

## 4. ENVIRONMENTAL IMPACT ANALYSIS

### M. UTILITIES AND SERVICE SYSTEMS

#### 3. SOLID WASTE

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##### 1. INTRODUCTION

This section addresses potential impacts on existing and planned capacity of designated landfill sites and inert materials landfill sites; and whether sufficient capacity is available to serve Project demand. Consistency with applicable goals and programs to divert waste and increase recycling of the waste stream is also evaluated. This section incorporates information from the Los Angeles County 2035 General Plan Update Public Services and Facilities Element (Public Services Element, 2015) and associated EIR (2015), and other County plans and environmental documents, including the Los Angeles County Integrated Waste Management Plan 2014 Annual Report.

##### 2. ENVIRONMENTAL SETTING

###### a. Existing Conditions

###### (1) Existing Site Conditions

The approximately 72-acre Project Site is currently occupied by the Harbor-UCLA Medical Center Campus and associated surface parking. Waste generation volumes from operations on a day-to-day basis vary as there are multiple waste sources throughout the Campus, ranging from medical and biohazardous waste, to everyday Municipal Solid Waste (MSW), such as food waste. As summarized below in **Table 4.M.3-1, Existing Solid Waste Generation**, it is estimated that the Harbor-UCLA Medical Center Campus currently generates approximately 1,817 tons of solid waste per year.<sup>1</sup> Harbor-UCLA Medical Center's Environmental Services Department is responsible for the collection, transportation, and processing of the existing Hospital's waste stream, which includes general waste, regulated medical waste, sharps containers, pharmaceutical waste, chemo waste, and pathogen waste.

###### (2) Solid Waste Disposal Services

###### (a) Countywide Collection Services

For many years, two-thirds of the unincorporated areas (primarily in the San Gabriel Valley and Antelope Valley Planning Areas), residential and commercial solid waste collection services were provided through an open-market system, whereby each resident/business directly arranged for trash collection services with no County involvement. Due to changes in federal and state laws regarding waste reduction, and changing public attitudes toward protecting the environment and increasing consumer demands for better service, the

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<sup>1</sup> The total estimated existing solid waste generation includes Regulated Medical Waste (RMW) or sharps containers, which are estimated to generate approximately 2,200 pounds per day (1.1 tons per day) per page H-23 of the Harbor-UCLA Master Plan Addendum. This translates to approximately 401.5 tons per year, which is included in the overall 1,817 tons per year of total solid waste generated on-site.

Table 4.M.3-1

## Existing Solid Waste Generation

Land Use	Generation Factor	Units (beds, s.f.)	Solid Waste Generation (lbs./day)	Solid Waste Generation (tons/year)
<b>Existing Uses</b>				
Administrative Office	6 lbs./ksf/day	23,435 s.f.	140.61	25.66
Day-Care Center	6 lbs./ksf/day	4,360 s.f.	26.16	4.77
Central Utilities/Industrial /Infrastructure	6 lbs./ksf/day	112,719 s.f.	676.31	123.43
Hospital/Inpatient	16 lbs./day/bed	453 beds <sup>a</sup>	5,968.00	1,089.16
Library	7 lbs./ksf/day	22,500 s.f.	157.50	28.74
Medical Office/Outpatient	6 lbs./ksf/day	327,304 s.f.	1,963.82	358.40
Biomedical Research & Development	6 lbs./ksf/day	94,754 s.f.	568.52	103.76
Warehouse/Storage	10 lbs./ksf/day	45,402 s.f.	454.02	82.86
Retail	6 lbs./ksf/day	0 s.f.	-	-
<b>Total Existing Solid Waste Generation</b>			<b>9,954.94</b>	<b>1,816.78</b>

Notes: ksf = thousand square feet s.f. = square feet lbs = pounds

<sup>a</sup> Although the existing Hospital is licensed for 453 beds, only 373 beds are currently staffed, and thus only these beds would count toward existing solid waste generation for hospital/inpatient uses.

Source: PCR Services Corporation, 2016

open-market system was unable to fully adapt to these conditions. In response, beginning in 2007, the Department of Public Works (DPW) gradually implemented a system establishing commercial and residential Garbage Disposal Districts (GDDs) to replace the open-market system. Garbage Disposal Districts (GDDs) are designated areas within the unincorporated areas where trash collection and disposal services are provided to both residents and businesses by a private waste hauler that contracts with DPW. Operational expenses are paid from revenues generated through special property tax assessments. To date, the County has established seven GDDs in the unincorporated areas in South Los Angeles and Malibu communities. Because the Harbor-UCLA Medical Center is owned and operated by DPW as a public facility, it is not part of a GDD.

### (b) Harbor-UCLA Medical Center Campus Collection Services

The Los Angeles County DPW Environmental Services is responsible for the collection, transport and processing of the Medical Centers Campus' waste stream. The waste generated on-site includes 1) General Waste, 2) Regulated Medical Waste (RMW), 3) Sharps Containers, 4) Pharmaceutical Waste, 5) Chemo Waste, and 6) Pathological Waste.<sup>2</sup> All waste processing equipment and staging space is currently located at the loading dock area south of the recently completed Surgery and Emergency Room. The equipment consists of a sterilizer, a 40-cubic-yard compactor/container, and a cardboard baler. Regulated Medical Waste is currently sterilized in the sterilizer, and then added to the General Waste compactor/container. The 40-

<sup>2</sup> Perkins+Will. Harbor-UCLA Campus Master Plan Addendum. June 2012. Page H-23.

cubic-yard compactor/container is emptied four to five times per week. Twenty six (26) additional three-cubic-yard dumpsters are also located throughout the Medical Center Campus, which are emptied four days per week.<sup>3</sup>

### (3) Regional Landfill Capacity

Regional planning for the provision of landfill services is provided by the County of Los Angeles which, in response to the California Integrated Waste Management Act of 1989, prepared and administers a Countywide Integrated Waste Management Plan (ColWMP). As part of its obligations, Los Angeles County continually evaluates landfill disposal needs and capacity through preparation of ColWMP Annual Reports. Within each annual report, future landfill disposal needs over the ensuing 15-year planning horizon are addressed, in part by determining the available landfill capacity.<sup>4</sup> As discussed in the Los Angeles County Countywide Integrated Waste Management Plan 2014 Annual Report (published in December 2015), due to lack of consumer demand for materials, slowdown in the construction industry, and the production and manufacturing of goods, the amount of waste that residents and business generated and disposed of in Los Angeles County has continued to decrease substantially since 2006 and has generally stayed even from 2009 through 2014. In 2014, Los Angeles County disposed of approximately 9 million tons of materials, compared to approximately 12 million tons in 2005.<sup>5</sup> Of that amount, the majority was accommodated by in-County Class III landfills (4.6 million tons), followed by exports to out-of-County landfills (3.7 million tons) and transformation facilities (562,685 tons).<sup>6</sup> The remaining disposal capacity for the County's Class III landfills is estimated at approximately 112 million tons as of December 31, 2014.<sup>7</sup> It is estimated that by year 2029, the cumulative demand for disposal capacity will have reached a total of approximately 99.8 million tons, or approximately 89 percent of the existing remaining capacity.<sup>8</sup> As such, projected cumulative County disposal demands would continue to be met even without the provision of additional disposal capacity at the various permitted facilities. However, as further discussed below, additional disposal capacity is being sought through a number of options, including in-County landfill expansions, exports to out-of-County facilities, and source reduction and recycling to ensure adequate capacity is maintained in the long-term.

Of the various landfills serving the County of Los Angeles, Sunshine Canyon Landfill is the largest recipient of non-hazardous MSW, i.e. Class III waste materials. This landfill received 2.4 million tons of solid waste in 2014, which accounts for approximately 27% of the total solid waste disposed in 2014.<sup>9</sup> This landfill had a remaining capacity 64.7 million tons in 2014, with an expected life expectancy of 23 years.<sup>10</sup>

The annual amount of disposed inert waste materials, such as earth, landscaping, concrete and asphalt, in 2014 was 315,884 tons. It is estimated that that this disposal amount represents the generation of

<sup>3</sup> *Ibid*, Page H-23.

<sup>4</sup> *Los Angeles County Department of Public Works, Los Angeles County Integrated Waste Management Plan, 2014 Annual Report, December 2015.*

<sup>5</sup> *Ibid*, Page 5, Figure 1.

<sup>6</sup> *Ibid*, Page 24.

<sup>7</sup> *Ibid*, Page 31, Figure 20.

<sup>8</sup> *Ibid*, Appendix E-2, Table 5.

<sup>9</sup> *Ibid*, Page 27, Figure 5.

<sup>10</sup> *Ibid*, Page 31, Figure 20 and Page 32, Figure 21.

approximately 21.9 million tons with a 60 percent diversion rate. As of 2014, the Azusa Land Reclamation is the only permitted Inert Waste Landfill in Los Angeles County with a full solid waste facility permit. The remaining capacity of this landfill is estimated at 59.8 million tons. Given the remaining permitted capacity and at the average disposal rate of 1,215 tons per day in 2014, this capacity would be exhausted in approximately 189 years. In addition to the County-permitted facility, there are a number of Inert Debris Engineered Fill Operation facilities operating under State permit provisions that provide additional capacity in the County, processing approximately 4.3 million tons in 2014.<sup>11</sup>

Aggressive waste reduction and diversion programs on a countywide level have helped reduce disposal levels at the County's landfills. As described in the Regulatory Framework section below, the County has prepared and is updating its Countywide Integrated Waste Management Plan, including annual reports and a master plan for meeting waste disposal needs over the next 20 years. The most recent Annual Report indicates that, as noted above, the County can adequately meet future Class III disposal needs through 2029 through scenarios that include a combination of all or some of the following: (1) expansion of existing in-County Class III landfills; (2) studying, promoting, and developing conversion technologies; (3) expansion of transfer and processing infrastructure; (4) development of a waste-by-rail system; and (5) maximization of waste reduction and recycling.<sup>12</sup>

#### **(4) County Recycling Efforts**

As discussed further below in the regulatory discussion, the County of Los Angeles has numerous plans, policies and regulations that address the future provision of solid waste services and reductions of the solid waste stream. These waste reduction measures increased recycling goals for the County and State (e.g., AB341's goal of reduce, recycle, or compost at least 75 percent of solid waste that would go to landfills by 2020) and require monitoring activities to attain the recycling goals. Multiple cities within the County have already achieved an earlier goal of achieving a 50% waste reduction to landfills. The County Department of Public Works' Clean LA Program provides multiple initiatives to recycle waste, including the SmartBusiness Recycling Program, Construction and Demolition Debris Recycling and Reuse Program, and the Los Angeles County Materials Exchange.<sup>13</sup> The 2014 Los Angeles County Integrated Waste Management Plan indicates that in 2014, the County generated approximately 21.9 million tons of potential solid waste. Of this total, the County diverted 13.1 million tons (or approximately 60%) from disposal into landfills.<sup>14</sup>

### **b. Regulatory Framework**

#### **(1) State of California**

##### **(a) Assembly Bill 939 - California Integrated Waste Management Act of 1989**

The State Legislature passed the California Integrated Waste Management Act of 1989 (AB 939) to improve solid waste disposal management with respect to (1) source reduction, (2) recycling and composting, and

<sup>11</sup> *Los Angeles County Department of Public Works, Los Angeles County Integrated Waste Management Plan, 2014 Annual Report, December 2015.*

<sup>12</sup> *Ibid, Page 50.*

<sup>13</sup> <http://dpw.lacounty.gov/epd/cleanla/3Rs.aspx>

<sup>14</sup> *Ibid, Page 25.*

(3) environmentally safe transformation and land disposal. AB 939 mandates jurisdictions to meet a diversion goal of 25 percent by 1995 and 50 percent by 2000.<sup>15</sup>

AB 939 requires that all counties have to prepare a Countywide Integrated Waste Management Plan (CIWMP). The CIWMP had to include had to include a Source Reduction and Recycling Element (SRRE) to address waste characterization, source reduction, recycling, composting, solid waste facility capacity, education and public information, funding, special waste (asbestos, sewage sludge, etc.), and household hazardous waste. The CIWMP also had to include a Nondisposal Facility Element (NDFE) to identify nondisposal facilities to be used in order to assist counties in reaching AB 939's diversion mandates. Nondisposal facilities include material recovery facilities, transfer stations, large-scale composting facilities, and other facilities that require a solid waste facility permit. Lastly, the CIWMP has to include a Household Hazardous Waste Element (HHWE) to reduce the amount of hazardous household waste generated and to provide the County with convenient collection services and promote waste minimization/reduction techniques. It also requires counties to develop a Siting Element that addresses how each county, and cities within that county, will manage their solid waste disposal over 15-year planning periods. The Siting Elements also include goals and policies to ease the use of out-of-County/remote landfills and foster the development of alternatives to landfill disposal (e.g. conversion technologies). See further discussion of the Los Angeles County Siting Element below under Los Angeles County regulations. Oversight of these activities was set up under the charge of the California Integrated Waste Management Board (CIWMB). The duties and responsibilities of CIWMB were transferred to the California Department of Resources, Recycling, and Recovery (CalRecycle) as of January 1, 2010.

#### **(b) Assembly Bill 1327 - California Solid Waste Reuse and Recycling Access Act of 1991**

The California Solid Waste Reuse and Recycling Access Act of 1991 (AB 1327), passed on October 11, 1991, required CalRecycle to develop a model ordinance for adoption of recyclable materials in development projects by March 1, 1993. Local agencies were then required to adopt the model, or an ordinance of their own, governing adequate areas for collection and loading of recyclable materials in development projects by September 1, 1993. If, by that date, a local agency had not adopted its own ordinance, the model ordinance adopted by the CalRecycle took effect and shall be enforced by the local agency.

#### **(c) Senate Bill 1374 – Construction and Demolition Waste Materials Diversion Requirements**

Senate Bill 1374 was signed into law in 2002 to assist jurisdictions with diverting their construction and demolition (C&D) waste material. The legislation requires that the CIWMB complete five items in regards to the diversion of construction and demolition waste: (1) adopt a model ordinance for diverting 50 percent to 75 percent of all construction and demolition debris from landfills; (2) consult with multiple regulators and waste entities (e.g. California State Association of Counties, private and public waste services, building construction materials industry, etc.) during the development of the model ordinance; (3) compile a report on programs that can be implemented to increase diversion of C&D debris; (4) post a report on the agency's website for general contractors on methods that contractors can use to increase diversion of C&D waste materials; (5) post on the agency's website a report for local governments with suggestions on programs to

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<sup>15</sup> [https://www.edcgov.us/Government/EMD/SolidWaste/The\\_Intergrated\\_Waste\\_Management\\_Act\\_AB\\_939.aspx](https://www.edcgov.us/Government/EMD/SolidWaste/The_Intergrated_Waste_Management_Act_AB_939.aspx)

increase diversion of C&D waste materials. The model ordinance was adopted by CalRecycle on March 16, 2004.

## **(2) Los Angeles County**

### **(a) Countywide Integrated Waste Management Plan (ColWMP)**

Pursuant to AB 939, each County is required to prepare and administer a Countywide Integrated Waste Management Plan (the aforementioned ColWMP), including preparation of an Annual Report. The ColWMP, per AB 939, is to comprise of the various counties' and cities' solid waste reduction planning documents, plus an Integrated Waste Management Summary Plan (Summary Plan) and a Countywide Siting Element (CSE). The Summary Plan describes the steps to be taken by local agencies, acting independently and in concert, to achieve the mandated state diversion rate by integrating strategies aimed toward reducing, reusing, recycling, diverting, and marketing solid waste generated within the County. The County's Department of Public Works is responsible for preparing and administering the Summary Plan and the CSE. The Summary Plan for the County was approved by CalRecycle on June 23, 1999. The CSE was approved by CalRecycle on June 24, 1998. A revised CSE was completed in 2012. An EIR for this document was scheduled to be released for public review in early 2016, but as of March 2016 the document has not been published.

In addition, as part of its regulatory efforts, the County has prepared a long-term master plan which describes how the County will manage solid waste through the year 2050. The 2050 Plan identifies measures to meet the landfill needs over the time horizon and includes such measures as conserving in-County disposal capacity, implementing waste diversion programs, fostering alternatives to landfills, and identifying funding resources to carry out the plan.

### **(b) Construction and Demolition (C&D) Debris Recycling and Reuse Program**

On January 4, 2005, the County of Los Angeles Board of Supervisors adopted the C&D Debris Recycling and Reuse Ordinance which added Chapter 20.87 to the Los Angeles County Code. The ordinance requires projects to recycle or reuse 50 percent of the debris generated. The ordinance is meant to increase the diversion of construction and demolition debris from disposal facilities to assist California's statewide waste reduction mandates.

Los Angeles County adopted the Green Buildings Standard Code, which became effective on January 1, 2011. The Code enforces more stringent provisions for all construction and demolition projects after January 1, 2011; non-residential projects must recycle a minimum of 50 percent of the debris generated by weight.

### **(c) Roadmap to a Sustainable Waste Management Future**

On October 21, 2014, the Board of Supervisors adopted the Roadmap to a Sustainable Waste Management Future, establishing a goal to divert 80 percent of solid waste generated in the unincorporated County areas from landfills by 2025, 90 percent by 2035, and 95 percent or more by 2045.<sup>16</sup> The County's efforts to achieve waste diversion are guided by the new waste management paradigm, which places a greater

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<sup>16</sup> *Los Angeles County Department of Public Works, Los Angeles County Integrated Waste Management Plan, 2014 Annual Report, December 2015. Page 7.*

emphasis on source reduction, reuse, recycling, and otherwise maximizing the benefits and use of materials over disposal.

#### **(d) Los Angeles County General Plan Update (2035)**

As a County-run facility operated on County-owned land, the proposed Project is subject to the Los Angeles County General Plan Update (2035), including the Public Services and Facilities Element. Applicable goals and polices from the Public Services and Facilities Element are identified below:

**Goal PS/F 5:** Adequate disposal capacity and minimal waste and pollution.

- **Policy PS/F 5.5:** Reduce the County's waste stream by minimizing waste generation and enhancing diversion.
- **Policy PS/F 5.7:** Encourage the recycling of construction and demolition debris generated by public and private projects.
- **Policy PS/F 5.8:** Ensure adequate and regular waste and recycling collection services.
- **Policy PS/F 5.9:** Encourage the availability of trash and recyclables containers in new developments, public streets, and large venues.

### **3. ENVIRONMENTAL IMPACTS**

#### **a. Methodology**

The analysis of impacts on solid waste disposal addresses the amount of waste debris that would be generated by the Project and whether sufficient landfill capacity is available to receive that waste debris. The amount of waste debris generated is determined by multiplying the amount of each of the Project uses by per unit waste generation factors associated with each use. The availability of landfill capacity is taken directly from the County of Los Angeles Countywide Integrated Waste Management Plan, 2014 Annual Report. The Project's waste generation is compared to existing and planned capacities to determine potential Project impact.

The analysis also addresses the Project's consistency with policies and programs to increase diversion of waste materials from landfills and increase the recycling of materials in support of sustainability/green growth. Applicable policies and programs are summarized, and their goals and standards are noted. The Project's design features are reviewed for consistency with those goals and standards.

#### **b. Thresholds of Significance**

The potential for solid waste impacts is based on thresholds derived from the County's Initial Study Checklist questions, which are based on Appendix G of the State *CEQA Guidelines*. These questions are as follows:

**XVIII. Utilities and Service Systems. Would the project:**

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

Based on the above factors, the Project would have a potentially significant impact on Solid Waste if it would:

- SW-1** Would the Project generate solid waste in excess of the permitted capacity of the disposal facilities serving the Project?
- SW-2** Would the Project conflict with federal, state, and local statutes, ordinances, policies, and regulations related to solid waste?

**c. Project Characteristics**

The Project would generate construction debris as the result of demolition of existing buildings, excavation, grading, and construction of new buildings. A summary of land uses to be removed is provided in Table 2-2, *Disposition of Existing Buildings*, in Chapter 2.0, *Project Description*, of this Draft EIR. The long-term operations of the Project assumes continued operation of the Harbor-UCLA Medical Center in a manner similar to existing conditions, and would also introduce the new Bioscience Tech Park to the Project Site which would generate additional solid waste that requires disposal, some of which would end up at County landfills sites.

Nonetheless, the Project would include design provisions that respond to compliance measures and public goals that address reductions in waste generation and the resulting waste stream. Among these, the Project would be designed to meet the standards for Leadership in Energy and Environmental Design (LEED®) "Silver" level certification, which identifies and give credit for green building techniques and other sustainability features. Green building practices will be integrated into all building design, construction, and operation.

**d. Project Impacts**

**Threshold SW-1:** Would the Project generate solid waste in excess of the permitted capacity of the disposal facilities serving the Project?

**(1) Construction Impacts**

**Impact Statement SW-1:** *The Project would generate construction debris due to demolition and removal of multiple buildings throughout the Campus, grading and excavation, and construction of new buildings. Disposal of waste materials would achieve a minimum diversion or recycling rate of 50 percent, as required by County regulations, and adequate capacity exists at the County's C&D disposal sites. As such, impacts related to solid waste disposal capacity due to construction activities would be less than significant.*



The Project proposes the construction of medical buildings and uses on-site, as well as the expansion, removal, replacement, and modification of existing facilities. Construction would generate inert solid waste (e.g. construction demolition and debris) which would be disposed at an unclassified landfill. The Master Plan Project would be implemented in phases through the year 2030. The construction work for the Project Site includes the demolition of 759,649 square feet of existing buildings for Harbor-UCLA Medical Center and LA BioMed and the construction of 1,908,520 square feet of total building construction for Harbor-UCLA Medical Center, LA BioMed, and the Bioscience Tech Park.

Construction of the Project's new buildings would require earthwork and construction of the new buildings. Demolition of existing buildings would also occur. Each of these activities would generate demolition waste including but not limited to soil, asphalt, wood, paper, glass, plastic, metals, and cardboard that would be disposed of in the County's inert landfill site (Azusa Land Reclamation) or one of a number on inert debris engineered fill operations that are located throughout Los Angeles County. The amount of demolition waste anticipated to be generated by the Project is shown in **Table 4.M.3-2, *Estimated C&D Waste Generation***. As indicated therein, the Project would result in approximately 294,738 cubic yards of demolition waste. The total earthwork-soil volume will be 428,396 cubic yards, of which 154,154 cubic yards is export. There will be an additional 40 cubic yards of soil removed for soil remediation due to the four Leaking Underground Storage Tanks found near the Central Plant. More information regarding the soil remediation and tanks is in Section 4.F., *Hazards and Hazardous Materials*, of this Draft EIR.

Based on these quantities, construction of the proposed Project is estimated to generate 166,530 tons of soil 179,053 tons of demolition debris, and 4,142 tons of construction debris for a combined total of 349,725 tons of C&D waste as shown in Table 4.M.3-2. These numbers do not take into account the amount of C&D waste that could potentially be diverted via source reduction and recycling programs within the County. Pursuant to the C&D Debris Recycling and Reuse Program and the Los Angeles County Green Buildings Standard Code, the Project must recycle or reuse 50 percent of the debris generated.

As noted above, the County-certified waste processing facilities recycle amounts varying from 50 percent to 75 percent of the waste stream. Therefore, the most waste that would require disposal at a landfill site (i.e., assuming the lower 50 percent diversion rate) would be approximately 174,863 tons over the 15-year construction period. The C&D waste would be disposed of at the County's Azusa Land Reclamation landfill or one of the State-permitted Inert Debris Engineered Fill Operation facilities. As indicated above, the remaining disposal capacity for the Azusa Land Reclamation facility is 59.8 million tons. The Project's total solid waste disposal need during construction would represent approximately 0.29-percent of the estimated remaining capacity at the County's inert landfill. The Department of Public Works estimates that the remaining life of the Azusa Land Reclamation is 189 years based on the 2014 average disposal rate of 1,215 tons per day.<sup>17</sup> The County's inert fill landfills would have adequate capacity to accommodate Project-generated inert waste, and construction impacts relative to solid waste would be less than significant.

## (2) Operation

<sup>17</sup> Los Angeles County Department of Public Works, *Los Angeles County Integrated Waste Management Plan, 2014 Annual Report, December 2015, Page 32*.

Table 4.M.3-2

## Estimated C&amp;D Waste Generation

Debris Type	Quantity	Generation Factor	Waste Generation (in tons)
<b>Site Preparation</b>			
Earthwork-Soil	154,194 c.y.	1 cubic yd = 1.08 tons <sup>b</sup>	166,530 tons
Demolition	294,738 c.y. <sup>a</sup>	1 cubic yd = 0.6075 tons <sup>b</sup>	179,053 tons
<b>Site Preparation Subtotal</b>			<b>345,583 tons</b>
<b>Building Construction</b>			
Total Building Area (including parking and exterior walls)	1,908,520 square feet	1 square foot = 0.00217 tons <sup>c</sup>	4,142 tons
<b>Building Subtotal</b>			<b>4,142 tons</b>
<b>Grand Total</b>			<b>349,725 tons</b>

Notes: c.y. = cubic yards s.f. = square feet

<sup>a</sup> Includes demotion of interiors, structures, and asphalt/parking areas.

<sup>b</sup> CalRecycle Diversion Study Guide, <http://www.calrecycle.ca.gov/LGCentral/Library/DSG/ICandD.htm>, Accessed September 18, 2014. Factors converted from 80 lbs/cf to 1.08 tons/cy; and 45 lbs/cf to 0.6075 tons/cy.

<sup>c</sup> Generation factor obtained from U.S. EPA, *Estimating 2003 Building-Related Construction and Demolition Materials Amounts*, 2003, Page 8. Factor converted from 4.34 lbs/sf for non-residential uses to 0.00217 tons/sf.

Source: PCR Service Corporation, 2014.

**Impact Statement SW-2:** Impacts on waste disposal facilities from operations would be less than significant because the County has sufficient landfill capacity to accommodate residual waste generation. The Project would generate solid waste as the result of operation of Project Site, but there will not be a substantial increase in operations and solid waste generation. Waste disposal would include design features and compliance with County waste disposal procedures for recycling and diversion of waste from County landfills.

The estimated solid waste generation for the Project is shown in **Table 4.M.3-3, Solid Waste Generated During Operation**. Based on waste generation factors from the California Department of Resources Recycling and Recovery website, and net increases in square footage for the Project, it is estimated that the total waste generation from the existing uses to be demolished would be approximately 1,817 tons per year. The total waste generation from the Proposed Uses would be approximately 2,481 tons per year. As such, the Project would result in a net increase of approximately 664 tons of solid waste generated per year. These estimates do not take into account the amount of solid waste that could potentially be diverted via source reduction and recycling programs within the City.

Table 4.M.3-3

## Solid Waste Generated During Operation

Land Use	Generation Factor	Units (beds, s.f.)	Solid Waste Generation (lbs./day)	Solid Waste Generation (tons/year)
<b>Proposed Uses</b>				
Administrative Office	6 lbs./ksf/day	130,635 s.f.	783.81	143.05
Day-Care Center	6 lbs./ksf/day	4,360 s.f.	26.16	4.77
Central Utilities/Industrial /Infrastructure	6 lbs./ksf/day	129,205 s.f.	775.23	141.48
Hospital/Inpatient	16 lbs./day/bed	446 beds <sup>a</sup>	6,064.00	1,106.68
Library	7 lbs./ksf/day	0 s.f.	0	0
Medical Office/Outpatient	6 lbs./ksf/day	480,500 s.f.	2,883.00	526.15
Biomedical Research & Development	6 lbs./ksf/day	475,000 s.f.	2,850.00	520.13
Warehouse/Storage	10 lbs./ksf/day	0 s.f.	-	-
Retail	6 lbs./ksf/day	35,000 s.f.	210.00	38.33
<b>Total Proposed Solid Waste Generation</b>			<b>13,592.20</b>	<b>2,480.59</b>
<b>Total Existing Solid Waste Generation</b>			<b>9,954.94</b>	<b>1,816.78</b>
<b>Net Increase</b>			<b>3,637.26</b>	<b>663.81</b>

Notes: ksf = thousand square feet s.f. = square feet lbs = pounds

<sup>a</sup> Although the New Hospital would be licensed for 446 beds (as currently proposed), only 379 beds are expected to be staffed, and thus only these beds would count toward future solid waste generation for hospital/inpatient uses.

Source: PCR Services Corporation, 2016

Countywide, the ColWMP assumes a diversion rate of 60 percent for 2014, and anticipates an increase up to 75 percent by year 2020.<sup>18</sup> The Project's net increase in annual solid waste generation, not accounting for diversion, would represent a negligible increment to the County's 2014 annual waste generation of 9.2 million tons per year, as the additional 663 tons would be approximately 0.007-percent of the annual total, and less than 0.0006-percent of the remaining 112-million-ton capacity in the County's Class III landfills.

In year 2029, the year prior to the proposed buildout of the Master Plan Project, the County expects that cumulative demand for use of the currently available 112 million tons of capacity would be approximately 99.8 million tons. This would leave an available capacity of approximately 12.2 million tons of capacity to serve the Project, even without the provision of additional capacity compared to existing conditions. Further, the 2014 daily disposal rate in the County landfills was 14,567 tons per day versus a maximum daily capacity of 28,549 tons per day, resulting in an additional permitted daily capacity of 13,982 tons per day.<sup>19</sup> The Project's net additional daily generation volume of 1.82 tons, would be approximately 0.01 percent of the additional daily capacity, assuming no diversion. With 60 percent diversion it would be approximately 0.004 percent.

<sup>18</sup> Los Angeles County Department of Public Works, Los Angeles County Integrated Waste Management Plan, 2014 Annual Report, December 2015, Appendix E-2, Table 5.

<sup>19</sup> Los Angeles County Department of Public Works, Los Angeles County Integrated Waste Management Plan, 2014 Annual Report, December 2015, Appendix E-2 Table 1.

As noted above, the Sunshine Canyon Landfill is the primary recipient of County waste disposal. The maximum daily capacity for this landfill is 12,100 tons per day and the 2014 disposal rate was 7,582 tons per day, indicating a residual daily capacity of 4,518 tons per day of capacity. If all of the Project's waste were taken to Sunshine Canyon Landfill, the Project's respective additions to the daily disposal, 1.4 tons, would be approximately 0.013-percent of the residual daily capacity, assuming no diversion. With 60 percent diversion it would be approximately 0.005-percent.

As described in the CoIWMP 2014 Annual Report, future disposal needs over the next 15-year planning horizon (2029) would be adequately met through the use of in-County and out-of-County facilities through a number of strategies that would be carried out over the years. It should also be noted that with annual reviews of demand and capacity in each subsequent Annual Report, the 15-year planning horizon provides sufficient lead time for the County to address any future shortfalls in landfill capacity.

Based on the above discussion, the Project would not generate solid waste in sufficient quantities to substantially reduce the County's existing estimated landfill capacity or otherwise limit the County's ability to address ongoing landfill capacity needs via existing capacity and other options for increasing capacity. Therefore, impacts on solid waste disposal from Project operations would be less than significant.

**Threshold SW-2:** Would the Project conflict with federal, state, and local statutes, ordinances, policies, and regulations related to solid waste?

**Impact Statement SW-3:** *The Project would be implemented in compliance with all applicable Federal, State and local regulatory requirements regarding diversion of landfill materials and efficient use of County landfill facilities. Thus, impacts would be less than significant.*

### **(3) Consistency with Regulatory Framework**

The Project would comply with applicable regulations related to solid waste, including those pertaining to waste reduction and recycling, as summarized above in the Regulatory Framework subsection. In accordance with California's Green Building Standards Code for Non-residential development, development projects must recycle and/or salvage for reuse a minimum of 50 percent of the nonhazardous construction and demolition waste (Section No. 5.408). The Los Angeles County Construction and Demolition Debris Recycling and Reuse Ordinance (Chapter 20.87) also requires the recycling or reuse of at least 50 percent of all construction and demolition debris. Furthermore, the Project would implement source reduction and recycling strategies to comply with the County's Roadmap to a Sustainable Waste Management Future, which established a goal to divert 80 percent of solid waste generated in the unincorporated County areas from landfills by 2025, 90 percent by 2035, and 95 percent or more by 2045. Because the Harbor-UCLA Medical Center is a public facility under the control of the Department of Public Works, which also is responsible for waste collection and recycling efforts at the Medical Center Campus, it is anticipated that the Project would implement all applicable regulations related to solid waste and recycling at the facility, and thus impacts in this regard would be less than significant.

### e. Cumulative Impacts

Cumulative impacts associated with disposal of waste materials on landfill facilities are a regional phenomenon addressed by regional agencies, in this case the County of Los Angeles. County planning for future landfill capacity addresses expected cumulative demand over 15-year planning increments. The Los Angeles County Integrated Waste Management Plan, 2014 Annual Report anticipates a 10.1 percent increase in population growth within the County of Los Angeles by 2029 and an increase of 15.0 percent in employment.<sup>20</sup>

With regard to construction, the above analysis indicates that the Project's contribution to cumulative impacts would include 166,530 tons of soil and 179,053 tons of demolition and construction debris for a combined total of 349,725 tons of C&D waste, or 174,863 tons after accounting for 50 percent mandatory diversion. The 26 related projects identified in Table 3-1 in Chapter 3.0 of this Draft EIR would also contribute to the generation of C&D waste materials. All of the related projects are located within Los Angeles County and would therefore be subject to the same C&D recycling regulations as the proposed Project. Further, all of the related projects would have the same options for disposal as the proposed Project; i.e. the County's Azusa Land Reclamation landfill or one of the State-permitted Inert Debris Engineered Fill Operation facilities. As indicated above, the remaining disposal capacity for the Azusa Land Reclamation facility is 59.8 million tons; and the Department of Public Works estimates that the remaining life span of the Azusa Land Reclamation is 189 years based on the 2014 average disposal rate of 1,215 tons per day.<sup>21</sup> Given this future capacity, independent of the additional capacity at the State-permitted Inert Debris Engineered Fill Operation facilities, it is expected that all C&D waste can be accommodated for the foreseeable future, and cumulative impacts regarding the disposal of C&D waste would not occur.

With regard to future solid waste generation from the operations of new development, the contribution of the 26 related projects along with the proposed Project would contribute an increment to the overall cumulative demand for landfill disposal. As shown in **Table 4.M.3-4, Cumulative Solid Waste Generated - Operations**, the estimated solid waste requiring landfill disposal for the 26 related projects, not accounting for diversion and recycling, would be 32,926 pounds per day or 6,009 tons per year. The cumulative annual disposal inclusive of the Project would be 36,564 pounds per day or 6,673 tons per year. The cumulative daily generation, therefore, would be approximately 18.3 tons per day. Again, these estimates do not take into account the amount of solid waste that would potentially be diverted via source reduction and recycling programs within the County, which is assumed to be approximately 60 percent. The cumulative annual solid waste generation of 6,673 tons, not accounting for diversion, would represent 0.073-percent of the County's annual waste generation of 9.2 million tons per year, and 0.006-percent of the remaining 112-million-ton capacity in the County's Class III landfills.

<sup>20</sup> Los Angeles County Department of Public Works, *Los Angeles County Integrated Waste Management Plan, 2014 Annual Report, December 2015, Appendix E-2, Table 4.*

<sup>21</sup> *Ibid*, Page 32.

Table 4.M.3-4

## Cumulative Solid Waste Generated - Operations

Land Uses	Quantity (units/ rooms/ square feet)	Solid Waste Generation Factor <sup>a</sup>	Solid Waste Generated (pounds/day)	Solid Waste Generated (tons/year)
<b>Related Projects</b>				
Multifamily Residential <sup>b</sup>	2,769	4 lbs/unit/day	11,076	2,021.37
Single Family Residential	66	10 lbs/unit/day	660	120.45
Retail	1,580,640	6 lbs/ksf/day	9,483.84	1,730.80
Auto Dealer and Service Station <sup>c</sup>	10,198	9 lbs/ksf/day	91.78	16.75
Office	480	6 lbs/ksf/day	2.88	0.53
Medical Office <sup>d</sup>	11,340	6 lbs/ksf/day	68.04	12.42
Hotel	300	2 lbs/room/day	600.00	109.50
Restaurant	81,125	5 lbs/ksf/day	405.63	74.03
Other Services <sup>e</sup>	296,800	31.2 lbs/ksf/day	9,260.16	1,689.98
Manufacturing/Warehouse	84,015	14.2 lbs/ksf/day	1,193.01	217.73
Industrial	17,000	5 lbs/ksf/day	85.00	15.51
<b>Total</b>			<b>32,926.34</b>	<b>6,009.07</b>
<b>Proposed Project (Net Increase)</b>			<b>3,637.26</b>	<b>663.81</b>
<b>Cumulative Solid Waste Generation</b>			<b>36,563.60</b>	<b>6,672.88</b>

Notes: ksf = thousand square feet s.f. = square feet lbs = pounds

<sup>a</sup> Generation factors are taken from CalRecycle Waste Characterization: Estimated Solid Waste Generation and Disposal Rates (<http://www.calrecycle.ca.gov/WASTECHAR/WasteGenRates/>).

<sup>b</sup> Multifamily Residential includes apartments and condos.

<sup>c</sup> Auto Dealer and Service Station includes Automated Car Wash and Automobile Care Center.

<sup>d</sup> Medical Office uses waste generation factors for large offices.

<sup>e</sup> Other services includes Public Venues, Recreation, and a Transit Center.

Source: PCR Services Corporation, 2016.

In 2029, the year prior the anticipated buildout of the Master Plan Project, the County expects that cumulative demand for use of the currently available 112 million tons of capacity would be approximately 99.8 million tons. This would leave an available capacity of approximately 12.2 million tons of capacity to serve the cumulative development in the Project vicinity, even without the provision of additional capacity compared to existing conditions. Further, the 2014 daily disposal rate in the County landfills was 14,567 tons per day versus a maximum daily capacity of 28,549 tons per day, resulting in an additional permitted daily capacity of 13,982 tons per day.<sup>22</sup> The additional cumulative daily generation volume of 18.3 tons per day would be approximately 0.13-percent of the additional daily capacity, assuming no diversion. With 60 percent diversion it would be approximately 0.005 percent.

<sup>22</sup> Los Angeles County Department of Public Works, Los Angeles County Integrated Waste Management Plan, 2014 Annual Report, December 2015. Appendix E-2 Table 1.

As noted above, the CoIWMP 2014 Annual Report indicates that future disposal needs over the next 15-year planning horizon (2029) would be adequately met through the use of in-County and out-of-County facilities through a number of strategies that would be carried out over the years.

As discussed above, the Project, in conjunction with other related projects in the area, would not generate solid waste in sufficient quantities to substantially reduce the County's existing estimated landfill capacity or otherwise limit the County's ability to address ongoing landfill capacity needs via existing capacity and other options for increasing capacity. Therefore, the waste generation from the cumulative development would be less than significant.

#### **4. MITIGATION MEASURES**

No mitigation measures are required, as impacts would be less than significant given compliance with regulatory requirements related to solid waste disposal and recycling.

#### **5. LEVEL OF SIGNIFICANCE AFTER MITIGATION**

Project-specific and cumulative impacts related to solid waste disposal would be less than significant.