7	74		
2023	78,722	75%	19,681	500	2,000	0	18,181	1,800	240	3,500		3,000	49	10	3,400	11,000	350	16,999	1,182	
								1,800	65	458		1,200	7	0.85	483	11,000	185			
								10.0	2.7	5.0		9.8	0.03	0.04	2.2	34.7	4.7	69		
2024	79,653	75%	19,913	500	2,000	0	18,413	1,800	240	3,500		3,000	49	10	3,400	11,000	350	17,014	1,399	
								1,800	66	463		1,300	7	0.86	489	11,000	188			
								9.4	2.7	4.9		9.4	0.03	0.04	2.1	31.3	4.6	64		
2025	79,954	75%	19,989	500	2,000	0	18,489	1,800	240	3,500		3,000	49	10	3,400	11,000	350	17,019	1,469	
								1,800	66	465		1,400	7	0.86	491	11,000	188			
								8.9	2.7	4.8		9.0	0.03	0.04	1.9	27.9	4.5	60		
2026	81,003	75%	20,251	500	2,000	0	18,751	1,800	240	3,500		3,000	49	10	3,400	11,000	350	17,036	1,714	
								1,800	67	472		1,500	7	0.87	498	11,000	191			
								8.3	2.6	4.6		8.5	0.02	0.04	1.8	24.4	4.5	55		
2027	81,978	75%	20,494	500	2,000	0	18,994	1,800	240	3,500		3,000	49	10	3,400	11,000	350	17,052	1,942	
								1,800	68	478		1,600	7	0.89	505	11,000	194			
								7.7	2.6	4.5		8.0	0.02	0.04	1.6	21.0	4.4	50		
2028	82,921	75%	20,730	500	2,000	0	19,230	1,800	240	3,500		3,000	49	10	3,400	11,000	350	17,068	2,162	
								1,800	69	484		1,700	8	0.90	511	11,000	196			
								7.2	2.6	CP		7.5	CP	0.04	1.5	17.6	4.4	41		
2029	83,826	75%	20,957	500	2,000	0	19,457	1,800	240			3,000	10	3,400	11,000	350	16,586	2,871		
								1,800	69			1,800	0.91	517	11,000	198				
								6.6	2.6			6.9	0.04	1.3	14.1	4.3	36			

**ASSUMPTIONS:**

1. Waste Generation is estimated using CalRecycle's Adjustment Methodology, utilizing population projection, employment and real taxable sales projections from UCLA's Longterm Forecast, July 2014.
2. Daily Available Capacity from Commerce Refuse-to-Energy Facility and Southeast Resource Recovery Facility is assumed to continue at their current permitted daily capacity during the planning period.
3. The scenario assumes utilization of in-County disposal capacity only.
4. Total In-County Class III Landfill Available Capacity is calculated based on Maximum Permitted Daily Capacity (in blue text) for facilities without a restricted watershed or Expected Average Daily Tonnage for facilities with a restricted watershed.

**LEGEND:**

- CC/CP -Closure due to exhausted capacity (CC) or permit expiration (CP)
- E -Expansion may become effective
- R -Restricted watershed

**LOS ANGELES COUNTY COUNTYWIDE SITING ELEMENT  
DISPOSAL CAPACITY NEED ANALYSIS (EXCLUDING INERT WASTE LANDFILLS)**

**TABLE 4-11  
SCENARIO II - STATUS QUO**

• Existing In-County Class III Landfills and Transformation Facilities

• Diversion Rate (75% by 2020)

• Exports based on Existing Export Agreements

Year	Waste Generation Rate <sup>1</sup>	Diversion Rate	Total Daily Disposal Demand	Imports from Other Counties	Daily Available Capacity from Transformation Facilities <sup>2</sup>	Exports to Out-of-County Landfills	Class III Landfill Daily Disposal Demand	IN-COUNTY CLASS III LANDFILLS										Total In-County Class III Landfill Available Capacity <sup>3</sup> (tpd-6)	Class III Landfill Daily Disposal Capacity Shortfall (Reserve)	
								1	2	3	4	5	6	7	8	9	10			11
								Antelope Valley	R Burbank	R Calabasas	Chiquita	Lancaster	Pebble Beach	R San Clemente	R Scholl	Sunshine City/County Combined	R Whittier (Savage Canyon)			Total
A	B	C=A(1-B)	D	E	F	G=C+D-E-F	Maximum Permitted Daily Capacity (tpd-6) Expected Average Daily Tonnage (tpd-6) Remaining Capacity at Year's End (Million Tons)										H	I=G-H		
(tpd-6)	(tpd-6)	(tpd-6)	(tpd-6)	(tpd-6)	(tpd-6)	(tpd-6)											(tpd-6)	(tpd-6)		
2014	70,170	60%	28,068	371	1,642	11,859	14,938	1,800	240	3,500	6,000	3,000	49	10	3,400	11,000	350	23,651	--	
								1,415	100	707	3,411	307	11	1	745	7,582	286			
								14.9	2.9	6.5	1.8	12.0	0.1	0.04	3.8	64.7	5.3	112		
2015	71,576	61%	27,915	500	2,000	12,000	14,415	1,800	240	3,500	6,000	3,000	49	10	3,400	11,000	350	23,586	(9,172)	
								1,600	97	682	4,000	296	11	1.27	719	9,000	276			
								14.4	2.9	6.3	0.6	11.9	0.05	0.04	3.6	61.9	5.2	107		
2016	73,006	63%	27,012	500	2,000	12,000	13,512	1,800	240	3,500	6,000	3,000	49	10	3,400	11,000	350	23,474	(9,962)	
								1,700	91	639	4,500	500	10	1.19	674	10,000	259			
								13.9	2.9	6.1	CC	11.8	0.05	0.04	3.4	58.8	5.1	102		
2017	74,268	66%	25,251	500	2,000	12,000	11,751	1,800	240	3,500	6,000	3,000	49	10	3,400	11,000	350	17,256	(5,505)	
								1,800	79	556	600	600	9	1.03	586	11,000	225			
								13.4	2.8	5.9	11.6	0.04	0.04	3.2	55.3	5.0	97			
2018	75,225	69%	23,320	500	2,000	12,000	9,820	1,800	240	3,500	6,000	3,000	49	10	3,400	11,000	350	17,017	(7,197)	
								1,800	66	465	700	700	7	0.86	490	11,000	188			
								12.8	2.8	5.8	11.4	0.04	0.04	3.0	51.9	5.0	93			
2019	76,123	72%	21,314	500	2,000	12,000	7,814	1,800	240	3,500	6,000	3,000	49	10	3,400	11,000	350	16,768	(8,954)	
								1,800	52	370	800	800	6	0.69	390	11,000	150			
								12.2	2.8	5.7	CP	11.1	0.04	0.04	2.9	48.5	4.9	88		
2020	76,910	75%	19,228	500	2,000	12,000	5,728	1,800	240	3,500	6,000	3,000	49	10	3,400	11,000	350	16,510	(10,782)	
								1,800	38	271	900	900	4	0.50	286	11,000	110			
								11.7	2.8	5.6	10.8	0.04	0.04	2.8	45.0	4.9	84			
2021	77,336	75%	19,334	500	2,000	12,000	5,834	1,800	240	3,500	6,000	3,000	49	10	3,400	11,000	350	16,523	(10,689)	
								1,800	39	276	1,000	1,000	4	0.51	291	11,000	112			
								11.1	2.8	5.5	10.5	0.04	0.04	2.7	41.6	4.8	79			
2022	77,884	75%	19,471	500	2,000	12,000	5,971	1,800	240	3,500	6,000	3,000	49	10	3,400	11,000	350	16,540	(10,569)	
								1,800	40	283	1,100	1,100	4	0.52	298	11,000	114			
								10.5	2.8	5.4	10.2	0.04	0.04	2.6	38.2	4.8	75			
2023	78,722	75%	19,681	500	2,000	12,000	6,181	1,800	240	3,500	6,000	3,000	49	10	3,400	11,000	350	16,566	(10,385)	
								1,800	41	292	1,200	1,200	5	0.54	308	11,000	118			
								10.0	2.7	5.3	9.8	0.03	0.04	2.6	34.7	4.8	70			
2024	79,653	75%	19,913	500	2,000	12,000	6,413	1,800	240	3,500	6,000	3,000	49	10	3,400	11,000	350	16,595	(10,181)	
								1,800	43	303	1,300	1,300	5	0.56	320	11,000	123			
								9.4	2.7	5.2	9.4	0.03	0.04	2.5	31.3	4.7	65			
2025	79,954	75%	19,989	500	2,000	12,000	6,489	1,800	240	3,500	6,000	3,000	49	10	3,400	11,000	350	16,604	(10,116)	
								1,800	44	307	1,400	1,400	5	0.57	324	11,000	124			
								8.9	2.7	5.1	9.0	0.03	0.04	2.4	27.9	4.7	61			
2026	81,003	75%	20,251	500	2,000	12,000	6,751	1,800	240	3,500	6,000	3,000	49	10	3,400	11,000	350	16,637	(9,886)	
								1,800	45	319	1,500	1,500	5	0.59	337	11,000	129			
								8.3	2.7	5.0	8.5	0.03	0.04	2.2	24.4	4.7	56			
2027	81,978	75%	20,494	500	2,000	12,000	6,994	1,800	240	3,500	6,000	3,000	49	10	3,400	11,000	350	16,667	(9,672)	
								1,800	47	331	1,600	1,600	5	0.61	349	11,000	134			
								7.7	2.7	4.9	8.0	0.03	0.04	2.1	21.0	4.6	51			
2028	82,921	75%	20,730	500	2,000	12,000	7,230	1,800	240	3,500	6,000	3,000	49	10	3,400	11,000	350	16,696	(9,466)	
								1,800	49	342	1,700	1,700	5	0.64	361	11,000	139			
								7.2	2.7	CP	7.5	CP	0.04	2.0	17.6	4.6	42			
2029	83,826	75%	20,957	500	2,000	12,000	7,457	1,800	240	3,500	6,000	3,000	49	10	3,400	11,000	350	16,366	(8,909)	
								1,800	50	342	1,800	1,800	6	0.66	372	11,000	143			
								6.6	2.7	6.9	6.9	0.04	1.9	14.1	4.5	37				

**ASSUMPTIONS:**

- Waste Generation is estimated using CalRecycle's Adjustment Methodology, utilizing population projection, employment and real taxable sales projections from UCLA's Longterm Forecast, July 2014.
- Daily Available Capacity from Commerce Refuse-to-Energy Facility and Southeast Resource Recovery Facility is assumed to continue at their current permitted daily capacity during the planning period.
- Total In-County Class III Landfill Available Capacity is calculated based on Maximum Permitted Daily Capacity (in blue text) for facilities without a restricted wasteshed or Expected Average Daily Tonnage for facilities with a restricted wasteshed.

**LEGEND:**

- CC/CP -Closure due to exhausted capacity (CC) or permit expiration (CP)
- E -Expansion may become effective
- R -Restricted wasteshed

**LOS ANGELES COUNTY COUNTYWIDE SITING ELEMENT  
DISPOSAL CAPACITY NEED ANALYSIS (EXCLUDING INERT WASTE LANDFILLS)**

**TABLE 4-12  
SCENARIO III - MEETING CALRECYCLE'S STATEWIDE DISPOSAL TARGET OF 2.7 PPD (STATUS QUO SCENARIO)**

• Existing In-County Class III Landfills and Transformation Facilities

• Diversion Rate (78% by 2020)

• Exports based on Existing Export Agreements

Year	Waste Generation Rate <sup>1</sup> A (tpd-6)	Diversion Rate B	Total Daily Disposal Demand <sup>2</sup> C=A(1-B) (tpd-6)	Per Capita Disposal Rate Based on CalRecycle's Target = 2.7 D	Imports from Other Counties E (tpd-6)	Daily Available Capacity from Transformation Facilities <sup>2</sup> F (tpd-6)	Exports to Out-of-County Landfills G (tpd-6)	Class III Landfill Daily Disposal Demand H=C+E-F-G (tpd-6)	IN-COUNTY CLASS III LANDFILLS										Total In-County Class III Landfill Available Capacity <sup>3</sup> (tpd-6) I (tpd-6)	Class III Landfill Daily Disposal Capacity Shortfall (Reserve) J=H-I (tpd-6)
									Antelope Valley	Burbank	Calabasas	Chiquita	Lancaster	Pebbly Beach	San Clemente	Scholl	Sunshine City/County (Savage Canyon) Combined	Whittier		
2014	70,170	60%	28,068	--	371	1,642	11,859	14,938	1,800	240	3,500	6,000	3,000	49	10	3,400	11,000	350	23,651	(8,713)
									1,415	100	707	3,411	307	11	1	745	7,582	286		
									14.9	2.9	6.5	1.8	12.0	0.1	0.04	3.8	64.7	5.3	112	
2015	71,576	61%	27,915	--	500	2,000	12,000	14,415	1,800	240	3,500	6,000	3,000	49	10	3,400	11,000	350	23,586	(9,172)
									1,600	97	682	4,000	296	11	1.27	719	9,000	276		
									14.4	2.9	6.3	0.6	11.9	0.05	0.04	3.6	61.9	5.2	107	
2016	73,006	63%	27,012	--	500	2,000	12,000	13,512	1,800	240	3,500	6,000	3,000	49	10	3,400	11,000	350	23,474	(9,962)
									1,700	91	639	4,500	500	10	1.19	674	10,000	259		
									13.9	2.9	6.1	CC	11.8	0.05	0.04	3.4	58.8	5.1	102	
2017	74,268	66%	25,251	--	500	2,000	12,000	11,751	1,800	240	3,500	3,000	49	10	3,400	11,000	350	17,256	(5,505)	
									1,800	79	556	600	9	1.03	586	11,000	225			
									13.4	2.8	5.9	11.6	0.04	0.04	3.2	55.3	5.0	97		
2018	75,225	69%	23,320	--	500	2,000	12,000	9,820	1,800	240	3,500	3,000	49	10	3,400	11,000	350	17,017	(7,197)	
									1,800	66	465	700	7	0.86	490	11,000	188			
									12.8	2.8	5.8	11.4	0.04	0.04	3.0	51.9	5.0	93		
2019	76,123	72%	21,314	--	500	2,000	12,000	7,814	1,800	240	3,500	3,000	49	10	3,400	11,000	350	16,768	(8,954)	
									1,800	52	370	800	6	0.69	390	11,000	150			
									12.2	2.8	5.7	CP	11.1	0.04	0.04	2.9	48.5	4.9	88	
2020	76,910	78.422%	16,596	2.70	500	2,000	12,000	3,096	1,800	240	3,500	3,000	49	10	3,400	11,000	350	16,184	(13,088)	
									1,800	21	146	900	2	0.27	154	11,000	59			
									11.7	2.8	5.6	10.8	0.04	0.04	2.9	45.0	4.9	84		
2021	77,336	78.412%	16,695	2.70	500	2,000	12,000	3,195	1,800	240	3,500	3,000	49	10	3,400	11,000	350	16,196	(13,001)	
									1,800	21	151	1,000	2	0.28	159	11,000	61			
									11.1	2.8	5.6	10.5	0.04	0.04	2.8	41.6	4.9	79		
2022	77,884	78.426%	16,802	2.70	500	2,000	12,000	3,302	1,800	240	3,500	3,000	49	10	3,400	11,000	350	16,209	(12,907)	
									1,800	22	156	1,100	2	0.29	165	11,000	63			
									10.5	2.8	5.5	10.2	0.04	0.04	2.8	38.2	4.9	75		
2023	78,722	78.520%	16,910	2.70	500	2,000	12,000	3,410	1,800	240	3,500	3,000	49	10	3,400	11,000	350	16,223	(12,813)	
									1,800	23	161	1,200	3	0.30	170	11,000	65			
									10.0	2.8	5.5	9.8	0.04	0.04	2.7	34.7	4.8	70		
2024	79,653	78.638%	17,016	2.70	500	2,000	12,000	3,516	1,800	240	3,500	3,000	49	10	3,400	11,000	350	16,236	(12,720)	
									1,800	24	166	1,300	3	0.31	175	11,000	67			
									9.4	2.8	5.4	9.4	0.04	0.04	2.7	31.3	4.8	66		
2025	79,954	78.584%	17,123	2.70	500	2,000	12,000	3,623	1,800	240	3,500	3,000	49	10	3,400	11,000	350	16,249	(12,626)	
									1,800	24	171	1,400	3	0.32	181	11,000	69			
									8.9	2.8	5.4	9.0	0.04	0.04	2.6	27.9	4.8	61		
2026	81,003	78.727%	17,232	2.70	500	2,000	12,000	3,732	1,800	240	3,500	3,000	49	10	3,400	11,000	350	16,262	(12,530)	
									1,800	25	177	1,500	3	0.33	186	11,000	71			
									8.3	2.7	5.3	8.5	0.03	0.04	2.6	24.4	4.8	57		
2027	81,978	78.849%	17,339	2.70	500	2,000	12,000	3,839	1,800	240	3,500	3,000	49	10	3,400	11,000	350	16,276	(12,436)	
									1,800	26	182	1,600	3	0.34	192	11,000	74			
									7.7	2.7	5.3	8.0	0.03	0.04	2.5	21.0	4.7	52		
2028	82,921	78.956%	17,450	2.70	500	2,000	12,000	3,950	1,800	240	3,500	3,000	49	10	3,400	11,000	350	16,289	(12,340)	
									1,800	27	187	1,700	3	0.35	197	11,000	76			
									7.2	2.7	CP	7.5	CP	0.04	2.4	17.6	4.7	42		
2029	83,826	79.059%	17,554	2.70	500	2,000	12,000	4,054	1,800	240	3,500	3,000	49	10	3,400	11,000	350	16,108	(12,053)	
									1,800	27	187	1,800	3	0.36	202	11,000	78			
									6.6	2.7	6.9	6.9	0.04	0.04	2.4	14.1	4.7	37		

**ASSUMPTIONS/NOTES:**

- Waste Generation is estimated using CalRecycle's Adjustment Methodology, utilizing population projection, employment and real taxable sales projections from UCLA's Longterm Forecast, July 2014.
- The Total Daily Disposal Demand for the years 2014 - 2019 (Column C) is determined based on the daily solid waste generation rate and the assumed diversion rates for the scenario. However, for the purposes of this scenario, the total daily disposal demand for the years 2020 - 2029 is adjusted using CalRecycle's statewide disposal target of 2.7 pounds per person per day (PPD). As a result, the diversion rate is assumed to increase from 75% (as shown in other scenarios) to 78% by 2020.
- Daily Available Capacity from Commerce Refuse-to-Energy Facility and Southeast Resource Recovery Facility is assumed to continue at their current permitted daily capacity during the planning period.
- Total In-County Class III Landfill Available Capacity is calculated based on Maximum Permitted Daily Capacity (in blue text) for facilities without a restricted watershed or Expected Average Daily Tonnage for facilities with a restricted watershed.

**LEGEND:**

- CC/CP -Closure due to exhausted capacity (CC) or permit expiration (CP)
- E -Expansion may become effective
- R -Restricted watershed

**LOS ANGELES COUNTY COUNTYWIDE SITING ELEMENT  
DISPOSAL CAPACITY NEED ANALYSIS (EXCLUDING INERT WASTE LANDFILLS)**

**TABLE 4-13  
SCENARIO IV - PROPOSED IN-COUNTY CLASS III LANDFILL EXPANSIONS**

• Existing In-County Class III Landfills & Transformation Facilities

• Exports based on Existing Export Agreements

• Diversion Rate (75% by 2020)

• Proposed Expansions of In-County Class III Landfills

Year	Waste Generation Rate <sup>1</sup>	Diversion Rate	Total Daily Disposal Demand	Imports from Other Counties	Daily Available Capacity from Transformation Facilities <sup>2</sup>	Exports to Out-of-County Landfills	Class III Landfill Daily Disposal Demand	IN-COUNTY CLASS III LANDFILLS										Total In-County Class III Landfill Available Capacity <sup>3</sup> (tpd-6)	Class III Landfill Daily Disposal Capacity Shortfall (Reserve)	
								1	2	3	4	5	6	7	8	9	10			11
								Antelope Valley	Burbank	Calabasas	Chiquita	Lancaster	Pebble Beach	San Clemente	Scholl	Sunshine City/County Combined	Whittier (Savage Canyon)			
								Maximum Permitted Daily Capacity (tpd-6)												
								Expected Average Daily Tonnage (tpd-6)												
								Remaining Capacity at Year's End (Million Tons)												
	<b>A</b>	<b>B</b>	<b>C=A(1-B)</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G=C+D-E-F</b>													
	(tpd-6)		(tpd-6)	(tpd-6)	(tpd-6)	(tpd-6)	(tpd-6)											<b>H</b>	<b>I=G-H</b>	
																		(tpd-6)	(tpd-6)	
2014	70,170	60%	28,068	371	1,642	11,859	14,938	1,800	240	3,500	6,000	3,000	49	10	3,400	11,000	350	23,651	(8,713)	
								1,415	100	707	3,411	307	11	1.31	745	7,250	286			
								14.9	2.9	6.5	1.8	12.0	0.05	0.04	3.8	64.7	5.3	112		
2015	71,576	61%	27,915	500	2,000	12,000	14,415	1,800	240	3,500	6,000	3,000	49	10	3,400	11,000	350	23,586	(9,172)	
								1,600	97	682	4,000	296	11	1.27	719	9,000	276			
								14.4	2.9	6.3	0.6	11.9	0.05	0.04	3.6	61.9	5.2	107		
2016	73,006	63%	27,012	500	2,000	12,000	13,512	1,800	240	3,500	10,000	3,000	49	10	3,400	11,000	350	27,474	(13,962)	
								1,700	91	639	4,500	500	10	1.19	674	10,000	259			
								13.9	2.9	6.1	47.30	E	11.8	0.05	0.04	11.4	E	58.8	157	
2017	74,268	66%	25,251	500	2,000	12,000	11,751	1,800	240	3,500	10,000	3,000	49	10	3,400	11,000	350	27,256	(15,505)	
								1,800	79	556	5,000	600	9	1.03	586	11,000	225			
								13.4	2.8	5.9	45.7	11.6	0.04	0.04	11.2	55.3	5.0	151		
2018	75,225	69%	23,320	500	2,000	12,000	9,820	1,800	240	3,500	10,000	3,000	49	10	3,400	11,000	350	27,017	(17,197)	
								1,800	66	465	5,500	700	7	0.86	490	11,000	188			
								12.8	2.8	5.8	44.0	11.4	0.04	0.04	11.0	51.9	5.0	145		
2019	76,123	72%	21,314	500	2,000	12,000	7,814	1,800	240	3,500	10,000	3,000	49	10	3,400	11,000	350	26,768	(18,954)	
								1,800	52	370	6,000	800	6	0.69	390	11,000	150			
								12.2	2.8	5.7	42.1	11.1	0.04	0.04	10.9	48.5	4.9	138		
2020	76,910	75%	19,228	500	2,000	12,000	5,728	1,800	240	3,500	10,000	3,000	49	10	3,400	11,000	350	26,510	(20,782)	
								1,800	38	271	6,500	900	4	0.50	286	11,000	110			
								11.7	2.8	5.6	40.1	10.8	0.04	0.04	10.8	45.0	4.9	132		
2021	77,336	75%	19,334	500	2,000	12,000	5,834	1,800	240	3,500	10,000	3,000	49	10	3,400	11,000	350	26,523	(20,689)	
								1,800	39	276	7,000	1,000	4	0.51	291	11,000	112			
								11.1	2.8	5.5	37.9	10.5	0.04	0.04	10.7	41.6	4.8	125		
2022	77,884	75%	19,471	500	2,000	12,000	5,971	1,800	240	3,500	10,000	3,000	49	10	3,400	11,000	350	26,540	(20,569)	
								1,800	40	283	7,500	1,100	4	0.52	298	11,000	114			
								10.5	2.8	5.4	35.6	10.2	0.04	0.04	10.6	38.2	4.8	118		
2023	78,722	75%	19,681	500	2,000	12,000	6,181	1,800	240	3,500	10,000	3,000	49	10	3,400	11,000	350	26,566	(20,385)	
								1,800	41	292	8,000	1,200	5	0.54	308	11,000	118			
								10.0	2.7	5.3	33.1	9.8	0.03	0.04	10.6	34.7	4.8	111		
2024	79,653	75%	19,913	500	2,000	12,000	6,413	1,800	240	3,500	10,000	3,000	49	10	3,400	11,000	350	26,595	(20,181)	
								1,800	43	303	8,500	1,300	5	0.56	320	11,000	123			
								9.4	2.7	5.2	30.4	9.4	0.03	0.04	10.5	31.3	4.7	104		
2025	79,954	75%	19,989	500	2,000	12,000	6,489	1,800	240	3,500	10,000	3,000	49	10	3,400	11,000	350	26,604	(20,116)	
								1,800	44	307	9,000	1,400	5	0.57	324	11,000	124			
								8.9	2.7	5.1	27.6	9.0	0.03	0.04	10.4	27.9	4.7	96		
2026	81,003	75%	20,251	500	2,000	12,000	6,751	1,800	240	3,500	10,000	3,000	49	10	3,400	11,000	350	26,637	(19,886)	
								1,800	45	319	9,500	1,500	5	0.59	337	11,000	129			
								8.3	2.7	5.0	24.7	8.5	0.03	0.04	10.2	24.4	4.7	89		
2027	81,978	75%	20,494	500	2,000	12,000	6,994	1,800	240	3,500	10,000	3,000	49	10	3,400	11,000	350	26,667	(19,672)	
								1,800	47	331	10,000	1,600	5	0.61	349	11,000	134			
								7.7	2.7	4.9	21.6	8.0	0.03	0.04	10.1	21.0	4.6	81		
2028	82,921	75%	20,730	500	2,000	12,000	7,230	1,800	240	3,500	10,000	3,000	49	10	3,400	11,000	350	26,696	(19,466)	
								1,800	49	342	10,000	1,700	5	0.64	361	11,000	139			
								7.2	2.7	CP	18.4	7.5	CP	0.04	10.03	17.6	4.6	68		
2029	83,826	75%	20,957	500	2,000	12,000	7,457	1,800	240		10,000	3,000	10	3,400	11,000	350	26,366	(18,909)		
								1,800	50		10,000	1,800	0.66	372	11,000	143				
								6.6	2.7		15.3	6.9	0.04	9.91	14.1	4.5	60			

**ASSUMPTIONS:**

1. Waste Generation is estimated using CalRecycle's Adjustment Methodology, utilizing population projection, employment and real taxable sales projections from UCLA's Longterm Forecast, July 2014.
2. Daily Available Capacity from Commerce Refuse-to-Energy Facility and Southeast Resource Recovery Facility is assumed to continue at their current permitted daily capacity during the planning period.
3. Total In-County Class III Landfill Available Capacity is calculated based on Maximum Permitted Daily Capacity (in blue text) for facilities without a restricted watershed or Expected Average Daily Tonnage for facilities with a restricted watershed.

**LEGEND:**

- CC/CP -Closure due to exhausted capacity (CC) or permit expiration (CP)
- E -Expansion may become effective
- R -Restricted watershed

**LOS ANGELES COUNTY COUNTYWIDE SITING ELEMENT  
DISPOSAL CAPACITY NEED ANALYSIS (EXCLUDING INERT WASTE LANDFILLS)**

**TABLE 4-14  
SCENARIO V - UTILIZATION OF ADDITIONAL ALTERNATIVE TECHNOLOGY CAPACITY**

- Existing In-County Class III Landfills and Transformation Facilities
- Diversion Rate (75% by 2020)
- Exports based on Existing Export Agreements
- Utilization of Additional Alternative Technology Capacity

Year	Waste Generation Rate <sup>1</sup>	Diversion Rate	Total Daily Disposal Demand	Imports from Other Counties	Potential Available Capacity from Alternative Technology Facilities <sup>2</sup>	Exports to Out-of-County Landfills	Class III Landfill Daily Disposal Demand	IN-COUNTY CLASS III LANDFILLS											Total In-County Class III Landfill Available Capacity <sup>3</sup> (tpd-6)	Class III Landfill Daily Disposal Capacity Shortfall (Reserve)
								Antelope Valley	R Burbank	R Calabasas	Chiquita	Lancaster	Pebble Beach	R San Clemente	R Scholl	Sunshine City/County (Savage Canyon) Combined	R Whittier Canyon	In-County Class III Landfill Remaining Capacity (million tons)		
A	B	C=A(1-B)	D	E	F	G=C+D-E-F	Maximum Permitted Daily Capacity (tpd-6)											H	I=G-H	
(tpd-6)	(tpd-6)	(tpd-6)	(tpd-6)	(tpd-6)	(tpd-6)	(tpd-6)	Expected Average Daily Tonnage (tpd-6)											(tpd-6)	(tpd-6)	
								Remaining Capacity at Year's End (Million Tons)												
2014	70,170	60%	28,068	371	1,642	11,859	14,938	1,800	240	3,500	6,000	3,000	49	10	3,400	11,000	350	23,651	(8,713)	
								1,415	100	707	3,411	307	11	1	745	7,582	286			
								14.9	2.9	6.5	1.8	12.0	0.1	0.04	3.8	64.7	5.3	112		
2015	71,576	61%	27,915	500	2,000	12,000	14,415	1,800	240	3,500	6,000	3,000	49	10	3,400	11,000	350	23,586	(9,172)	
								1,600	97	682	4,000	296	11	1.27	719	9,000	276			
								14.4	2.9	6.3	0.6	11.9	0.05	0.04	3.6	61.9	5.2	107		
2016	73,006	63%	27,012	500	2,000	12,000	13,512	1,800	240	3,500	6,000	3,000	49	10	3,400	11,000	350	23,474	(9,962)	
								1,700	91	639	4,500	500	10	1.19	674	10,000	259			
								13.9	2.9	6.1	CC	11.8	0.05	0.04	3.4	58.8	5.1	102		
2017	74,268	66%	25,251	500	2,000	12,000	11,751	1,800	240	3,500	3,000	49	10	3,400	11,000	350	17,256	(5,505)		
								1,800	79	556	600	9	1.03	586	11,000	225				
								13.4	2.8	5.9	11.6	0.04	0.04	3.2	55.3	5.0	97			
2018	75,225	69%	23,320	500	2,000	12,000	9,820	1,800	240	3,500	3,000	49	10	3,400	11,000	350	17,017	(7,197)		
								1,800	66	465	700	7	0.86	490	11,000	188				
								12.8	2.8	5.8	11.4	0.04	0.04	3.0	51.9	5.0	93			
2019	76,123	72%	21,314	500	2,000	12,000	7,814	1,800	240	3,500	3,000	49	10	3,400	11,000	350	16,768	(8,954)		
								1,800	52	370	800	6	0.69	390	11,000	150				
								12.2	2.8	5.7	CP	11.1	0.04	0.04	2.9	48.5	4.9	88		
2020	76,910	75%	19,228	500	2,000	12,000	5,728	1,800	240	3,500	3,000	49	10	3,400	11,000	350	16,510	(10,782)		
								1,800	38	271	900	4	0.50	286	11,000	110				
								11.7	2.8	5.6	10.8	0.04	0.04	2.8	45.0	4.9	84			
2021	77,336	75%	19,334	500	2,000	12,000	5,834	1,800	240	3,500	3,000	49	10	3,400	11,000	350	16,523	(10,689)		
								1,800	39	276	1,000	4	0.51	291	11,000	112				
								11.1	2.8	5.5	10.5	0.04	0.04	2.7	41.6	4.8	79			
2022	77,884	75%	19,471	500	2,500	12,000	5,471	1,800	240	3,500	3,000	49	10	3,400	11,000	350	16,478	(11,007)		
								1,800	37	259	1,100	4	0.48	273	11,000	105				
								10.5	2.8	5.4	10.2	0.04	0.04	2.7	38.2	4.8	75			
2023	78,722	75%	19,681	500	2,500	12,000	5,681	1,800	240	3,500	3,000	49	10	3,400	11,000	350	16,504	(10,823)		
								1,800	38	269	1,200	4	0.50	283	11,000	109				
								10.0	2.7	5.3	9.8	0.04	0.04	2.6	34.7	4.8	70			
2024	79,653	75%	19,913	500	2,500	12,000	5,913	1,800	240	3,500	3,000	49	10	3,400	11,000	350	16,533	(10,619)		
								1,800	40	280	1,300	4	0.52	295	11,000	113				
								9.4	2.7	5.3	9.4	0.03	0.04	2.5	31.3	4.7	65			
2025	79,954	75%	19,989	500	2,500	12,000	5,989	1,800	240	3,500	3,000	49	10	3,400	11,000	350	16,542	(10,554)		
								1,800	40	283	1,400	4	0.53	299	11,000	115				
								8.9	2.7	5.2	9.0	0.03	0.04	2.4	27.9	4.7	61			
2026	81,003	75%	20,251	500	2,500	12,000	6,251	1,800	240	3,500	3,000	49	10	3,400	11,000	350	16,575	(10,324)		
								1,800	42	296	1,500	5	0.55	312	11,000	120				
								8.3	2.7	5.1	8.5	0.03	0.04	2.3	24.4	4.7	56			
2027	81,978	75%	20,494	500	3,000	12,000	5,994	1,800	240	3,500	3,000	49	10	3,400	11,000	350	16,543	(10,548)		
								1,800	40	284	1,600	4	0.53	299	11,000	115				
								7.7	2.7	5.0	8.0	0.03	0.04	2.2	21.0	4.6	51			
2028	82,921	75%	20,730	500	3,000	12,000	6,230	1,800	240	3,500	3,000	49	10	3,400	11,000	350	16,572	(10,342)		
								1,800	42	295	1,700	5	0.55	311	11,000	119				
								7.2	2.7	CP	7.5	CP	0.04	2.1	17.6	4.6	42			
2029	83,826	75%	20,957	500	3,000	12,000	6,457	1,800	240	3,500	3,000	49	10	3,400	11,000	350	16,290	(9,833)		
								1,800	43	296	1,800	5	0.57	322	11,000	124				
								6.6	2.7		6.9		0.04	2.0	14.1	4.6	37			

**ASSUMPTIONS:**

- Waste Generation is estimated using CalRecycle's Adjustment Methodology, utilizing population projection, employment and real taxable sales projections from UCLA's Longterm Forecast, July 2014.
- Potential Available Capacity from Alternative Technology Facilities assume that Commerce Refuse-to-Energy Facility and Southeast Resource Recovery Facility will continue to operate at their current permitted daily capacity during the planning period. It also assumes that additional capacity will be available from potential EMSW facilities or other alternative technologies. Potential capacity from anaerobic digestion facility is considered part of diversion since anaerobic digestion process is within the statutory definition of composting which is considered as recycling.
- Total In-County Class III Landfill Available Capacity is calculated based on Maximum Permitted Daily Capacity (in blue text) for facilities without a restricted watershed or Expected Average Daily Tonnage for facilities with a restricted watershed.

**LEGEND:**

- CC/CP - Closure due to exhausted capacity (CC) or permit expiration (CP)
- E - Expansion may become effective
- R - Restricted watershed

**LOS ANGELES COUNTY COUNTYWIDE SITING ELEMENT  
DISPOSAL CAPACITY NEED ANALYSIS (EXCLUDING INERT WASTE LANDFILLS)**

**TABLE 4-15  
SCENARIO VI - INCREASE IN EXPORTS TO OUT-OF-COUNTY LANDFILLS (INCLUDING POTENTIAL WASTE-BY-RAIL CAPACITY)**

• Existing In-County Class III Landfills and Transformation Facilities

• Diversion Rate (75% by 2020)

• Exports based on Existing Export Agreements

• Increase in Exports to Out-of-County Landfills (Including Potential Waste-by-Rail Capacity)

Year	Waste Generation Rate <sup>1</sup>	Diversion Rate	Total Daily Disposal Demand	Imports from Other Counties	Daily Available Capacity from Transformation Facilities <sup>2</sup>	Exports to Out-of-County Landfills	Class III Landfill Daily Disposal Demand	IN-COUNTY CLASS III LANDFILLS											Total In-County Class III Landfill Available Capacity <sup>3</sup> (tpd-6)	Potential Waste-by-Rail Capacity <sup>4</sup>	Class III Landfill Daily Disposal Capacity Shortfall (Reserve)
								1	2	3	4	5	6	7	8	9	10	11			
								Antelope Valley	Burbank	Calabasas	Chiquita	Lancaster	Pebble Beach	San Clemente	Scholl	Sunshine City/County (Savage Canyon) Combined	Whittier	Total			
	<b>A</b>	<b>B</b>	<b>C=A(1-B)</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G=C+D-E-F</b>	Maximum Permitted Daily Capacity (tpd-6) Expected Average Daily Tonnage (tpd-6) Remaining Capacity at Year's End (Million Tons)											<b>H</b>	<b>I</b>	<b>J=G-H-I</b>
	(tpd-6)		(tpd-6)	(tpd-6)	(tpd-6)	(tpd-6)	(tpd-6)												(tpd-6)	(tpd-6)	(tpd-6)
2014	70,170	60%	28,068	371	1,642	11,859	14,938	1,800	240	3,500	6,000	3,000	49	10	3,400	11,000	350	23,651	—	(8,713)	
								1,415	100	707	3,411	307	11	1	745	7,582	286				
								14.9	2.9	6.5	1.8	12.0	0.1	0.04	3.8	64.7	5.3	112			
2015	71,576	61%	27,915	500	2,000	12,000	14,415	1,800	240	3,500	6,000	3,000	49	10	3,400	11,000	350	23,586	—	(9,172)	
								1,600	97	682	4,000	296	11	1.27	719	9,000	276				
								14.4	2.9	6.3	0.6	11.9	0.05	0.04	3.6	61.9	5.2	107			
2016	73,006	63%	27,012	500	2,000	12,000	13,512	1,800	240	3,500	6,000	3,000	49	10	3,400	11,000	350	23,474	—	(9,962)	
								1,700	91	639	4,500	500	10	1.19	674	10,000	259				
								13.9	2.9	6.1	CC	11.8	0.05	0.04	3.4	58.8	5.1	102			
2017	74,268	66%	25,251	500	2,000	12,000	11,751	1,800	240	3,500	3,000	49	10	3,400	11,000	350	17,256	—	(5,505)		
								1,800	79	556		600	9	1.03	586	11,000	225				
								13.4	2.8	5.9		11.6	0.04	0.04	3.2	55.3	5.0	97			
2018	75,225	69%	23,320	500	2,000	12,000	9,820	1,800	240	3,500	3,000	49	10	3,400	11,000	350	17,017	4,000	(11,197)		
								1,800	66	465		700	7	0.86	490	11,000	188				
								12.8	2.8	5.8		11.4	0.04	0.04	3.0	51.9	5.0	93			
2019	76,123	72%	21,314	500	2,000	12,000	7,814	1,800	240	3,500	3,000	49	10	3,400	11,000	350	16,768	4,000	(12,954)		
								1,800	52	370		800	6	0.69	390	11,000	150				
								12.2	2.8	5.7	CP	11.1	0.04	0.04	2.9	48.5	4.9	88			
2020	76,910	75%	19,228	500	2,000	12,000	5,728	1,800	240	3,500	3,000	49	10	3,400	11,000	350	16,510	4,000	(14,782)		
								1,800	38	271		900	4	0.50	286	11,000	110				
								11.7	2.8	5.6		10.8	0.04	0.04	2.8	45.0	4.9	84			
2021	77,336	75%	19,334	500	2,000	12,000	5,834	1,800	240	3,500	3,000	49	10	3,400	11,000	350	16,523	4,000	(14,689)		
								1,800	39	276		1,000	4	0.51	291	11,000	112				
								11.1	2.8	5.5		10.5	0.04	0.04	2.7	41.6	4.8	79			
2022	77,884	75%	19,471	500	2,000	12,000	5,971	1,800	240	3,500	3,000	49	10	3,400	11,000	350	16,540	4,000	(14,569)		
								1,800	40	283		1,100	4	0.52	298	11,000	114				
								10.5	2.8	5.4		10.2	0.04	0.04	2.6	38.2	4.8	75			
2023	78,722	75%	19,681	500	2,000	12,000	6,181	1,800	240	3,500	3,000	49	10	3,400	11,000	350	16,566	4,000	(14,385)		
								1,800	41	292		1,200	5	0.54	308	11,000	118				
								10.0	2.7	5.3		9.8	0.03	0.04	2.6	34.7	4.8	70			
2024	79,653	75%	19,913	500	2,000	12,000	6,413	1,800	240	3,500	3,000	49	10	3,400	11,000	350	16,595	4,000	(14,181)		
								1,800	43	303		1,300	5	0.56	320	11,000	123				
								9.4	2.7	5.2		9.4	0.03	0.04	2.5	31.3	4.7	65			
2025	79,954	75%	19,989	500	2,000	12,000	6,489	1,800	240	3,500	3,000	49	10	3,400	11,000	350	16,604	4,000	(14,116)		
								1,800	44	307		1,400	5	0.57	324	11,000	124				
								8.9	2.7	5.1		9.0	0.03	0.04	2.4	27.9	4.7	61			
2026	81,003	75%	20,251	500	2,000	12,000	6,751	1,800	240	3,500	3,000	49	10	3,400	11,000	350	16,637	4,000	(13,886)		
								1,800	45	319		1,500	5	0.59	337	11,000	129				
								8.3	2.7	5.0		8.5	0.03	0.04	2.2	24.4	4.7	56			
2027	81,978	75%	20,494	500	2,000	12,000	6,994	1,800	240	3,500	3,000	49	10	3,400	11,000	350	16,667	4,000	(13,672)		
								1,800	47	331		1,600	5	0.61	349	11,000	134				
								7.7	2.7	4.9		8.0	0.03	0.04	2.1	21.0	4.6	51			
2028	82,921	75%	20,730	500	2,000	12,000	7,230	1,800	240	3,500	3,000	49	10	3,400	11,000	350	16,696	4,000	(13,466)		
								1,800	49	342		1,700	5	0.64	361	11,000	139				
								7.2	2.7	CP		7.5	CP	0.04	2.0	17.6	4.6	42			
2029	83,826	75%	20,957	500	2,000	12,000	7,457	1,800	240	3,500	3,000	49	10	3,400	11,000	350	16,366	4,000	(12,909)		
								1,800	50			1,800	0.66	372	11,000	143					
								6.6	2.7			6.9	0.04	1.9	14.1	4.5	37				

**ASSUMPTIONS:**

- Waste Generation is estimated using CalRecycle's Adjustment Methodology, utilizing population projection, employment and real taxable sales projections from UCLA's Longterm Forecast, July 2014.
- Daily Available Capacity from Commerce Refuse-to-Energy Facility and Southeast Resource Recovery Facility is assumed to continue at their current permitted daily capacity during the planning period.
- Total In-County Class III Landfill Available Capacity is calculated based on Maximum Permitted Daily Capacity (in blue text) for facilities without a restricted watershed or Expected Average Daily Tonnage for facilities with a restricted watershed.
- The operation of the Mesquite Regional Landfill (MRL) and waste by rail system (WBR) is entirely dependent on the availability of in-county and near-county disposal capacity, diversion from landfills and the cost of disposal. When the MRL/WBR disposal capacity is needed and when the tipping fee make MRL/WBR economically viable, then the system may begin operation. However, for the purpose of the analysis, the waste-by-rail system is assumed to begin its operation in 2018.

**LEGEND:**

- CC/CP -Closure due to exhausted capacity (CC) or permit expiration (CP)
- E -Expansion may become effective
- R -Restricted watershed

**LOS ANGELES COUNTY COUNTYWIDE SITING ELEMENT  
DISPOSAL CAPACITY NEED ANALYSIS (EXCLUDING INERT WASTE LANDFILLS)**

**TABLE 4-16  
SCENARIO VII - ALL SOLID WASTE MANAGEMENT OPTIONS CONSIDERED BECOME AVAILABLE**

- Existing In-County Class III Landfills & Transformation Facilities
- Exports based on Existing Export Agreements
- Diversion Rate (75% by 2020)
- Utilization of Additional Alternative Technology Capacity
- Proposed Expansions of In-County Class III Landfills
- Increase in Exports to Out-of-County Landfills (Including Potential Waste-by-Rail Capacity)

Year	Waste Generation Rate <sup>1</sup>	Diversion Rate	Total Daily Disposal Demand	Imports from Other Counties	Potential Available Capacity from Alternative Technology Facilities <sup>2</sup>	Exports to Out-of-County Landfills	Class III Landfill Daily Disposal Demand	IN-COUNTY CLASS III LANDFILLS											Total In-County Class III Landfill Available Capacity <sup>4</sup> (tpd-6)	Potential Waste-by-Rail Capacity <sup>4</sup>	Class III Landfill Daily Disposal Capacity Shortfall (Reserve)
								1	2	3	4	5	6	7	8	9	10	11			
								Antelope Valley	R Burbank	R Calabasas	Chiquita	Lancaster	Pebble Beach	R San Clemente	R Scholl	Sunshine City/County Combined	R Whittier (Savage Canyon)				
								Maximum Permitted Daily Capacity (tpd-6)													
								Expected Average Daily Tonnage (tpd-6)													
								Remaining Capacity at Year's End (Million Tons)													
A	B	C=A(1-B)	D	E	G	H=C+D-E-F-G												I	J	K=H-I-J	
(tpd-6)		(tpd-6)	(tpd-6)	(tpd-6)	(tpd-6)	(tpd-6)												(tpd-6)	(tpd-6)	(tpd-6)	
2014	70,170	60%	28,068	371	1,642	11,859	14,938	1,800	240	3,500	6,000	3,000	49	10	3,400	11,000	350	23,651	-	(8,713)	
								1,415	100	707	3,411	307	11	1.31	745	7,250	286				
								14.9	2.9	6.5	1.8	12.0	0.05	0.04	3.8	64.7	5.3	112			
2015	71,576	61%	27,915	500	2,000	12,000	14,415	1,800	240	3,500	6,000	3,000	49	10	3,400	11,000	350	23,586	-	(9,172)	
								1,600	97	682	4,000	296	11	1.27	719	9,000	276				
								14.4	2.9	6.3	0.6	11.9	0.05	0.04	3.6	61.9	5.2	107			
2016	73,006	63%	27,012	500	2,000	12,000	13,512	1,800	240	3,500	10,000	3,000	49	10	3,400	11,000	350	27,474	-	(13,962)	
								1,700	91	639	4,500	500	10	1.19	674	10,000	259				
								13.9	2.9	6.1	47.3	E	11.8	0.05	0.04	11.38	E	58.8	5.1	157	
2017	74,268	66%	25,251	500	2,000	12,000	11,751	1,800	240	3,500	10,000	3,000	49	10	3,400	11,000	350	27,256	-	(15,505)	
								1,800	79	556	5,000	600	9	1.03	586	11,000	225				
								13.4	2.8	5.9	45.7	11.6	0.04	0.04	11.2	55.3	5.0	151			
2018	75,225	69%	23,320	500	2,000	12,000	9,820	1,800	240	3,500	10,000	3,000	49	10	3,400	11,000	350	27,017	4,000	(21,197)	
								1,800	66	465	5,500	700	7	0.86	490	11,000	188				
								12.8	2.8	5.8	44.0	11.4	0.04	0.04	11.0	51.9	5.0	145			
2019	76,123	72%	21,314	500	2,000	12,000	7,814	1,800	240	3,500	10,000	3,000	49	10	3,400	11,000	350	26,768	4,000	(22,954)	
								1,800	52	370	6,000	800	6	0.69	390	11,000	150				
								12.2	2.8	5.7	42.1	11.1	0.04	0.04	10.9	48.5	4.9	138			
2020	76,910	75%	19,228	500	2,000	12,000	5,728	1,800	240	3,500	10,000	3,000	49	10	3,400	11,000	350	26,510	4,000	(24,782)	
								1,800	38	271	6,500	900	4	0.50	286	11,000	110				
								11.7	2.8	5.6	40.1	10.8	0.04	0.04	10.8	45.0	4.9	132			
2021	77,336	75%	19,334	500	2,000	12,000	5,834	1,800	240	3,500	10,000	3,000	49	10	3,400	11,000	350	26,523	4,000	(24,689)	
								1,800	39	276	7,000	1,000	4	0.51	291	11,000	112				
								11.1	2.8	5.5	37.9	10.5	0.04	0.04	10.7	41.6	4.8	125			
2022	77,884	75%	19,471	500	2,500	12,000	5,471	1,800	240	3,500	10,000	3,000	49	10	3,400	11,000	350	26,478	4,000	(25,007)	
								1,800	37	259	7,500	1,100	4	0.48	273	11,000	105				
								10.5	2.8	5.4	35.6	10.2	0.04	0.04	10.7	38.2	4.8	118			
2023	78,722	75%	19,681	500	2,500	12,000	5,681	1,800	240	3,500	10,000	3,000	49	10	3,400	11,000	350	26,504	4,000	(24,823)	
								1,800	38	269	8,000	1,200	4	0.50	283	11,000	109				
								10.0	2.7	5.3	33.1	9.8	0.04	0.04	10.6	34.7	4.8	111			
2024	79,653	75%	19,913	500	2,500	12,000	5,913	1,800	240	3,500	10,000	3,000	49	10	3,400	11,000	350	26,533	4,000	(24,619)	
								1,800	40	280	8,500	1,300	4	0.52	295	11,000	113				
								9.4	2.7	5.3	30.4	9.4	0.03	0.04	10.5	31.3	4.7	104			
2025	79,954	75%	19,989	500	2,500	12,000	5,989	1,800	240	3,500	10,000	3,000	49	10	3,400	11,000	350	26,542	4,000	(24,554)	
								1,800	40	283	9,000	1,400	4	0.53	299	11,000	115				
								8.9	2.7	5.2	27.6	9.0	0.03	0.04	10.4	27.9	4.7	96			
2026	81,003	75%	20,251	500	2,500	12,000	6,251	1,800	240	3,500	10,000	3,000	49	10	3,400	11,000	350	26,575	4,000	(24,324)	
								1,800	42	296	9,500	1,500	5	0.55	312	11,000	120				
								8.3	2.7	5.1	24.7	8.5	0.03	0.04	10.3	24.4	4.7	89			
2027	81,978	75%	20,494	500	3,000	12,000	5,994	1,800	240	3,500	10,000	3,000	49	10	3,400	11,000	350	26,543	4,000	(24,548)	
								1,800	40	284	10,000	1,600	4	0.53	299	11,000	115				
								7.7	2.7	5.0	21.6	8.0	0.03	0.04	10.2	21.0	4.6	81			
2028	82,921	75%	20,730	500	3,000	12,000	6,230	1,800	240	3,500	10,000	3,000	49	10	3,400	11,000	350	26,572	4,000	(24,342)	
								1,800	42	295	10,000	1,700	5	0.55	311	11,000	119				
								7.2	2.7	CP	18.4	7.5	CP	0.04	10.10	17.6	4.6	68			
2029	83,826	75%	20,957	500	3,000	12,000	6,457	1,800	240	3,500	10,000	3,000	49	10	3,400	11,000	350	26,290	4,000	(23,833)	
								1,800	43	300	10,000	1,800	5	0.57	322	11,000	124				
								6.6	2.7		15.3	6.9		0.04	10.00	14.1	4.6	60			

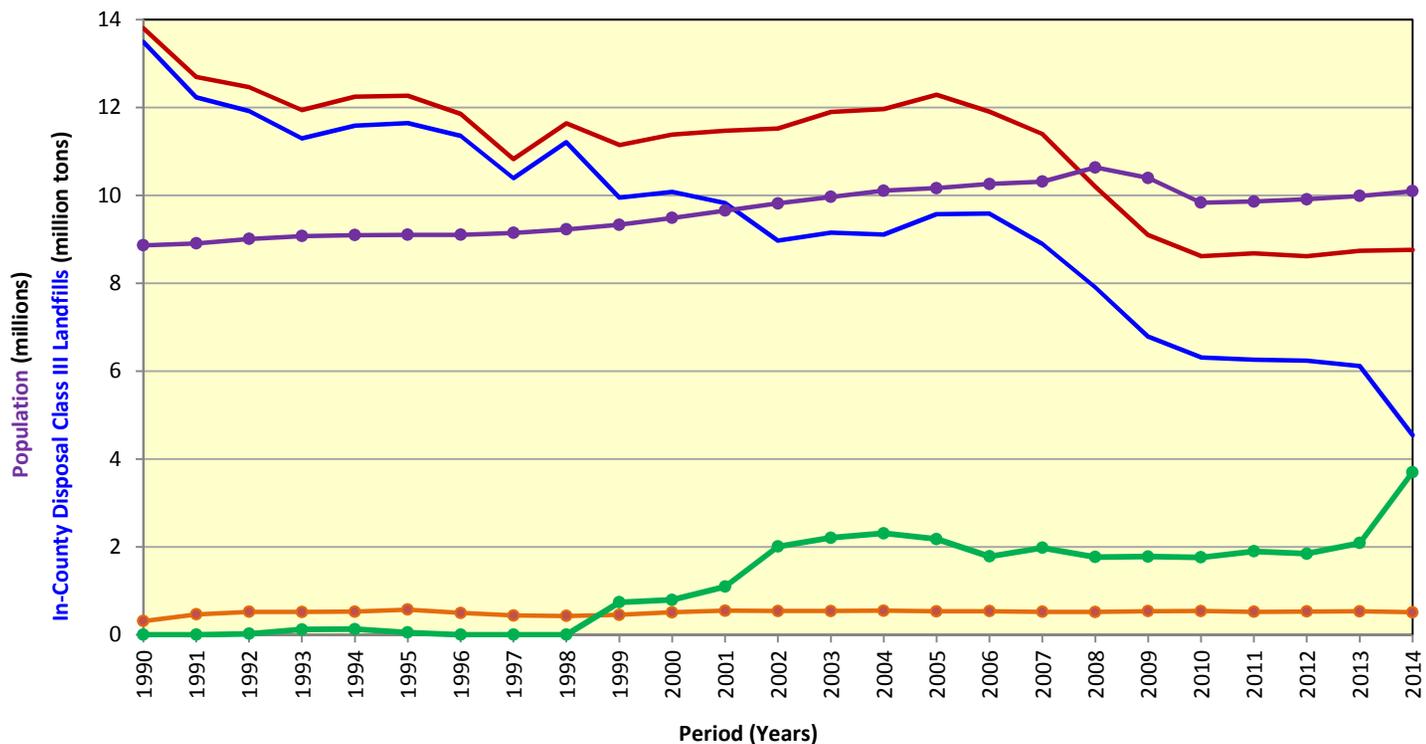
**ASSUMPTIONS:**

- Waste Generation is estimated using CalRecycle's Adjustment Methodology, utilizing population projection, employment and real taxable sales projections from UCLA's Longterm Forecast, July 2014.
- Potential Available Capacity from Alternative Technology Facilities assume that Commerce Refuse-to-Energy Facility and Southeast Resource Recovery Facility will continue to operate at their current permitted daily capacity during the planning period. It also assumes that additional capacity will be available from potential EMSW facilities or other alternative technologies. Potential capacity from anaerobic digestion facility is considered part of diversion since anaerobic digestion process is within the statutory definition of composting which is considered as recycling.
- Total In-County Class III Landfill Available Capacity is calculated based on Maximum Permitted Daily Capacity (in blue text) for facilities without a restricted watershed or Expected Average Daily Tonnage for facilities with a restricted watershed.
- The operation of the Mesquite Regional Landfill (MRL) and waste by rail system (WBR) is entirely dependent on the availability of in-county and near-county disposal capacity, diversion from landfills and the cost of disposal. When the MRL/WBR disposal capacity is needed and when the tipping fees make MRL/WBR economically viable, then the system may begin operation. However, for the purpose of the analysis, the waste-by-rail system is assumed to begin its operation in 2018.

**LEGEND:**

- CC/CP -Closure due to exhausted capacity (CC) or permit expiration (CP)
- E -Expansion may become effective
- R -Restricted watershed

**Figure 4-1  
Graph of Los Angeles County Population and Solid Waste Disposal Trend (1990-2014)**



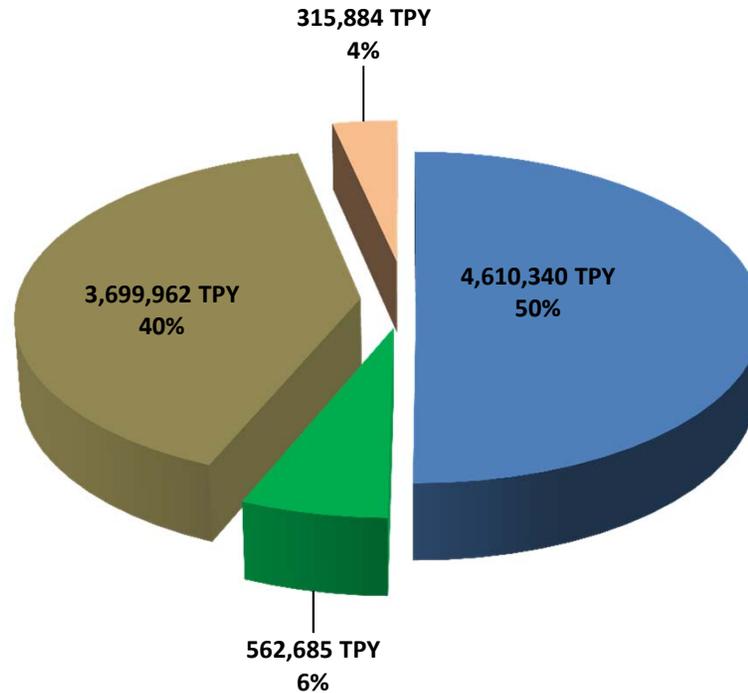
**Legend:**

- In-County Disposal at Class III Landfills
- Out-of-County Disposal
- Population
- In-County Disposal at Waste-to-Energy Facilities
- Total Disposal

**Notes:**

1. In-County disposal data at Class III landfills for the period 1990-1995 includes waste imported from jurisdictions outside the County. 1996-1998 data does not include waste imported from jurisdictions outside the County.
2. In-County disposal data at transformation facilities for the period 1990-1995 includes waste imported from jurisdictions outside the County. Data for the period 1996-1998 does not include waste imported from jurisdictions outside the County. 1990 excludes 500 tons/day of ash which were landfilled; for other years, ash has been diverted from disposal.
3. Out-of-County disposal data for the period 1990-1991 and 1996-1998 is not available. There is no record per SWIMS.

**Figure 4-2**  
**2014 Los Angeles County Solid Waste Disposal Distribution**  
(January 1, 2014 - December 31, 2014 in tons per year (tpy))

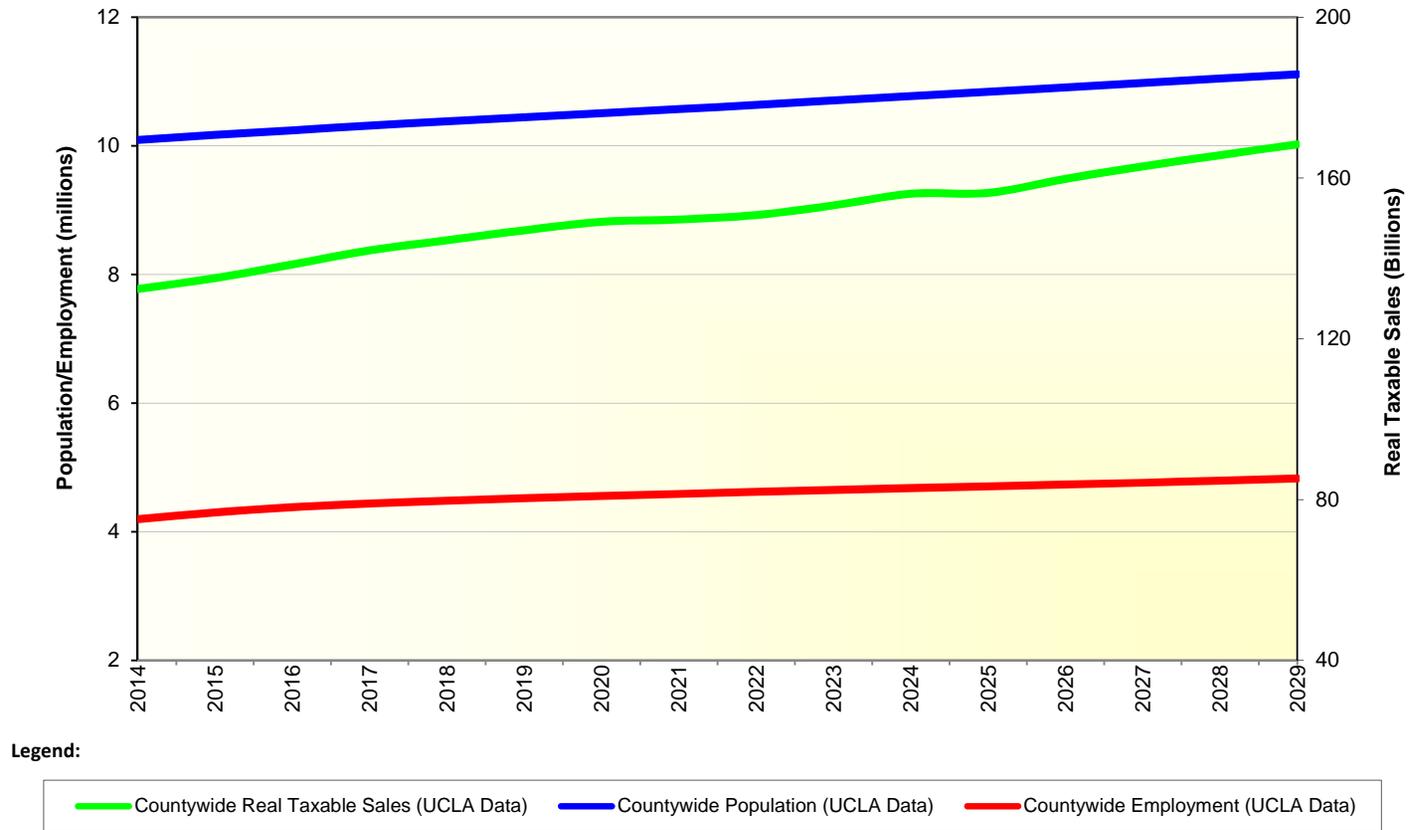


**Legend:**

<span style="color: blue;">■</span> In-County Class III Landfills	<span style="color: green;">■</span> Waste-to-Energy Facilities
<span style="color: brown;">■</span> Exports to Out-of-County Landfills	<span style="color: orange;">■</span> In-County Permitted Inert Waste Landfill

Figure 4-3

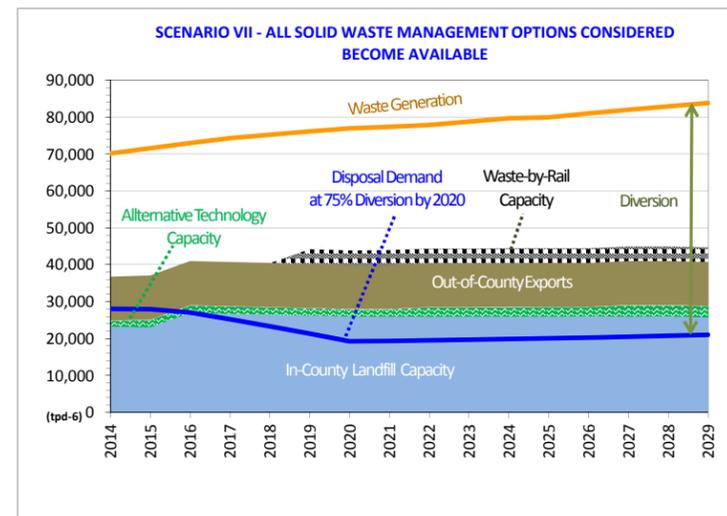
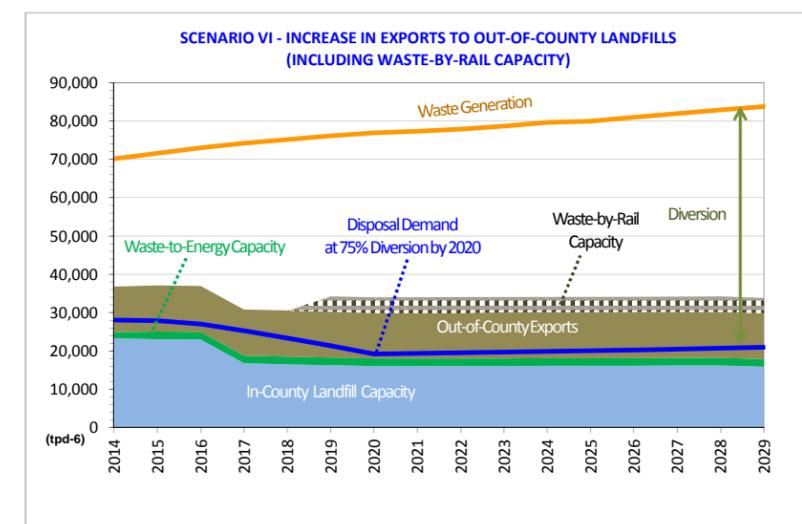
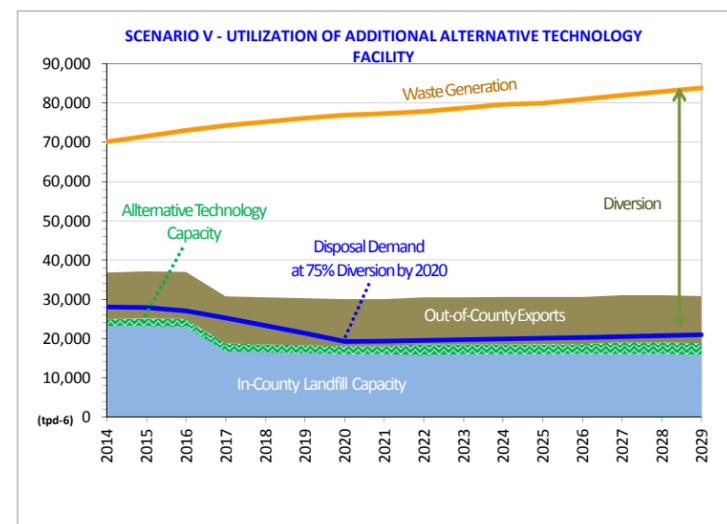
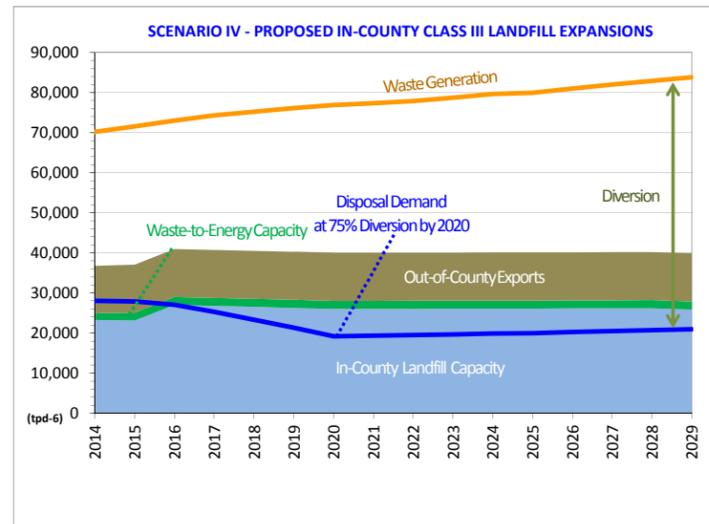
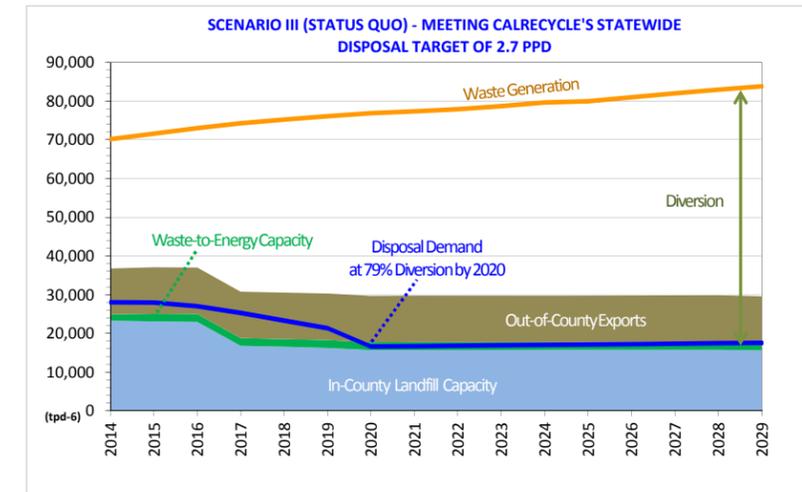
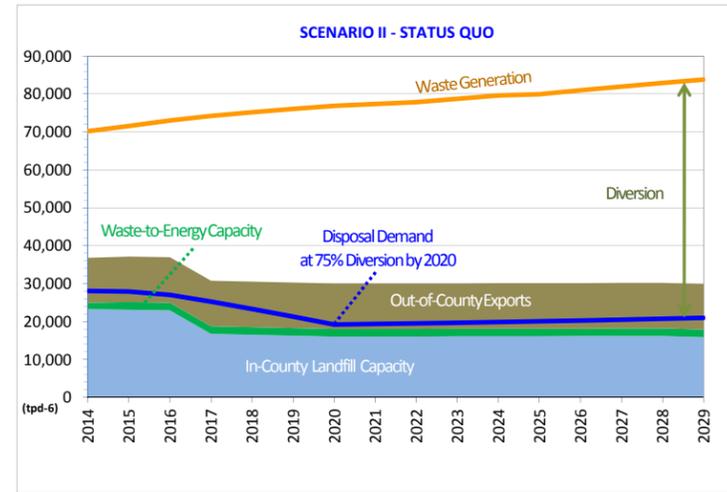
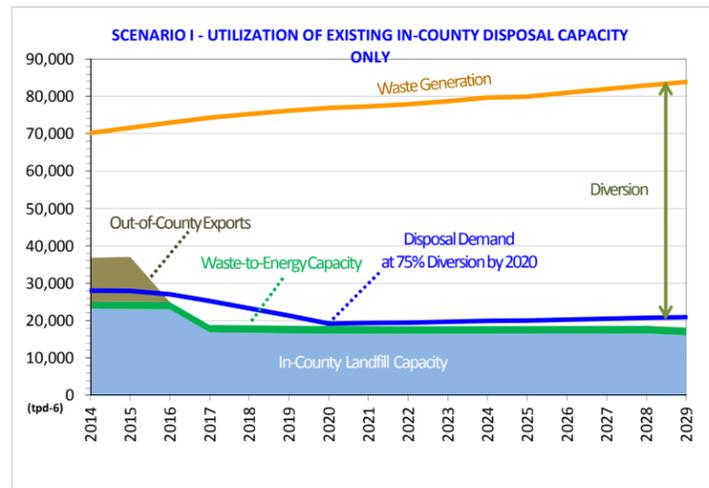
Graph of Population, Employment, Taxable Sales, and Solid Waste Generation Projection  
in Los Angeles County



Notes:

1. Population, Employment and Taxable Sales are based on Countywide Population, Employment and Taxable Sales Projection from the UCLA Long Term Forecast of Los Angeles County, dated July 2014.
2. See Table 4-6 for projection data.

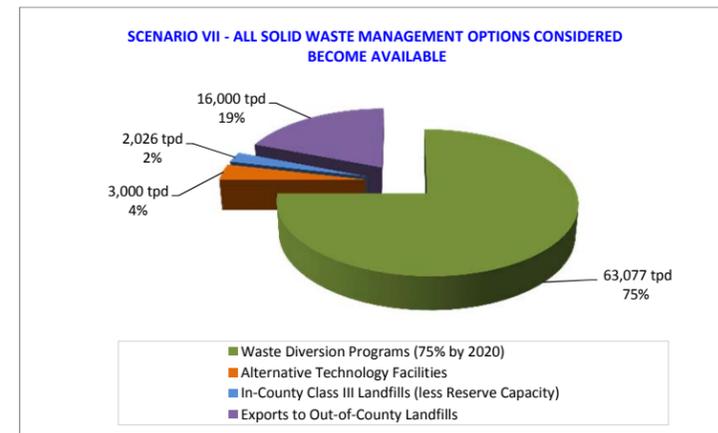
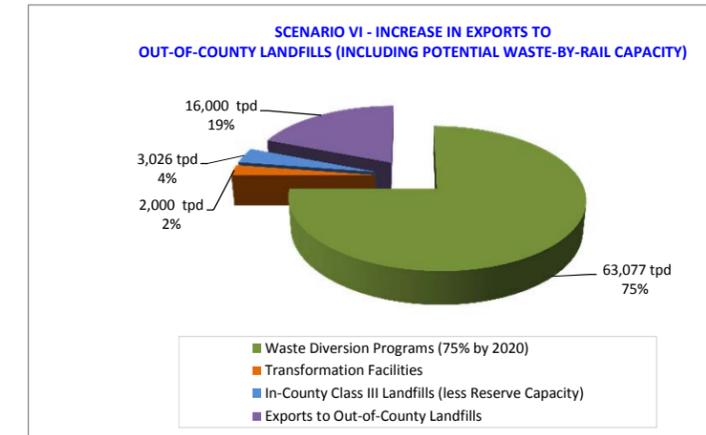
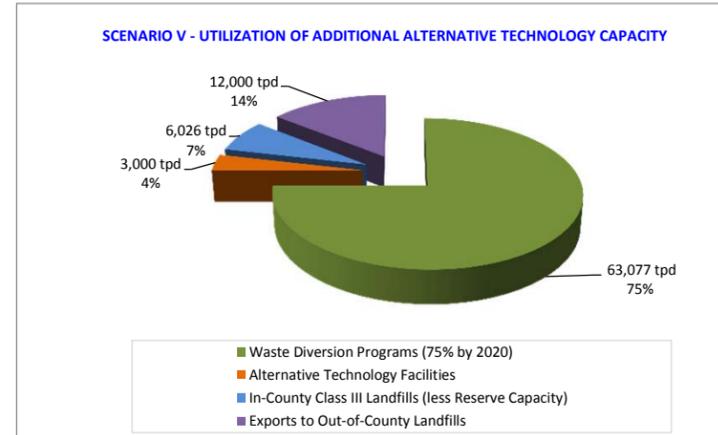
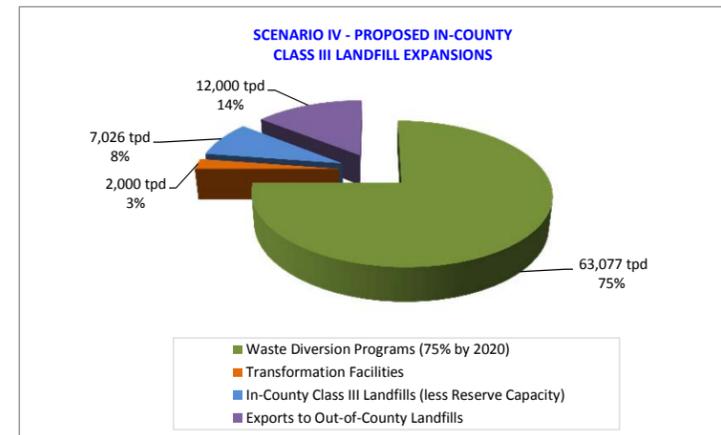
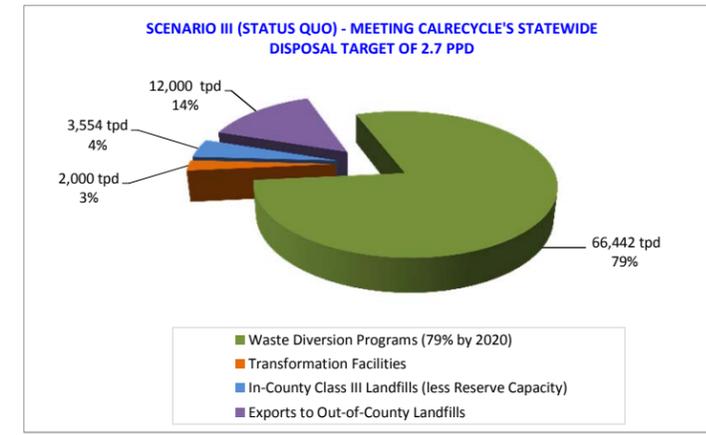
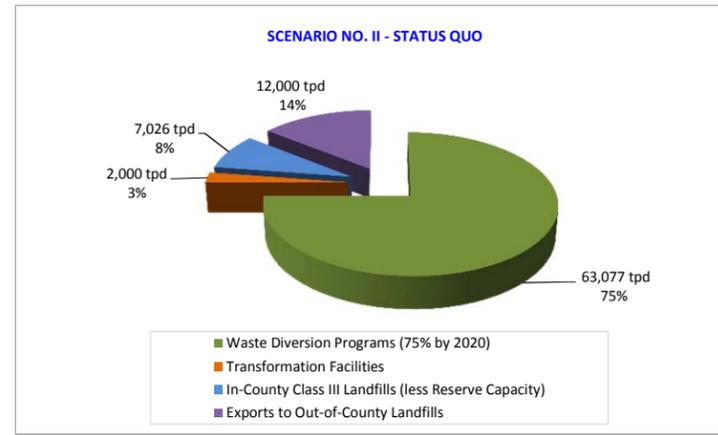
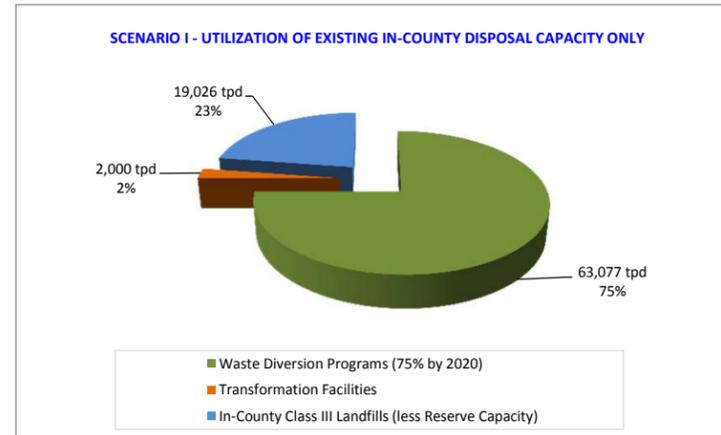
**FIGURE 4-4**  
**GRAPH OF SOLID WASTE DISPOSAL CAPACITY PROJECTIONS FOR EACH SCENARIO<sup>1</sup> FOR THE PLANNING PERIOD (2014-2029)**



**Footnote:**

<sup>1</sup> See Chapter 4, Section 4.10 (Disposal Capacity Need Analysis Scenarios) and Table 4-9 (Summary of Description of Disposal Capacity Need Analysis Scenarios) for a detailed description of each scenario and assumptions.

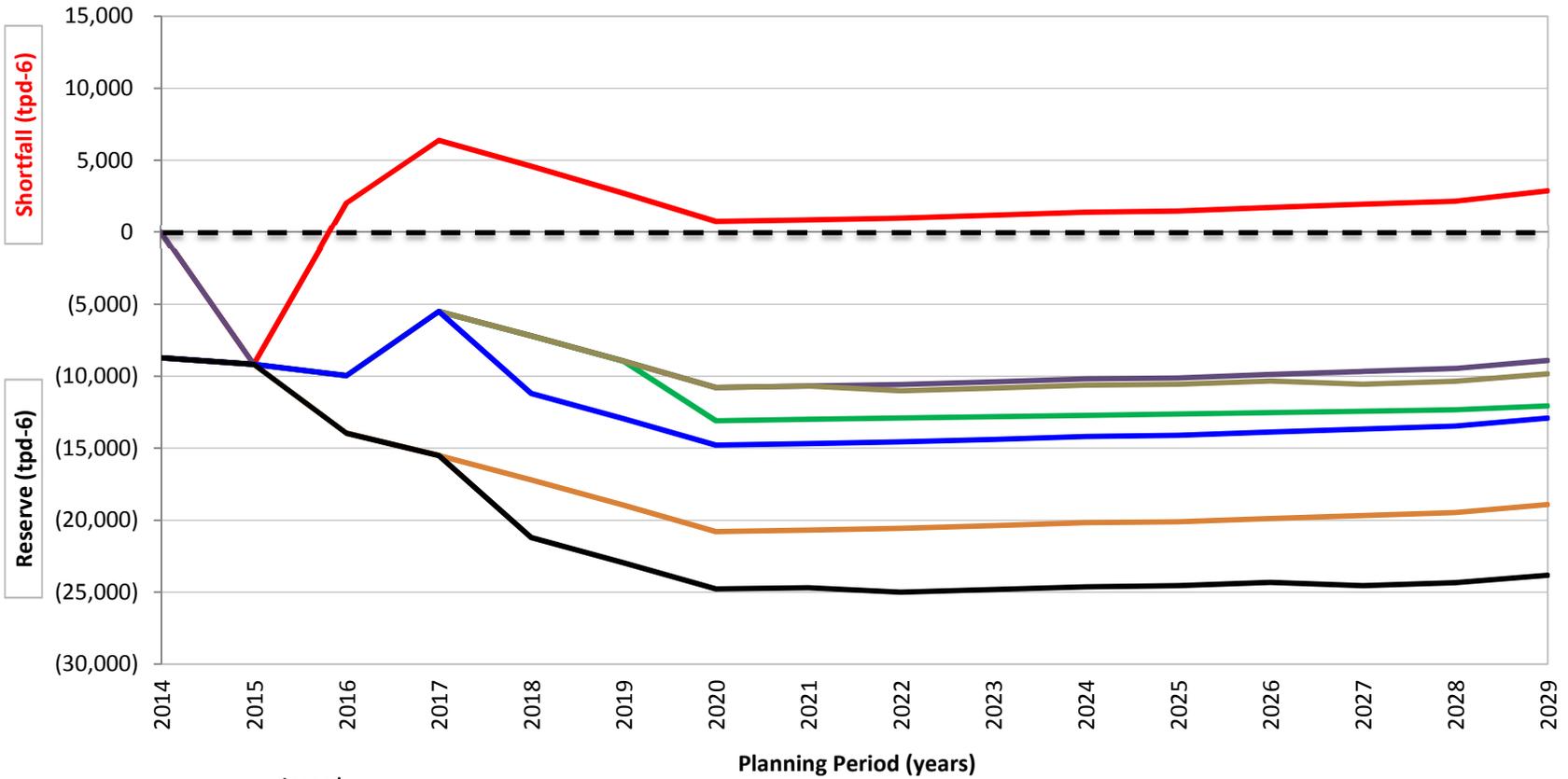
**FIGURE 4-5**  
**LOS ANGELES COUNTY PROJECTED SOLID WASTE DISPOSAL IN 2029 FOR EACH SCENARIO<sup>1</sup> FOR THE PLANNING PERIOD (2014-2029)**



**Footnote:**

<sup>1</sup> See Chapter 4, Section 4.10 (Disposal Capacity Need Analysis Scenarios) and Table 4-9 (Summary of Description of Disposal Capacity Need Analysis Scenarios) for a detailed description of each scenario and assumptions.

**FIGURE 4-6  
CLASS III LANDFILL DAILY DISPOSAL CAPACITY **SHORTFALL** (RESERVE)  
FOR EACH DISPOSAL CAPACITY NEED ANALYSIS SCENARIO**



- Legend:**
- Scenario I - Utilization of Existing In-County Disposal Capacity
  - Scenario II - Status Quo
  - Scenario III (Status Quo) - Meeting CalRecycle's Statewide Disposal Target of 2.7 PPD
  - Scenario IV - Proposed In-County Class III Landfill Expansions
  - Scenario V - Utilization of Additional Alternative Technology Facility
  - Scenario VI - Increase in Exports to Out-of-County Landfills (Including Waste-by-Rail Capacity)
  - Scenario VII - All Solid Waste Management Options Considered Become Available

**APPENDIX 4-A**

**Los Angeles County Solid Waste Management Committee/  
Integrated Waste Management Task Force's Report (dated March 28, 1991)  
to the California Integrated Waste Management Board –  
on the Remaining Permitted Disposal Capacity of Solid Waste Facilities  
in Los Angeles County**

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LOS ANGELES COUNTY  
SOLID WASTE MANAGEMENT COMMITTEE /  
INTEGRATED WASTE MANAGEMENT TASK FORCE  
900 SOUTH FREMONT AVENUE ALHAMBRA, CALIFORNIA 91803-1331  
P.O. BOX 1480 ALHAMBRA, CALIFORNIA 91802

THOMAS A. TIDEMANSON  
CHAIRMAN

March 28, 1991

WM-2

Mr. George Larson, Chief Executive O  
California Integrated Waste Manageme  
1020 Ninth Street, Suite 300  
Sacramento, CA 95814

Dear Mr. Larson:

**REMAINING PERMITTED DISPOSAL CAPACITY  
SOLID WASTE FACILITIES IN  
LOS ANGELES COUNTY**

Pursuant to the requirements of Section 41791 of the Public Resources Code regarding the date of submission of the Countywide Siting Element and the County Integrated Waste Management Plan for Los Angeles County, the following is offered.

The citizens of Los Angeles County are currently disposing of approximately 51,000 tons (1990 average daily disposal  $\approx$  six days/week) of solid waste per day. Approximately 43,245 tons of this waste are disposed of in 19 permitted Class III landfills (see Table 1, enclosed), 1,000 tons are managed by two waste-to-energy facilities (does not include the 500 tons of residual ash which is landfilled), and the remaining inert waste tons are disposed of at the permitted unclassified landfills.

At present, the remaining permitted Class III capacity in this County is estimated at 99 million tons (Table 1). Based on the 1990 average disposal rate of 43,245 tons per day (six days per week) as shown on Table 1, this capacity will be mathematically exhausted by the year 1999. However, this is misleading in that the majority of landfills have a number of restrictions which significantly impact their operations. These include expiration of the land use permit; restriction on acceptance of waste generated outside a jurisdiction and/or watershed boundary; permit restrictions on daily tonnage that can be accepted; and/or limitation on daily tonnage that can be handled at a facility due to lack of manpower and equipment.

At the present time, several of the operating Class III landfills have operating restrictions reducing available daily disposal capacity in the County. Burbank and Whittier (Savage Canyon) can only receive solid waste generated within their respective cities. Lopez Canyon can only receive solid waste generated by single- and multi-family residential customers within the City of Los Angeles which have been collected by City of Los Angeles Bureau of Sanitation trucks; while Puente Hills and Spadra are prohibited from receiving any waste

Mr. George Larson  
March 28, 1991  
Page 2

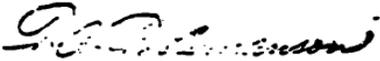
originating from the City of Los Angeles. Calabasas and Scholl Canyon Landfills only accept solid waste generated within defined wastesheds, while Brand Park, Pitchess Honor Rancho, and San Clemente are not open to the public.

As indicated in Table 1, Class III landfills had a permitted daily capacity of 63,950 tons in January 1991; however, this permitted capacity was reduced by 6,500 tons per day to 57,450 tons per day due to closure of Azusa Western Landfill as the result of a California Appellate Court decision. Additionally, by January 30, 1996, eight of the remaining landfills, representing 35,500 tons of permitted daily capacity, could be closed due to capacity limitations or the expiration of land use permits.

Based on the foregoing and utilizing a diversion rate of 25 percent, the County of Los Angeles will experience daily disposal capacity shortfalls within five years. Accordingly, the County will prepare and submit the CSE and the CoIWMF to the Board by January 1, 1992, pursuant to requirements of Section 41791 of the PRC.

We look forward to working with you in implementing the provisions of the California Integrated Waste Management Act of 1989, as well as other matters of joint interest.

Very truly yours,



T. A. TIDEMANSON, Chairman  
Los Angeles County Solid Waste Management  
Committee/Integrated Waste Management Task Force

HA:mc2/GL

Enc.

TABLE 1  
REMAINING PERMITTED COMBINED DISPOSAL CAPACITY  
OF EXISTING SOLID WASTE FACILITIES IN LOS ANGELES COUNTY

Class III Landfill	Solid Waste Facility Permit	Facility Address	Oper. Days/Week	Jan. 1991 SWRF Capacity (tons)	LUP Daily Capacity (tons)	1990 Average Daily Tonnage (tons)	1990 Average Daily Tonnage That Can Be Handled (tons)	Quantity of Municipal Solid Waste Disposed Year 1990 (million tons)	Projected remaining permitted capacity (million cubic yards)	Comments
Antelope Valley	18-AA-0009	1800 West City Ranch Road Palo Verde, CA 91350	7	350	-----	400	0	0.125	2.6	Approx. date of closure 1994
Azusa Land Reclamation	18-AA-0013	1201 Oldstone Avenue Azusa, CA 91702	6	6,500	6,500	2,754	0	0.88	0	1/91 Appellate Court's rescinded permit. Date of closure 11/30/95
BLX	18-AF-0001	2210 South Azusa Avenue West Covina, CA 91790	6	12,000 <sup>a</sup>	-----	8,744	3,600 <sup>b</sup>	3.04	23.8	Date of closure 11/30/95
Bradley West	18-AR-0008	8227 Tujunga Avenue Sun Valley, CA 91352	6	7,000	6,500	1,923	1,577	0.60	19.7	LUP expires 12/28/93
Brand Park	18-AA-0008	1601 West Mountain Street Glendale, CA 91207	5	104	-----	48	0 <sup>c</sup>	0.015	0.875	Private use only
Burbank	18-AA-0040	1600 Leeward View Drive Burbank, CA 91510	5	240	-----	194	44	0.081	22.0	Limited to the City's use only
Calabasas	18-AA-0034	28918 Ventura Freeway Agoura, CA 91301	6	3,500	-----	2,724	776	0.85	21.6	Limited to the Calabasas Masterplan
Chiquita Canyon	18-AA-0052	28201 Henry Mayo Drive Meridian, CA 91322	7	5,000	-----	1,743	1,237	0.55	2.2	LUP expires 11/24/97
Lancaster	18-AA-0050	600 East Avenue F Lancaster, CA 91594	6	450	-----	295	5	0.092	0.5	LUP expires 12/95
Lopez Canyon	18-AA-0020	11950 Lopez Canyon Road Pacoima, CA 91331	5	4,100 <sup>d</sup>	4,000	3,109	891	0.07	7.0	LUP expires 1/30/96 limited to City of Los Angeles use only.
Pebble Beach	18-AA-0041	San Catalina Island Avalon, CA 90701	6	30	-----	10	20	0.003	0.16	
Pitchess Hoop Ranch	18-AA-0037	29100 The Old Road Saugus, CA 91350	5	23	-----	17	6	0.0054	3.73	Approx. date of closure 1994. Private use only
Puerta Hills	18-AA-0033	2600 S. Herban Hill Rd. Whittier, CA 90607	6	12,000	13,200	11,839	1,341	3.7	10.7	LUP limits to 71,000 tpy waste from City of L.A.
San Clemente	18-AA-0013	San Clemente Island LA County, CA 92133	5	1	-----	1	0	0.002	0.034	LUP expires 10/31/93
Schall Canyon	18-AA-0011	7721 North Figueroa St. Los Angeles, CA 90041	6	3,400	-----	2,179	1,221	0.98	19	LUP expires 10/31/91
Spadra	18-AA-0015	4125 West Valley Blvd. Walnut, CA 91709	6	3,000	-----	2,724	276	0.85	9.93	Limited to the Scholl Cyn. Masterplan only
Sunshine Canyon (North Valley)	18-AR-0002	14747 San Fernando Road Los Angeles, CA 91242	6	7,000	6,000	2,141	2,859	0.96	1.64	LUP limits to 18,000 tpy reduces to 1,500 tpy 7/1/95, no City of L.A. MSW accepted
Two Harbors	18-AA-0062	Two Harbors Avalon, CA	5	2.5	-----	3.5	0	0.000068	0.0104	LUP expires 9/26/91
Whittier (Savage Canyon)	18-AH-0001	13918 East Peon Street Whittier, CA 91350	6	350	-----	333	0	0.11	10.4	Limited to the City of Whittier use only
<b>Total</b>										
								96.65	156.08	

Note: <sup>a</sup> Daily capacity established in 8/90. Notice and Order, as amended, by the City of West Covina.  
<sup>b</sup> Daily capacity established by MSW and Courts.  
<sup>c</sup> Closed operation as a Class III landfill on 3/21/91.  
<sup>d</sup> MSW can handle additional 2,400 tpy if SWRF permit is revised.  
 Operator has informed OPR that additional waste cannot be handled due to manpower and equipment limitation.  
<sup>e</sup> Average daily tonnage. Monday through Friday.

MSW/1/14/1-143  
01/20/91

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