

## 5. Environmental Analysis

### 5.16 UTILITIES AND SERVICE SYSTEMS

This section of the Draft Environmental Impact Report (DEIR) discusses the current conditions for utility providers, including water, wastewater, stormwater, solid waste, electricity, and natural gas services, and the Century Villages at Cabrillo Specific Plan's (Specific Plan) effects on these providers and their service systems.

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Villages at Cabrillo Specific Plan (Specific Plan) to impact utilities and services systems. Utilities and services systems include wastewater (sewage) treatment and collection systems, water supply and distribution systems, storm drainage, solid waste collection and disposal, and other public utilities. Impacts to hydrology (e.g., flooding) and water quality are provided in Section 5.8, *Hydrology and Water Quality*. Storm drainage, though discussed below, is also addressed in Section 5.8, *Hydrology and Water Quality*.

The analysis in this section is based in part on the following sources:

- *Utility Infrastructure Technical Report: Wastewater*, KPFF Consulting Engineers, June 16, 2020 (Appendix G1)
- *Utility Infrastructure Technical Report: Water*, KPFF Consulting Engineers, July 10, 2020 (Appendix G3)
- *Technical Report, Water Resources*, KPFF, June 19, 2020 (Appendix G2)
- *Water Supply Assessment*, Long Beach Water, May 28, 2020 (Appendix G4)

These technical reports are provided in Appendices G1, G2, G3, and G4 of this DEIR, as indicated above.

#### 5.16.1 Wastewater Treatment and Collection

##### 5.16.1.1 ENVIRONMENTAL SETTING

###### Regulatory Background

###### *Federal*

###### ***Clean Water Act and National Pollution Elimination Discharge System***

The Clean Water Act establishes regulations to control the discharge of pollutants into the waters of the United States and regulates water quality standards for surface waters (US Code, Title 33, §§ 1251 et seq.). Under the act, the US Environment Protection Agency (EPA) is authorized to set wastewater standards and runs the National Pollutant Discharge Elimination System (NPDES) permit program. Under the NPDES program, permits are required for all new developments that discharge directly into Waters of the United States. The federal Clean Water Act requires wastewater treatment of all effluent before it is discharged into surface waters. NPDES permits for such discharges in the project region are issued by the Los Angeles Regional Water Quality Control Board (RWQCB).

## 5. Environmental Analysis

### UTILITIES AND SERVICE SYSTEMS

#### *State*

##### ***State Water Resources Control Board: Statewide General Waste Discharge Requirements***

The General Waste Discharge Requirements specify that all federal and state agencies, municipalities, counties, districts, and other public entities that own or operate sanitary sewer systems greater than one mile in length that collect and/or convey untreated or partially treated wastewater to a publicly owned treatment facility in the State of California need to develop a Sewer Master Plan (“Master Plan”). The Master Plan evaluates existing sewer collection systems and provides a framework for undertaking the construction of new and replacement facilities in order to maintain proper levels of service. The Master Plan includes inflow and infiltration studies to analyze flow monitoring and water use data, a capacity assurance plan to analyze the existing system with existing land use and unit flow factors, a condition assessment and sewer system rehabilitation plan, and a financial plan with recommended capital improvements and financial models.

##### ***General Pretreatment Regulations for Existing and New Sources of Pollution***

The General Pretreatment Regulations establish the responsibilities of Federal, State, and local government, industry, and the public to implement National Pretreatment Standards to control pollutants which pass through or interfere with treatment processes in Publicly Owned Treatment Works (POTW) or which may contaminate sewage sludge. Pretreatment standards are pollutant discharge limits which apply to industrial users.

#### *Local*

##### ***Long Beach Water Reclamation Plant NPDES Permit***

Wastewater discharge requirements for the Long Beach Reclamation Plant are detailed in NPDES No. CA0054119, Order No. R4-2003-0123. The permit includes the conditions needed to meet minimum applicable technology-based requirements. The permit includes limitations more stringent than applicable federal technology-based requirements where necessary to achieve the required water quality standards.

##### ***Los Angeles County Sanitation District’s Connection Fees***

Capital improvements to the Los Angeles County Sanitation District’s (LACSD) water reclamation plants are funded from connection fees charged to new developments, redevelopments, and expansions of existing land uses. The connection fee is a capital facilities fee used to provide additional conveyance, treatment, and disposal facilities (capital facilities) required by new users connecting to the LACSD’s sewerage system or by existing users who significantly increase the quantity or strength of their wastewater discharge. The Connection Fee Program ensures that all users pay their fair share for any necessary expansion of the system. Estimated wastewater generation factors used in determining connection fees in LACSD’s 22 member districts are set forth in the Connection Fee Ordinance for each respective district available on LACSD’s website. Most of the City of Long Beach, including the Plan Area, is in District 3 of the Sanitation District; (LACSD 2016).

##### ***Long Beach Water Department’s Rules, Regulations, and Charges***

In 2011, the Board of Water Commissioners adopted by resolution the *Rules, Regulations and Charges Governing Potable Water, Reclaimed Water, Sewer Service, and the Water Conservation and Water Supply Shortage Plan* (“Rules,

## 5. Environmental Analysis UTILITIES AND SERVICE SYSTEM

Regulations, and Charges”), which govern potable water, reclaimed water, sewer service, and the water conservation and water supply shortage plan provided by the Long Beach Water Department (LBWD 2017a).

In accordance with Part 18 (Sewer Capacity Charge) of the Rules, Regulations, and Charges, new residential and commercial development in the City is required to pay a sewer capacity fee. Commercial (all added plumbing fixtures) and residential uses (new units only) are required to pay the fees set forth in Appendix B of the Rules, Regulations, and Charges which are currently set at \$109.05 for both of these land uses (Long Beach 2019).

### ***Long Beach Water Department Sewer System Management Plan***

The purpose of the Sewer System Management Plan (SSMP) is to provide a plan and schedule to properly manage, operate, and maintain all parts of LBWD’s sewer system. The overall objective of LBWD SSMP’s program implementation is to prevent and minimize sanitary sewer overflows (SSO) and to mitigate SSOs that do occur. According to the State Water Resources Control Board’s (SWRCB) Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (Order No. 2006-0003- DWQ), the SSMP must be updated to incorporate changes every 5 years (LBWD 2019a).

### ***City of Long Beach Municipal Code***

**Chapter 15.01, Sewers**—Rules, Regulations and Charges, of the Municipal Code sets forth the current edition of the rules, regulations and charges governing water and sewer service as approved by the Board of Water Commissioners.

## Existing Conditions

### *Wastewater Conveyance*

LBWD owns, operates, and maintains over 700 miles of sanitary sewer lines and delivers over 40 million gallons of wastewater per day to the Long Beach Water Reclamation Plant (WRP) (LBWD 2019b).

The LBWD’s sanitary sewer system comprises of:

- 712 miles of gravity mains
- 7.6 miles of force mains (2-inch to 12-inch diameter)
- 28 sewer lift stations
- 115,133 lateral connections
- 16,158 sewer maintenance manholes (LBWD 2019a)

The Plan Area’s existing sewer infrastructure was constructed in the 1960’s and consists of two private sanitary sewer main lines which tie into a public point of connection (POC) along Technology Place. Each private main line separately branches off to buildings serving the West and East portions of the campus. Based on available record data provided by the LBWD, the sewer main connected to the public POC West of River Avenue is a 10-inch vitrified clay pipe (VCP) and has a calculated capacity of 0.300 cubic feet per second (cfs) (193,895

## 5. Environmental Analysis

### UTILITIES AND SERVICE SYSTEMS

gallons per day (gpd)). The sewer mains connected to the public POC East of River Avenue are two 8-inch VCPs with a total calculated capacity of 0.864 cfs (558,418 gpd) (KPFF 2020b).

#### *Wastewater Treatment*

The WRP is located at 7400 East Willow Street in the City and is owned and operated by the LACSD. The plant occupies 17 acres west of Interstate 605 south of Katella Avenue, and began operation in 1973. The WRP provides primary, secondary and tertiary treatment and serves a population of approximately 250,000 people. The WRP treats about 18 million gallons of wastewater per day, though it has the capacity to treat up to 25 million gallons of wastewater per day. (LBWD 2019b, 2019c).

Almost 6 million gallons per day of the recycled water is used at over 60 sites. Reuses include landscape irrigation of schools, golf courses, parks, and greenbelts by the City, the re-pressurization of oil-bearing strata off the coast of Long Beach, and the replenishment of the Central Basin groundwater supply from water processed at the Leo J. Vander Lans Advanced Water Treatment Facility. The remainder is discharged to Coyote Creek (LBWD 2019c).

#### 5.16.1.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project:

- U-1        Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.
  
- U-3        Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

#### 5.16.1.3 ENVIRONMENTAL IMPACTS

##### Impact Analysis

The following impact analysis addresses thresholds of significance for which the Initial Study (Appendix A) disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

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**Impact 5.16-1: Existing wastewater infrastructure and treatment facilities would be able to accommodate project-generated wastewater demands. [Threshold U-1 and U-3]**

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#### *Wastewater Conveyance*

Wastewater generation would not occur during the construction phase of the Specific Plan as a result of construction workers on-site. Construction workers would utilize portable restrooms, which would not

## 5. Environmental Analysis UTILITIES AND SERVICE SYSTEM

contribute to wastewater flows to the City's wastewater system. Thus, wastewater generation from construction activities is not anticipated to cause any increase in wastewater flows, and no impact would occur.

Based on the type of use and generation factors, the Specific Plan would generate a net increase of approximately 0.12 cfs (79,280 gpd) of wastewater in which 0.08 cfs (53,455 gpd) is collected from the West private main line and 0.04 cfs (25,825 gpd) from the East private main line (KPPF 2019a).

The existing capacity of the 10-inch sewer main at the public POC West of River Ave is approximately 0.300 cfs at 50% full and the existing capacity of the two 8-inch sewer mains connected to the public POC's East of River Ave is approximately 0.864 cfs at 50% full; 50% full, also known as 50% depth over diameter, is the local agency requirement for sewer pipe capacity. These sewer mains serve only the Plan Area since the Plan Area is the most upstream development on this particular public system.

At full buildout of the Specific Plan, the private sewer main line in the West portion of the campus will contribute a net increase of approximately 0.08 cfs of sewage into the public sewer system West of River Avenue, which results in approximately 27% of the pipe's capacity at 50% full. Similarly, at full buildout of the Specific Plan, the private sewer main line in the East portion of the campus will contribute a net increase of approximately 0.04 cfs of sewage into the public sewer system East of River Avenue, which results in approximately 5% of the pipe's capacity at 50% full. Since sewer generation associated with implementation of the Specific Plan would be within the available sewer infrastructure capacity, it would not require the construction of new or expanded sewer lines, and impacts on wastewater infrastructure would be less than significant.

### *Wastewater Treatment*

The Specific Plan would generate a net increase of 79,280 gpd of sewer that needs to be treated at the WRP, which has a residual capacity of 7 million gpd. Therefore, the Specific Plan will contribute an increased sewage flow equivalent to approximately 1% of WRP's residual capacity; impacts would be less than significant.

The WRP is required by federal and state law to meet applicable standards of treatment plant discharge requirements subject to NPDES NO. CA0054119, Order No. R4-2003-0123. The permit includes the conditions needed to meet minimum applicable technology-based requirements. The NPDES permit regulates the amount and type of pollutants that the system can discharge into receiving waters. The WRP is operating in compliance with and would continue to operate subject to state waste discharge requirements and federal NPDES permit requirements, as set forth in the NPDES permit and order. Furthermore, the Specific Plan will comply with the LBWD's Rules, Regulations, and Charges.

The additional wastewater (quantity and type) that would be generated by the Specific Plan and treated by the WRP would not impede the treatment plant's ability to continue to meet its wastewater treatment requirements. Impacts on wastewater treatment would be less than significant.

***Level of Significance Before Mitigation:*** Less than Significant.

## 5. Environmental Analysis

### UTILITIES AND SERVICE SYSTEMS

#### 5.16.1.4 CUMULATIVE IMPACTS

The area considered for cumulative impacts to wastewater treatment is the WRP's service area. The area considered for cumulative impacts to wastewater conveyance systems is the LBWD's service area.

Future growth in the City would result in increases in wastewater flow. These include increases in residential, commercial, and industrial effluent. The City's SSMP projects daily wastewater generation in line with land use changes associated with the General Plan. Sewer collection system expansions and upgrades would be based on the SSMP. Through the use of connection fees and agreements, LBWD is able to maintain and expand its wastewater collection system as necessary and is able to ensure that new developments pay their fair-share costs associated with increased demand. Therefore, there would be no significant cumulative impacts on wastewater collection.

The City's wastewater effluent is directed to WRP operated by LACSD. Future development in the City would comply with the LBWD's Rules, Regulations, and Charges to ensure that the WRP continues to operate in compliance with its NPDES permit. Furthermore, future development would also comply with the requirements of the LACSD's Connection Fee Program to fund future capital improvement programs. Accordingly, cumulative impacts on wastewater infrastructure and treatment would be less than significant.

#### 5.16.1.5 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval impact 5.16-1 would be less than significant.

#### 5.16.1.6 MITIGATION MEASURES

No mitigation measures required.

#### 5.16.1.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval impact 5.16-1 would be less than significant.

### 5.16.2 Water Supply and Distribution Systems

#### 5.16.2.1 ENVIRONMENTAL SETTING

##### Regulatory Background

##### *Federal*

##### ***Federal Safe Drinking Water Act***

The Safe Drinking Water Act (SDWA), the principal federal law intended to ensure safe drinking water for the public, was enacted in 1974 and has been amended several times since it came into law. The Act authorizes the EPA to set national standards for drinking water, called the National Primary Drinking Water Regulations, to protect against both naturally-occurring and man-made contaminants. These standards set enforceable

## 5. Environmental Analysis UTILITIES AND SERVICE SYSTEM

maximum contaminant levels in drinking water and require all water providers in the United States to treat water to remove contaminants, except for private wells serving fewer than 25 people. In California, the SWRCB conducts most enforcement activities. If a water system does not meet standards, it is the water supplier's responsibility to notify its customers.

### *State*

#### ***Porter-Cologne Water Quality Control Act***

Under the Porter-Cologne Water Quality Control Act (Water Code Sections 13000 et seq.), which was passed in California in 1969 and amended in 2013, the SWRCB has authority over State water rights and water quality policy. This Act divided the state into nine regional basins, each under the jurisdiction of a Regional Water Quality Control Board (RWQCB) to oversee water quality on a day-to-day basis at the local and regional level. RWQCBs engage in a number of water quality functions in their respective regions, including regulating all pollutant or nuisance discharges that may affect either surface water or groundwater.

#### ***California Senate Bill 610 and 221***

Senate Bill (SB) 610 and SB 221 were passed in 2001 to establish coordination between the local water and land use decisions and ensure that California cities and communities are provided with adequate water supply. Specific projects are required to prepare a Water Supply Assessment (WSA). The WSA is composed of information regarding existing and forecasted water demands, as well as information pertaining to available water supplies for the new development.

The following projects are required to prepare a WSA:

- Residential developments consisting of more than 500 homes, or
- A business employing more than 1,000 people or having more than 500,000 square feet;
- A commercial office building employing more than 1,000 people or having more than 250,000 square feet of floor space;
- A hotel having more than 500 rooms;
- An industrial complex with more than 1,000 employees and occupying more than 40 acres of land; or
- A mixed-use project that requires the same or greater amount of water as a 500 dwelling-unit project.

Based on the Specific Plan's characteristics, a WSA is required.

SB 221 requires written verification that there is sufficient water supply available for new residential subdivisions that include over 500 dwelling units or meet the other requirements listed above. The verification must be provided before commencement of construction for the project.

#### ***Urban Water Management Planning Act***

The Urban Water Management Planning Act of 1983 (Water Code Sections 10610 et seq.) requires water suppliers to:

## 5. Environmental Analysis

### UTILITIES AND SERVICE SYSTEMS

- Plan for water supply and assess reliability of each source of water over a 20-year period in 5-year increments.
- Identify and quantify adequate water supplies, including recycled water, for existing and future demands in normal, single-dry, and multiple-dry years.
- Implement conservation and the efficient use of urban water supplies.

Significant new requirements for quantified demand reductions have been added by the Water Conservation Act of 2009 (Senate Bill 7 of Special Extended Session 7 or SBX7-7), which amended the Urban Water Management Planning Act and adds new water conservation provisions to the Water Code.

#### ***Mandatory Water Conservation***

Following Governor Brown's declaration of a state of emergency on July 15, 2014, the SWRCB adopted Resolution No. 2014-0038. The emergency regulation was partially repealed by Resolution No. 2017-0024. The remaining regulation prohibits several activities, including (1) the application of potable water to outdoor landscapes in a manner that causes excess runoff; (2) the use of a hose to wash a motor vehicle except where the hose is equipped with a shut-off nozzle; (3) the application of potable water to driveways and sidewalks; (4) the use of potable water in nonrecirculating ornamental fountains; and (5) the application of potable water to outdoor landscapes during and within 48 hours after measurable rainfall. The SWRCB resolution also directed urban water suppliers to submit monthly water monitoring reports to the SWRCB.

#### ***The Water Conservation Act of 2009 (Senate Bill X7-7)***

The Water Conservation Act of 2009, SB X7-7, requires all water suppliers to increase water use efficiency. The legislation sets an overall goal of reducing per capita water use by 20 percent by 2020, with an interim goal of a 10 percent reduction in per capita water use by 2015. Effective in 2016, urban retail water suppliers who do not meet the water conservation requirements established by this bill are not eligible for state water grants or loans. The SB X7-7 requires that urban water retail suppliers determine baseline water use and set reduction targets according to specified standards, it also requires that agricultural water suppliers prepare plans and implement efficient water management practices.

#### ***Water Conservation in Landscaping Act of 2006 (AB 1881)***

The Water Conservation in Landscaping Act of 2006 (AB 1881) requires the Department of Water Resources (DWR) to update the State Model Water Efficient Landscape Ordinance (MWELo) by 2009. The State's model ordinance was issued on October 8, 2009. Under AB 1881, cities and counties are required to adopt a State updated model landscape water conservation ordinance by January 31, 2010, or to adopt a different ordinance that is at least as effective in conserving water as the updated Model Ordinance. It also requires reporting on the implementation and enforcement of local ordinances, with required reports due by December 31, 2015 (DWR 2019).

#### ***2015 Update of the State Model Water Efficient Landscape Ordinance (Per Governor's Executive Order B-29-15)***

To improve water savings in the landscaping sector, the DWR updated the Model Ordinance in accordance with Executive Order B-29-15. The Model Ordinance promotes efficient landscapes in new developments and

## 5. Environmental Analysis UTILITIES AND SERVICE SYSTEM

retrofitted landscapes. The Executive Order calls for revising the Model Ordinance to increase water efficiency standards for new and retrofitted landscapes through more efficient irrigation systems, greywater usage, and on-site stormwater capture, and by limiting the portion of landscapes that can be covered in turf.

New development projects that include landscaped areas of 500 square feet or more, including residential, commercial, industrial, and institutional projects that require a permit, plan check, or design review, are subject to the Model Ordinance. The previous landscape size threshold for new development projects ranged from 2,500 square feet to 5,000 square feet.

Chapter 13.02 of the MMWD Code adopts an ordinance that incorporates updates consistent with the 2015 State MWELo update.

### *Local*

#### ***City of Long Beach Urban Water Management Plan***

Long Beach is required to prepare an Urban Water Management Plan (UWMP) pursuant to Water Code Sections 10610 through 10656 of the Urban Water Management Planning Act, effective January 1, 1984. The Urban Water Management Planning Act requires all urban water suppliers to prepare, adopt, and file a UWMP with the DWR every five years. The Long Beach 2015 UWMP outlines current water demands, sources, and supply reliability to the City by forecasting water use based on climate, demographics, and land use changes in the City. The plan also provides demand management measures to increase water use efficiency for various land use types, and details a water supply contingency plan in case of shortage emergencies (LBWD 2016).

#### ***City of Long Beach Municipal Code***

The following provisions from the LBMC focus on water supply impacts and water conservation:

- **Chapter 2.38 (Sustainable City Commission).** This chapter establishes the Sustainable City Commission, which provides advisory policy recommendations to the City Council on issues relating to the environment including recommendations on a sustainable City plan, efforts or programs to address environmental issues such as air quality, water quality, and resource conservation relating to the protection and integrity of the natural environment, and programs to increase education and awareness of the environment. The Sustainable City Commission also serves as a forum for community discussion of these environmental issues and to encourage input and participation from all sectors.
- **Chapter 18.48 (Fire Code).** This chapter sets forth the requirements in the Fire Code. Section 18.48.770 establishes fire water flow standards consistent with the California Fire Code.
- **Chapter 18.47 (Green Building Standards Code).** Adopts by reference the most current (2019) California Green Building Standards Code (CALGreen).
- **Chapter 21.42 (Landscaping Standards), Section 21.42.035 (Special Requirements for Water Efficient Landscaping).** Outlines the types of projects that are required to adhere to the provisions of this section.

## 5. Environmental Analysis UTILITIES AND SERVICE SYSTEMS

### Existing Conditions

#### *Water Supply*

LBWD provides water service to residents, businesses, and other users in the City, including the Plan Area. As of 2017, the LBWD's service area encompassed approximately 50 square miles and a population of 480,173, with some customers outside the City limits (LBWD 2017b). The primary source of water is groundwater extracted locally from the Central Basin. Other water supplies include purchased imported water from the Metropolitan Water District (MWD) and recycled water from the Long Beach WRP.

Every urban water supplier is required to assess the reliability to provide water service to its customers under normal, dry, and multiple dry water years. The 2015 UWMP states that the City will be able to meet projected supplies between 2020 and 2040 during normal years, single dry years, and multiple dry years (see Table 5.16-1).

**Table 5.16-1 Normal, Single Dry, and Multiple Dry Year Supply and Demand (AFY)**

	2020	2025	2030	2035	2040
<b>Normal Year</b>					
Supply Totals	77,291	77,791	78,291	78,791	79,291
Demand Totals	63,643	63,410	63,454	63,609	64,137
<b>Surplus</b>	13,648	14,381	14,386	15,182	15,154
<b>Single Dry Year</b>					
Supply Totals	77,291	77,791	78,291	78,791	79,291
Demand Totals	63,643	63,410	63,454	63,609	64,137
<b>Surplus</b>	13,648	14,381	14,386	15,182	15,154
<b>Multiple Dry Year</b>					
Supply Totals	77,291	77,791	78,291	78,791	79,291
Demand Totals	63,643	63,410	63,454	63,609	64,137
<b>Surplus</b>	13,648	14,381	14,386	15,182	15,154

Note: Includes both potable and recycled water supplies/demands.  
Source: Long Beach Water Department, 2016. 2015 UWMP

#### *Water Conveyance*

As of 2015, there were approximately 90,000 active potable water customer accounts throughout the City. LBWD also provides irrigation services that supply water solely for the purposes of landscape irrigation. In 2015 LBWD had just over 1,200 active irrigation services. Recycled water connections for the same year amounted to 129 connections.

The City currently owns and operates:

- 29 active groundwater wells
- 907 miles of water mains

## 5. Environmental Analysis UTILITIES AND SERVICE SYSTEM

- Three wells (Wells 41, 44, and 52) currently undergo treatment at the John Gavin Ion Exchange Plant (LBWD 2016).

The existing on-site water system is owned by the LBWD and consists of 6- to 8-inch main lines located in the private streets. There are existing easements within the private streets for the water system. In compliance with existing standard development requirements and the LBWD, Century Villages at Cabrillo pays the required fees to connect to the water distribution system.

### *Water Treatment*

LBWD pumps groundwater through 29 active wells throughout the service area and then transports the extracted groundwater water through a series of collection lines to its groundwater treatment plant. The treatment plant is also home to LBWD's water quality laboratories, which conduct over 50,000 water quality tests per year on LBWD's water supply (LBWD 2016).

### 5.16.2.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project:

- U-1 Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.
- U-2 Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.

### 5.16.2.3 ENVIRONMENTAL IMPACTS

#### Impact Analysis

The following impact analysis addresses the threshold of significance for which the Initial Study (Appendix A) identified potentially significant impacts. The applicable threshold is identified in brackets after the impact statement.

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**Impact 5.16-2:** Available water supplies are sufficient to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years; existing water infrastructure and treatment facilities would be able to accommodate project-generated water demands. [Thresholds U-1 and U-2]

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#### Water Supply

##### *Construction*

Construction activities would result in a temporary increase in water demand. Water use would be associated with earthwork and soil compaction, dust control, mixing and placement of concrete, equipment and site

## 5. Environmental Analysis

### UTILITIES AND SERVICE SYSTEMS

cleanup, irrigation for plant and landscaping establishment, water line testing and flushing, and other related short-term activities. The amount of water used during construction would vary depending on weather, soil conditions, the size of the area under construction, and the specific activities being performed. These activities would occur intermittently throughout the construction period and would be temporary in nature. However, the short-term and intermittent water use during construction is not expected to be substantial. Water demand generated by construction activities would be offset by the reduction in water consumption resulting from the removal of the existing buildings to be carried out during different phases. Additionally, as concluded in LBWD's 2015 UWMP, projected water demand for the City will be met by available supplies during a normal year, single dry year, and multiple dry year hydrological conditions through 2040, as well as the intervening years. Therefore, the Specific Plan's construction impacts on water supply would be less than significant.

#### *Operation*

Development of the Specific Plan would increase the long-term water demand associated with consumption, operational uses, maintenance, and other on-site activities. On May 28, 2020, the Long Beach Board of Water Commissioners approved the WSA for the Specific Plan, pursuant to California Water Code Sections 10910 through 10914 (see Appendix G.4 of this DEIR). The WSA estimated that the Specific Plan will result in an additional water demand of 192.3 acre-feet per year (AFY). The Board determined that there would be adequate water supplies available during normal, single-, and multiple-dry water years to meet the projected water demand of the Specific Plan, in addition to the existing and other planned future uses of LBWD's system. The finding is based on LBWD's reliable supply of groundwater and imported water, the expanded use of recycled water, continued success with water conservation programs, and the growth accounted for within the LBWD 2015 Urban Water Management Plan.

The WSA is an extremely conservative estimate of water demand based on a variety of factors. First, the WSA is based on the conservative estimate that each new dwelling unit will use an amount of water equal to that of a typical Long Beach single family home (500 single family homes used 130 AFY) and it overestimates the net increase in dwelling units by 20 units. In calendar year 2015, 500 multi-family (apartments and condominiums) dwelling units in Long Beach averaged 78 AFY, or 60 percent of water use for single family homes. Second, nonresidential water demand was based on commercial water demand factors from the "Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2001". The guidebook sets 500 dwelling units as being equivalent to 250,000 sf of commercial use in terms of water demand. Therefore, 250,000 sf of commercial use has a water demand of 130 AFY. Third, the water demand does not account for water conservation features that would be implemented as part of the Specific Plan and required by the City, including LBMC Chapter 21.42, Landscaping Standards. The Specific Plan development will include all State mandated water-saving features, including water-efficient faucets, shower heads, and toilets; landscape improvements would include drought tolerant landscaping and incorporate California native species.

To estimate actual water demand, KPFF estimated water demand based on demand factors specific to the product type proposed in the Specific Plan (see Appendix G.3, of this DEIR). Water demand for residential was based on an average demand for studios and 1-, 2-, and 3-bedroom apartments; and factors for residential and commercial were based on 2019 rates.

5. Environmental Analysis  
UTILITIES AND SERVICE SYSTEM

As shown in Table 5.16-2, it is estimated that the Specific Plan would result in a net increase in daily domestic water demand of approximately 93.4 AFY, or approximately 49 percent of that assumed in the WSA.

**Table 5.16-2 Water Demand Estimate for the Specific Plan**

Land Use	Removed	Proposed	Net Increase	Domestic Water Demand Rate	Net Increase in Water (AFY)
Residential Units	235 DU	750 DU	515 DU	0.15 AFY/ DU <sup>a</sup>	77.3
Amenities	10,030 SF	77,000 SF	66,970 SF	0.1344 AFY/TSF <sup>b</sup>	9.0
Education	10,200 SF	15,000 SF	4,800 SF	0.1344 AFY/TSF <sup>b</sup>	0.6
Commercial/Retail	0 SF	17,000 SF	17,000 SF	0.0560 AFY/TSF <sup>b</sup>	1.0
Admin/Services	7,250 SF	48,000 SF	40,750 SF	0.1344 AFY/TSF <sup>b</sup>	5.5
<b>Total Net Increase</b>	-			-	<b>93.4</b>

Source: KPFF, 2020c (see Table 3 of Appendix G.3 of this DEIR).

<sup>a</sup> Demand Factors for residential units are based on the average of studio and apartments (1-bedroom, 2-bedroom, 3-bedroom) per LA County Sewer Capacity Availability Requests (SCAR) (latest version as of 2019).

<sup>b</sup> Demand Factors for commercial land use are based on the average of studio and apartments (1-bedroom, 2-bedroom, 3-bedroom) per LA County Sewer Capacity Availability Requests (SCAR) (latest version as of 2019).

AFY = Acre-feet per year  
SF = Square feet  
TSF = Thousand square feet  
DU = Dwelling unit

Based on LBWD’s 2015 UWMP water demand projections through 2040, the water demand for the City in 2040 during normal year, single dry year, and multiple dry year hydrological conditions is expected to reach approximately 64,137 AFY with an available supply of 79,291 AFY (LBWD 2016). The Specific Plan’s estimated net increase in water demand of approximately 93.4 AFY is well within the City’s residual water supply. Therefore, LBWD would be able to meet the water demand for the Specific Plan in combination with existing and planned water demand in its future service area.

**Water Infrastructure**

*Construction*

The Specific Plan would require construction of new, on-site water distribution lines to serve the new buildings. Construction impacts associated with the installation of water distribution lines would primarily involve trenching in order to place the water distribution lines below the surface and would be limited to on-site water distribution, with minor off-site work associated with connections to the public main. Prior to ground disturbance, project contractors would coordinate with LBWD to identify the locations and depth of all lines. LBWD would be notified in advance of proposed ground disturbance activities to avoid water lines and disruption of water service. Therefore, impacts on water infrastructure associated with construction activities would be less than significant.

*Operation*

Water service to the Plan Area would continue to be provided by the LBWD for domestic and fire protection uses. While domestic water demand is typically the main contributor to water consumption, fire flow demands

## 5. Environmental Analysis

### UTILITIES AND SERVICE SYSTEMS

have a much greater instantaneous impact on infrastructure and therefore are the primary means for analyzing infrastructure capacity. Per the current California Fire Code, fire flow requirements are based on building types and floor area, and range from 1,500 to 8,000 gallons per minute at 20 pounds per square inch. In accordance with LBMC Section 18.48.420, all new commercial, industrial, and non-residential buildings that require two or more exits or that are greater than 3,000 square feet shall be protected by an automatic sprinkler system. Per the LBMC, fire flows can be reduced by up to 50 percent when fire sprinklers are installed. Prior to the issuance of building permits, the Long Beach Fire Department (LBFD) would be required to grant approval of the final building design, including all fire prevention and suppression systems, which would ensure the Specific Plan is developed pursuant to Fire Code requirements. In addition, on-site water connections would be constructed, as necessary, to comply with the fire flow set for the Specific Plan by the LBFD during the plan check process. The Specific Plan would also implement the requirements of the Green Building Standards Code and the City's Landscaping Standards.

With implementation of on-site water system improvements, the Specific Plan would not exceed the available capacity within the distribution infrastructure that would serve the Plan Area. Therefore, impacts with regard to water infrastructure would be less than significant.

***Level of Significance Before Mitigation:*** Less than Significant.

#### 5.16.2.4 CUMULATIVE IMPACTS

##### *Water Supply*

The geographic context for the cumulative impact analysis on water supply is the LBWD service area (i.e., the City). The LBWD is required to prepare and updated UWMP every five years to plan and provide for water supplies to serve existing and projected demands over a 20-year horizon. The 2015 UWMP prepared by LBWD accounts for existing development within the City, as well as projected growth through the year 2040. The UWMP water demand projections assumes population, housing, and employment growth anticipated in the City based on both historical trends and official forecasts from SCAG and the California Department of Finance (LBWD 2016).

The LBWD's 2015 UWMP acknowledges that growth in the City is expected to continue to be lower than that of other cities in Southern California and the region as a whole. In addition, the LBWD has determined it will be able to reliably provide water to its customers from 2015 through the year 2040, as well as during intervening years.

Additionally, under the provisions of SB 610, the LBWD is required to prepare a comprehensive water supply assessment for every new development "project" (as defined by Section 10912 of the Water Code) within its service area that meets certain thresholds. As described in the Regulatory Framework subsection above, the types of projects that are subject to the requirements of SB 610 tend to be larger projects that may or may not have been included within the growth projections of the LBWD 2015 UWMP. The water supply assessment for such projects would evaluate the quality and reliability of existing and projected water supplies, as well as alternative sources of water supply and measures to secure alternative sources if needed.

## 5. Environmental Analysis UTILITIES AND SERVICE SYSTEM

Compliance with regulatory requirements that promote water conservation, such as the LBWD Water Conservation and Water Supply Shortage Plan and the Sustainable City Plan, as well as implementation of water saving strategies, will also assist in assuring that adequate water supply is available on a cumulative basis. Therefore, it is anticipated that the LBWD would be able to supply the demands of the Specific Plan and future growth through 2040 and beyond; cumulative impacts on the water supply would be less than significant.

### *Water Infrastructure*

The geographic context for the cumulative impact analysis for water infrastructure is the project vicinity. Development of the Specific Plan and future new development in the project vicinity would cumulatively increase demands on the existing water conveyance system. However, new development projects would be subject to City review to assure that the existing public utility facilities would be adequate to meet the domestic and fire water demands of each project. Furthermore, individual projects would be subject to City requirements regarding infrastructure improvements needed to meet respective water demands, fire flow and pressure requirements. LBWD, Long Beach Department of Public Works, and the LBFD would conduct ongoing evaluations to ensure facilities are adequate. Therefore, cumulative impacts on the water infrastructure system would be less than significant.

#### **5.16.2.5 LEVEL OF SIGNIFICANCE BEFORE MITIGATION**

Upon implementation of regulatory requirements and standard conditions of approval, the following impact would be less than significant: 5.16-2.

#### **5.16.2.6 MITIGATION MEASURES**

No mitigation measures required.

#### **5.16.2.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION**

Upon implementation of regulatory requirements and standard conditions of approval, impact 5.16-2 would be less than significant.

### **5.16.3 Storm Drainage Systems**

#### **5.16.3.1 ENVIRONMENTAL SETTING**

##### **Regulatory Background**

##### *Federal*

##### ***National Pollutant Discharge Elimination System Program***

Under the NPDES program, all facilities that discharge pollutants into waters of the United States are required to obtain an NPDES permit. Requirements for stormwater discharges are also regulated under this program.

## 5. Environmental Analysis

### UTILITIES AND SERVICE SYSTEMS

#### *State*

##### ***State Water Resources Control Board General Construction Permit***

The SWRCB has adopted a statewide Construction General Permit (Order No. 2012-0006-DWQ) for stormwater discharges associated with construction activity. These regulations prohibit the discharge of stormwater from construction projects that include one acre or more of soil disturbance. Construction activities subject to this permit include clearing, grading, and other disturbance to the ground, such as stockpiling or excavation, that results in soil disturbance of at least one acre of total land area. Individual developers are required to submit a Notice of Intent to the SWRCB for coverage under the NPDES permit and would be obligated to comply with its requirements.

The NPDES Construction General Permit requires all dischargers to (1) develop and implement a Stormwater Pollution Prevention Plan (SWPPP), which specifies best management practices (BMP) to be used during construction of the project, (2) eliminate or reduce nonstorm water discharge to stormwater conveyance systems, and (3) develop and implement a monitoring program of all BMPs specified. The two major objectives of the SWPPP are to (1) help identify the sources of sediment and other pollutants that affect the water quality of stormwater discharges and (2) to describe and ensure the implementation of BMPs to reduce or eliminate sediment and other pollutants in stormwater as well as nonstorm water discharges.

##### ***Los Angeles RWQCB (MS4) Permit for the City of Long Beach***

On March 11, 2014, the Los Angeles RWQCB adopted a Municipal Separate Stormwater Sewer System (MS4) Permit for discharges from the City of Long Beach MS4. The MS4 permit (Order No. R4-2014-0024, NPDES No. CAS004003) was subsequently amended by Order No. R4-2014-0024-A01 on November 23, 2016. The municipal discharges of storm water and non-storm water by the City are subject to waste discharge requirements as set forth by this MS4 permit.

##### ***Los Angeles County Standard Urban Storm Water Mitigation Plan***

Pursuant to NPDES permit requirements, the County of Los Angeles was required to submit Standard Urban Storm Water Mitigation Plans (SUSMPs). The SUSMPs are plans that designate BMPs that must be used in specified categories of development projects. Los Angeles County submitted SUSMPs, but the Los Angeles RWQCB approved the SUSMPs only after making revisions. The Executive Officer issued the revised SUSMPs on March 8, 2000. On October 5, 2000 the Los Angeles RWQCB made more changes. The change sheet at the end of the State Board Order approved SUSMPs changes the March 8, 2000 version of SUSMPs (LARWQCB 2018).

#### *Local*

##### ***City of Long Beach Low Impact Development Best Management Practices Design Manual***

In order to comply with the updated MS4 Permit, a “Low Impact Development (LID) Best Management Practices (BMP) Design Manual” was developed in advance of the final permit. This manual details actions for compliance with the LID regulations adopted in City Ordinance No. ORD-10-035, including land development policies pertaining to LID and hydromodification for new development and significant redevelopment projects.

## 5. Environmental Analysis UTILITIES AND SERVICE SYSTEM

The term “hydromodification” refers to the changes in runoff characteristics from a watershed caused by changes in land use condition. More specifically, hydromodification refers to “the change in the natural watershed hydrologic processes and runoff characteristics (i.e., interception, infiltration, overland flow, interflow, and groundwater flow) caused by urbanization or other land use changes that result in increased stream flows and sediment transport.” The use of LID BMPs in project planning and design is to preserve a site’s predevelopment hydrology by minimizing the loss of natural hydrologic processes such as infiltration, evapotranspiration, and runoff detention. LID BMPs try to offset these losses by introducing structural and non-structural design components that restore these water quality functions into the project’s land plan (Long Beach 2013).

### *City of Long Beach Municipal Code*

**Chapter 8.96 – Stormwater and Runoff Pollution Control:** The purpose of this Chapter is to protect and improve water quality of receiving waters by:

- Prohibiting illicit discharges to the municipal stormwater system
- Eliminating illicit connections to the municipal stormwater system
- Eliminating spillage, dumping, and disposal of pollutant materials into the municipal stormwater system
- Reducing pollutant loads in stormwater and urban runoff from land uses and activities identified in the Municipal NPDES Permit.

The intent of this Chapter is to enhance and protect the water quality of the receiving waters of the United States in a manner that is consistent with the Clean Water Act and acts supplementary to applicable regulations and the Municipal NPDES Permit.

**Chapter 18.61 - NPDES and SUSMP Regulations:** The purpose of this chapter is to provide regulations and give legal effect to certain requirements of the NPDES permit issued to the City, and the subsequent requirements of the SUSMP, mandated by Los Angeles RWQCB. The intent of these regulations is to effectively prohibit non-storm water discharges into the storm drain systems or receiving waters and to require source control BMP to prevent or reduce the discharge of pollutants into the storm water to the maximum extent practicable.

**Chapter 18.74 – Low Impact Development Standards:** The purpose of this chapter is to require the use of LID standards in the planning and construction of development projects. The provisions of this section apply to all new development and redevelopment projects in the City. However, the following development or redevelopment projects are exempt from the requirements of this chapter:

- Any development or redevelopment projects that creates, adds or replaces less than five hundred (500) square feet of impervious surface area
- Any development or redevelopment projects involving emergency construction activities required to immediately protect public health and safety

## 5. Environmental Analysis

### UTILITIES AND SERVICE SYSTEMS

- Any development or redevelopment projects involving the grinding/overlaying and replacement of existing parking lots
- Any development or redevelopment projects where land disturbing activities result in the replacement of fifty percent (50%) or less of an existing building, structure or impervious surface area
- Any development or redevelopment projects that are technically infeasible pursuant to Subsection 18.74.040.B
- Any development or redevelopment projects that do not require a building permit.

The chapter also specifies LID requirements for new development or redevelopment projects for residential development of 5 units or more and nonresidential development. If redevelopment alters more than fifty percent (50%) of existing buildings, structures or impervious surfaces of an existing developed site, the entire site shall comply with the standards and requirements of this chapter and of the LID BMP Manual.

#### *City of Long Beach LID Ordinance*

The City's LID Ordinance requires applicable development or redevelopment to submit a LID Plan to the City for approval prior to the City issuing any building or grading permits. Since the Specific Plan includes multiple phases, individual development projects that would be accommodated by the Specific Plan will be subject to the requirements of the City's LID Ordinance, requiring the development of a project-specific LID Plan. Project-specific LID Plans within the Plan Area will be required to ensure all of the requirements of the City's LID Ordinance on stormwater quality are addressed for that project. This includes meeting any new requirements associated with development projects, as well as the requirements of the MS4 permit (or subsequent MS4 Permits), which includes LID features and/or hydromodification controls.

#### **Existing Conditions**

The Plan Area is located within the Los Angeles River Watershed in the Los Angeles Basin. Most portions of the Los Angeles River are completely channelized for flood protection as are many of its tributaries including Compton Creek, Rio Hondo, Arroyo Seco and Tujunga Wash. They are fed by a complex underground network of storm drains and a surface network of tributaries. The average dry weather flow at the watershed's most downstream monitoring station near Long Beach is 153 cubic feet per second. The average wet weather flow is two to three times higher or more during large storms.

The drainage pattern for the Plan Area runs from north to south. Runoff is directed to three main discharge locations. The main outlet for these storm drainpipes occurs at River Avenue, where a 35 by 24-inch arch pipe connects to a 42-inch mainline. The mainline conveys stormwater to a 54-inch mainline in Pacific Coast Highway. A small amount of runoff drains to an existing earthen channel on the west side of the campus, next to State Route 103. The storm drain system within the site is private and is maintained by Century Villages at Cabrillo.

The existing development on the Plan Area generates a flow rate of 59.78 cfs and a volume of 8.37 acre-feet (ac-ft) from a 10-year storm event.

## 5. Environmental Analysis

### UTILITIES AND SERVICE SYSTEM

Throughout the site, stormwater quality is addressed using methods and requirements as outlined in the Los Angeles County SUSMP and the City's LID design manuals. For example, catch basin, grate filter inserts, detention basins, vegetated swale, tree planting, and hydrodynamic separator units<sup>1</sup> are used throughout the site.

#### 5.16.3.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project:

- U-1 Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

#### 5.16.3.3 ENVIRONMENTAL IMPACTS

##### Impact Analysis

The following impact analysis addresses the threshold of significance for which the Initial Study (Appendix A) identified potentially significant impacts. The applicable threshold is identified in brackets after the impact statement.

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**Impact 5.16-3: Existing storm drain facilities would be able to accommodate project-generated storm water flows. [Threshold U-1]**

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**Impact Analysis:** Refer to Section 5.8, *Hydrology and Water Quality*, of this DEIR for an analysis of the storm drain system, which is summarized below.

Storm drainage collection on the Plan Area is regulated by the City. The City has adopted the Los Angeles County Department of Public Works (LACDPW) Hydrology Manual as its basis of design for storm drainage facilities. The LACDPW Hydrology Manual requires public and private storm drain infrastructure to be designed to the 10-year storm interval.

The existing conditions and proposed land uses do not change drastically, as the site would remain a low-income, senior, and veteran housing complex. A hydrologic analysis performed per the LACDPW Hydrology Manual estimated total runoff flow rate generated from the proposed site from a 10-year storm to be less than that of the existing site. However, the total runoff volume would increase due to the drainage subareas used for the hydrology analysis. For the existing conditions, the Plan Area was subdivided into 54 drainage subareas whereas for the proposed conditions 40 subareas were used. The larger subareas have similar or larger impervious percentages which increases the total volume from that subarea. However, with larger subareas the time of concentration decrease as well as the flow rate. Table 5.16-3 shows the difference in existing and proposed condition flow rates and volumes.

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<sup>1</sup> Hydrodynamic separators separate and trap debris, sediment, and hydrocarbons from stormwater runoff.

## 5. Environmental Analysis

### UTILITIES AND SERVICE SYSTEMS

**Table 5.16-3 Comparison of Existing and Proposed Flow Rates and Volumes from a 10-year Storm Event**

Category	Existing	Proposed	Difference
Flow Rate	59.78 (cfs)	59.31 (cfs)	-0.48 (cfs)
Volume	8.37 (ac-ft)	8.44 (ac-ft)	0.06 (ac-ft)

Source: KPFF, 2020a.  
Notes:  
cfs – cubic feet per second  
ac-ft – acre per feet

The existing storm drain system is described in Section 5.8.1.2 of this DEIR. The development accommodated by the Specific Plan would connect to the existing storm drain systems and would have similar discharge points. Currently, the 35-inch by 24-inch arch pipe is undersized to convey stormwater runoff from a 10-year storm via gravity flow out of the Plan Area. To meet the LACDPW Hydrology Manual's storage requirements, detention basins were constructed on site to store the excess volume of runoff created by existing development. This excess volume is released from the basins over a period of time at a slower flow rate due to the larger size of the watershed at buildout. Since the proposed runoff volume is only 0.06 ac-ft, a .07% increase, higher than the existing volume, the increase in hydrologic volume is considered negligible. Each phase of development is required to comply with City and County hydrology manual storage requirements, which will be plan checked by City staff. Therefore, impacts would be less than significant.

**Level of Significance before Mitigation:** Less than Significant.

#### 5.16.3.4 CUMULATIVE IMPACTS

Cumulative projects in the Los Angeles River Watershed could increase impervious areas and thus increase local runoff rates at those project sites. However, other projects in the region would be required to capture and infiltrate runoff, and many other projects in the region would be required to limit post-development runoff discharges to no greater than pre-development runoff rates, in accordance with the NPDES MS4 permit. Thus, no significant cumulative drainage impact would occur, and project drainage impacts would not be cumulatively considerable; impacts would be less than significant.

#### 5.16.3.5 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, Impact 5.16-3 would be less than significant.

#### 5.16.3.6 MITIGATION MEASURES

No mitigation measures are required.

#### 5.16.3.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Without mitigation, Impact 5.16-3 would be less than significant.

## 5. Environmental Analysis UTILITIES AND SERVICE SYSTEM

### 5.16.4 Solid Waste

#### 5.16.4.1 ENVIRONMENTAL SETTING

##### Regulatory Background

###### *Federal*

###### ***Resource Conservation and Recovery Act of 1976***

The Resource Conservation and Recovery Act of 1976 (Title 40, Part 258 of the Code of Federal Regulations), contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs incorporating the federal landfill criteria. The federal regulations address the location, operation, design (liners, leachate collection, run-off control, etc.), groundwater monitoring, and closure of landfills.

###### *State*

###### ***California Green Building Standards Code***

Section 5.408 (Construction Waste Reduction, Disposal, and Recycling) of the California Green Building Standards Code (CALGreen; Title 24, California Code of Regulations, Part 11) requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse. CALGreen is updated on a three-year cycle; the 2019 CALGreen took effect on January 1, 2020.

###### ***Assembly Bill 341***

Assembly Bill (AB) 341 increased the statewide solid waste diversion goal to 75 percent by 2020. The law, passed in 2011, mandates recycling for businesses producing four or more cubic yards of solid waste per week. This commercial recycling law took effect July 1, 2012.

###### ***Assembly Bill 939***

AB 939 (California Integrated Solid Waste Management Act of 1989; Public Resources Code 40050 et seq.) established an integrated waste-management system that focused on source reduction, recycling, composting, and land disposal of waste. AB 939 required every California city and county to divert 50 percent of its waste from landfills by the year 2000. Compliance with AB 939 is measured in part by comparing solid waste disposal rates for a jurisdiction with target disposal rates; actual rates at or below target rates are consistent with AB 939. AB 939 also requires California counties to show 15 years of disposal capacity for all jurisdictions in the county or show a plan to transform or divert its waste.

###### *Local*

###### ***County of Los Angeles Countywide Integrated Waste Management Plan***

The Integrated Waste Management Plan is comprised of the solid waste reduction planning documents produced by the County and its cities, and a Countywide Siting Element. To assess compliance with AB 939, a Disposal Reporting System was established to measure the amount of disposal from each jurisdiction.

## 5. Environmental Analysis

### UTILITIES AND SERVICE SYSTEMS

Comparing current disposal rates to base year solid waste generation determines whether each jurisdiction complies with the diversion mandate. Additionally, the Siting Element is a long-term planning document that describes how the County and the cities within the County plan to manage the disposal of their solid waste for a 15-year planning period. In addition, the Siting Element contains goals and policies on a variety of solid waste management issues.

#### *City of Long Beach Municipal Code*

LBMC Chapter 18.67 (Construction and Demolition Recycling Program) requires that certain categories of projects divert at least 65 percent of construction and demolition waste from landfills, through reuse or recycling. Covered projects include all newly constructed buildings or structures, residential building or structure additions or alterations where the project increases the building or structure's conditioned area, volume or size, nonresidential building or structure additions and alterations whenever a permit is required for work, and all demolition projects.

### Existing Conditions

#### *Solid Waste Collection*

The City of Long Beach Environmental Services Bureau collects solid waste in Long Beach. Gray carts are used for household trash and yard waste, and purple carts are used for recyclable materials. The City contracts with Waste Management, Inc. for the collection of recyclables. Currently, the City's Refuse Collection Division provides service to approximately 120,000 residential and commercial customers (Long Beach 2020).

#### *Solid Waste Recycling and Disposal*

In 2018 approximately 94 percent of the solid waste from the City was disposed of at seven landfills (CalRecycle 2019a). These facilities are described in Table 5.16-4, *Landfills Serving Long Beach*. The Southeast Resource Recovery Facility recycles about 178,500 tons of solid waste per year from the City.

5. Environmental Analysis  
UTILITIES AND SERVICE SYSTEM

**Table 5.16-4 Landfills Serving Long Beach**

Landfill	Remaining Capacity (million cubic yards)	Maximum Permitted Capacity (tons per day)	Maximum Permitted Throughput (tons per day)	Average Daily Disposal (2018) <sup>1</sup> (tons)	Estimated Closing Date
<b>Azusa Land Reclamation Co. Landfill</b> 1211 West Gladstone Street Azusa, CA 91702	51.5	80.6	8,000	1,194	1/1/2045
<b>El Sobrante Landfill</b> 10910 Dawson Canyon Road Corona, CA 91719	144.0	209.9	16,054	11,288	1/1/2051
<b>Frank R. Bowerman Sanitary Landfill</b> 11002 Bee Canyon Access Road Irvine, CA 92618	205.0	266.0	11,500	7,898	12/31/2053
<b>Olinda Alpha Landfill</b> 1942 N. Valencia Avenue Brea, CA 92823	34.2	148.8	8,000	7,133	12/31/2021
<b>Prima Deshecha Landfill</b> 32250 Avenida La Pata San Juan Capistrano, CA 92675	134.3	172.1	4,000	1,817	12/31/2102
<b>Simi Valley Landfill &amp; Recycling Center</b> 2801 Madera Road Simi Valley, CA 93065	88.3	119.6	9,250	4,251	1/30/2052
<b>Sunshine Canyon City/County Landfill</b> 14747 San Fernando Road, Los Angeles County, CA 91342	77.9	140.9	12,100	7,036	10/31/2037
<b>Total</b>	<b>735.2</b>	<b>1,137.9</b>	<b>68,904</b>	<b>40,617</b>	<b>-</b>

Sources: CalRecycle 2019b, 2019c, 2019d, 2019e, 2019f, 2019g, 2019h, 2019i.

<sup>1</sup> Average daily disposal is estimated based on 300 operating days per year. Each facility is open six days per week, Monday through Saturday, except certain holidays.

Collectively the seven landfills have a remaining disposal capacity of approximately 735.2 million cubic yards. All the landfills, except the Olinda Alpha landfill, have a disposal capacity beyond the 15-year horizon, as required by AB 939.

Compliance with AB 939 is measured in part by actual disposal rates compared to target rates for residents and employees, respectively; actual disposal rates at or below target rates are consistent with AB 939. Target disposal rates for Long Beach are 7.6 pounds per day (ppd) per resident and 25.1 ppd per employee. Actual disposal rates in 2018 were 4.5 ppd per resident and 12.4 ppd per employee (CalRecycle 2019j). Thus, solid waste diversion in Long Beach is consistent with AB 939.

## 5. Environmental Analysis UTILITIES AND SERVICE SYSTEMS

### 5.16.4.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project:

- U-4 Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.
- U-5 Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

The Initial Study, included as Appendix A, establishes that impacts associated with the following threshold would be less than significant:

- Threshold U-5

This impact will not be addressed in the following analysis.

### 5.16.4.3 ENVIRONMENTAL IMPACTS

#### Impact Analysis

The following impact analysis addresses the threshold of significance for which the Initial Study (Appendix A) identified significant impacts. The applicable threshold is identified in brackets after the impact statement.

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**Impact 5.16-4: Project-generated solid waste would not be in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. [Thresholds U-4]**

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#### Construction

Prior to construction of the Specific Plan, 235 dwelling units and 27,480 of non-residential square footage would be demolished and debris moved offsite to appropriate landfills. The project applicant anticipates approximately 3,208 tons of building demolition debris and 8,496 tons of asphalt and hardscape demolition debris for a total of 11,704 tons of demolition debris.

The demolition of the existing structures may cause a strain on existing landfill capacities if waste exceeds the daily permitted capacity for the landfills serving the City. Collectively, the seven primary landfills have a daily permitted capacity of 68,904 tons per day (tpd), and an average daily disposal of 40,617 tpd, as reported in 2018 (see Table 5.16-4). Therefore, the seven landfills have a residual capacity of 28,287 tpd. As a conservative assumption, the 11,704 tons of demolition waste that would be disposed of in landfills is expected to over a period of approximately 40 days, which would result in a maximum daily disposal of approximately 293 tpd. Therefore, demolition waste would not exceed the daily maximum permitted capacity of the landfills of 1,137.9 tpd (see Table 5.16-4). Construction associated with implementation of the Specific Plan would not require an expansion of landfill capacity; construction-related impacts would be less than significant.

5. Environmental Analysis  
UTILITIES AND SERVICE SYSTEM

**Operational**

Buildout of the Specific Plan is estimated to generate a net increase of 9,831 ppd of solid waste, as shown in Table 5.16-5.

**Table 5.16-5 Estimated Solid Waste Generation**

Land Use	Buildout	Solid Waste Generation Rate	Solid Waste Generation (ppd)
<b>Proposed Development</b>			
Residential	750 DU	4 lbs/DU per day	3,000
Commercial	157,000 SF	0.06 lbs/SF per day	9,420
<b>Existing to Be Demolished</b>			
Residential	235 DU	4 lbs/DU per day	(940)
Commercial	27,480	0.06 lbs/SF per day	(1,649)
<b>Net Increase</b>			<b>9,831</b>

Source: CalRecycle 2019k.  
Notes: SF = square feet; ppd = pounds per day; DU = dwelling units; lbs = pounds

As detailed in Table 5.16-4, the seven landfills serving the City have residual capacity of 28,287 tpd. The estimated 9,831 ppd or 4.9 tpd generated by the Specific Plan would be adequately served by these landfills.

Overall, sufficient landfill capacity is available in the region for the estimated solid waste generated by the Specific Plan during operation. Impacts would be less than significant for the operational phase.

**Regulatory Compliance**

AB 341 requires all businesses in California that generate four cubic yards or more of waste per week to implement one of the following actions in order to reuse, recycle, compost, or otherwise divert commercial solid waste from disposal:

- Source separate recyclable and/or compostable material from solid waste and donate or self-haul the material to recycling facilities.
- Subscribe to a recycling service with their waste hauler in the service area.
- Provide recycling service to their tenants (if commercial or multifamily complex).
- Demonstrate compliance with the requirements of California Code of Regulations Title 14.

The Specific Plan would implement the requirements of the County of Los Angeles Countywide Integrated Waste Management Plan to ensure that it complies with all applicable state and federal laws, including, but not limited to, The Integrated Waste Management Act of 1989 (AV 939). A construction waste management plan would be submitted and implemented in compliance with Section 4.408 of the 2016 California Green Building Code Standards.

## 5. Environmental Analysis

### UTILITIES AND SERVICE SYSTEMS

***Level of Significance Before Mitigation:*** Less than Significant.

#### 5.16.4.4 CUMULATIVE IMPACTS

The area considered for cumulative impacts is the area serviced by the seven landfills listed in Table 5.16-4. Collectively, these landfills have a remaining disposal capacity of approximately 1,138 million cubic yards. All the landfills, except the Olinda Alpha landfill, have a disposal capacity beyond the 15-year horizon, as required by AB 939. Thus, there is sufficient landfill capacity in the region for the cumulative increase in solid waste disposal. Cumulative impacts would be less than significant, and project impacts would not be cumulatively considerable.

#### 5.16.4.5 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, impact 5.16-4 would be less than significant.

#### 5.16.4.6 MITIGATION MEASURES

No mitigation measures required.

#### 5.16.4.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, Impact 5.16-4 would be less than significant.

### 5.16.5 Other Utilities

#### 5.16.5.1 ENVIRONMENTAL SETTING

##### Regulatory Background

##### *State*

##### ***California Energy Commission***

The California Energy Commission (CEC) was created in 1974 as the state's principal energy planning organization, in order to meet the energy challenges facing the state in response to the 1973 oil embargo. The CEC is charged with six basic responsibilities when designing state energy policy:

- Forecast statewide electricity needs.
- License power plants to meet those needs.
- Promote energy conservation and efficiency measures.
- Develop renewable energy resources and alternative energy technologies.
- Promote research, development, and demonstration.
- Plan for and direct the state's response to energy emergencies.

## 5. Environmental Analysis UTILITIES AND SERVICE SYSTEM

### ***California Energy Benchmarking and Disclosure***

AB 1103 (2007) requires that electric and gas utilities maintain records of the energy consumption data of all nonresidential buildings to which they provide service and that by January 1, 2009, upon authorization of a nonresidential building owner or operator, an electric or gas utility shall upload all of the energy consumption data for the specified building to the CalEPA Energy Star Portfolio Manager in a manner that preserves the confidentiality of the customer. This statute further requires a nonresidential building owner or operator disclose Energy Star Portfolio Manager benchmarking data and ratings, for the most recent 12-month period, to a prospective buyer, lessee, or lender. Enforcement of the latter requirement began on January 1, 2014.

On October 8, 2015 AB 802 was signed into law, directing the CEC to establish a statewide energy benchmarking and disclosure program and enhancing the CEC's existing authority to collect data from utilities and other entities for the purposes of energy forecasting, planning, and program design. Among the specific provisions, AB 802 would require utilities to maintain records of the energy usage data of all buildings to which they provide service for at least the most recent 12 complete months. AB 802 requires each utility, upon the request and authorization of the owner, owner's agent, or operator of a covered building, to deliver or provide aggregated energy usage data for a covered building to the owner, owner's agent, operator, or to the owner's account in the Energy Star Portfolio Manager, subject to specified requirements. AB 802 would also authorize the commission to specify additional information to be delivered by utilities for certain purposes.

### ***California Building Code: Building Energy Efficiency Standards***

Energy conservation standards for new residential and non-residential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977. Title 24 requires the design of building shells and building components to conserve energy, with standards updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. The 2019 Building Energy Efficiency Standards, which were recently adopted on May 9, 2018, go into effect starting January 1, 2020.

The 2019 standards move toward cutting energy use in new homes by more than 50 percent and will require installation of solar photovoltaic systems for single-family homes and multifamily buildings of three stories and less. The 2019 standards focus on four key areas: 1) smart residential photovoltaic systems; 2) updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa); 3) residential and nonresidential ventilation requirements; 4) and nonresidential lighting requirements. Under the 2019 standards, nonresidential buildings will be 30 percent more energy efficient compared to the 2016 standards, and single-family homes will be 7 percent more energy efficient. When accounting for the electricity generated by the solar photovoltaic system, single-family homes would use 53 percent less energy compared to homes built to the 2016 standards.

### ***California Building Code: CALGreen***

As described earlier in this section, CALGreen was adopted as part of the California Building Standards Code and established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), as well as water conservation and material conservation, both of

## 5. Environmental Analysis

### UTILITIES AND SERVICE SYSTEMS

which contribute to energy conservation. As previously stated, the 2019 CALGreen standards became effective January 1, 2020.

#### *2012 Appliance Efficiency Regulations*

The 2012 Appliance Efficiency Regulations (Title 20, CCR Sections 1601 through 1608) include standards for both federally regulated appliances and non-federally regulated appliances. Though these regulations are now often viewed as “business as usual,” they exceed the standards imposed by all other states, and they reduce reducing energy demand as well as GHG emissions.

#### *State Greenhouse Gas Regulations*

Current State of California guidance and goals for reductions in GHG emissions from stationary sources are generally embodied in Executive Orders S-03-05 and B-30-15; AB 32, and AB 197, and SB 32. While these regulations are inherently aimed at reducing GHG emissions, they have a direct relationship to energy conservation. A detailed discussion of these regulations is provided in the GHG Emissions chapter of the EIR.

### Existing Conditions

The Plan Area is within the service area of Southern California Edison (SCE) and would be served by the existing electrical transmission lines. Gas would be provided by Long Beach Energy Resources (LBER). All dry utility connections within the Plan Area would be located within underground conduits and vaults.

#### *Electricity*

SCE’s service area spans much of Southern California from Orange and Riverside counties on the south to Santa Barbara County on the west to Mono County on the north. Total electricity consumption in SCE’s service area in gigawatt-hours (GWh) was 104,407 GWh in 2018 (CEC 2020a).<sup>2</sup> Sources of electricity sold by SCE in 2017, the latest year for which data are available, were:

- 32 percent renewable, consisting mostly of solar and wind
- 8 percent large hydroelectric
- 20 percent natural gas
- 6 percent nuclear
- 34 percent unspecified sources—that is, not traceable to specific sources (SCE 2018)<sup>3</sup>

Total estimated existing (2020) electricity demand for the Plan Area is estimated at 5,295,391 kilowatt hours (kWh) per year.<sup>4</sup>

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<sup>2</sup> One GWh is equivalent to one million kilowatt-hours.

<sup>3</sup> The electricity sources listed reflect changes after the 2013 closure of the San Onofre Nuclear Generating Station, which is owned by SCE.

<sup>4</sup> Based on the historical CalEEMod electricity rates for the apartment mid-rise, general office, health club, regional shopping center, and enclosed parking structure with elevator.

## 5. Environmental Analysis UTILITIES AND SERVICE SYSTEM

### *Natural Gas*

Serving approximately 150,000 customers, LBER is the largest California municipal gas utility and the fifth largest municipal gas utility in the United States. LBER's service territory includes the cities of Long Beach and Signal Hill, and sections of surrounding communities including Lakewood, Bellflower, Compton, Seal Beach, Paramount, and Los Alamitos.

Long Beach receives a small amount of its gas supply directly into its pipeline system from local production fields that are located within the City's service territory, as well as offshore. Currently, the City receives approximately five percent of its gas supply from local production. The majority of the City's supplies are purchased at the California border, primarily from the Southwestern United States. The City, as a wholesale customer, receives intrastate transmission service for this gas from SoCalGas.

SoCalGas provides gas service in the City and has facilities throughout the City, including the Plan Area. The service area of SoCalGas spans much of the southern half of California, from San Luis Obispo County in the northwest to part of Fresno County in the north to Riverside County and most of San Bernardino County in the east to Imperial County in the southeast (CEC 2015b). Total natural gas supplies available to SoCalGas for years 2018 and 2019 are 3,055 million cubic feet per day (MMcf/day) and 3,385 MMcf/day, respectively (CGEU 2018). Total natural gas consumption in SoCalGas's service area was 722,247 MMcf for 2018, which is equivalent to 1,979 MMcf/day (CEC 2020b).

Existing natural gas demands for the Plan Area is estimated at 9,900,123 kilo-British thermal units per year (kBTU/yr).<sup>5</sup>

#### **5.16.5.2 THRESHOLDS OF SIGNIFICANCE**

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project:

- U-1 Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

#### **5.16.5.3 PLANS, PROGRAMS, AND POLICIES**

#### **5.16.5.4 ENVIRONMENTAL IMPACTS**

### **Impact Analysis**

The following impact analysis addresses the threshold of significance for which the Initial Study (Appendix A) identified significant impacts. The applicable thresholds are identified in brackets after the impact statement.

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<sup>5</sup> Based on the historical CalEEMod natural gas rates for the apartment mid-rise, general office, health club, and regional shopping center.

## 5. Environmental Analysis

### UTILITIES AND SERVICE SYSTEMS

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#### Impact 5.16-5: Existing facilities would be able to accommodate project-generated electricity and gas demands. [Threshold U-1]

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#### Electricity

##### *Construction*

Construction activities associated with the land uses accommodated under the Specific Plan would require electricity use to power the construction equipment. The electricity use during construction would vary during different phases of construction: the majority of construction equipment during demolition and grading would be gas-powered or diesel-powered, while later construction phases would require electricity-powered equipment such as nail guns for interior construction and sprayers for architectural coatings. Overall, the use of electricity would be temporary in nature and would fluctuate according to the phase of construction. Additionally, it is anticipated that the majority of electric-powered construction equipment would be hand tools (e.g., power drills, table saws, compressors) and lighting, which would result in minimal electricity usage during construction activities. Electrical energy would be available for use during construction from the existing power lines and connections available to the Plan Area. Impacts would be less than significant.

##### *Operation*

Electricity service to the Plan Area would be provided by SCE through connections to existing offsite electrical lines. Implementation of the Specific Plan would result in a net increase in electricity use by 4,325,536 kWh/year. While the Specific Plan would increase energy demand at the site compared to existing conditions, it would be required to comply with the latest applicable Building Energy Efficiency Standards and CALGreen.

Under the 2019 Building Energy Efficiency Standards, future residential buildings of three stories and less in the Plan Area would be required to install solar PV systems. Furthermore, under the Specific Plan design standards, streetlights will include solar panels and batteries to generate and capture electricity to be later used in the evening to light the way for pedestrians and vehicles. While this design feature would not decrease electricity demand, it would increase the amount of renewable electricity available to offset electricity demand from SCE. In addition, building orientation would be designed to maximize natural daylight and ventilation for the residential units and could contribute in minimizing electricity lighting and cooling. Overall, because the existing buildings were built and designed to comply with older building standards, the newer buildings would be more energy efficient as they would be constructed in compliance with the Specific Plan design guidelines and energy efficiency regulatory requirements, and would also be more energy efficient due to the mechanical systems utilized (e.g., building insulation) within the building envelope.

Specific Plan operation is expected to result in a net increase of 4.3 million kilowatt hours (kWh) annually at buildout. Total mid-electricity consumption in SCE's service area is forecast to increase by approximately 12,723 GWh between 2015 and 2027 (CEC 2016). SCE forecasts that it will have sufficient electricity supplies to meet demands in its service area; and the electricity demand due to the project is within the forecast increase in SCE's electricity demands. Specific Plan development would not require SCE to obtain new or expanded electricity supplies; impacts would be less than significant.

## 5. Environmental Analysis UTILITIES AND SERVICE SYSTEM

### Natural Gas

Specific Plan operation is estimated to result in a net increase of about 9.2 million kilo British Thermal Units (kBTU) per year at buildout. The City of Long Beach Gas and Oil Department forecasts that its natural gas supplies will increase by approximately 1 MMCF/day between 2019 and 2035. That amounts to an increase of 370 million kBTU (CGEU 2016). The forecast net increase in natural gas demands due to buildout under the Specific Plan is well within City forecasts of natural gas supplies, and therefore, would not require the City to obtain new or expanded natural gas supplies.

Furthermore, the Specific Plan would comply with the requirements of the current California Building Energy and Efficiency Standards and CALGreen . All new appliances would comply with the 2012 Appliance Efficiency Regulations.

***Level of Significance Before Mitigation:*** Less than Significant.

#### 5.16.5.5 CUMULATIVE IMPACTS

The area considered for cumulative impacts to electricity supplies and facilities is SCE's service area, and the area considered for natural gas is Long Beach Gas and Oil Department's service area. Forecast total electricity and natural gas supplies for the service areas are identified above. Other projects would increase electricity and natural gas demands.

Electricity demand forecasts are based on climate zones; economic and demographic growth forecasts from Moody's Analytics, IHS Global Insight, and the California Department of Finance; forecast electricity rates; effects of reasonably foreseeable energy efficiency and energy conservation efforts; anticipated partial electrification of portions of the transportation sector, including increasing adoption of light-duty plug-in electric vehicles, demand response measures, such as electricity rates that increase during high-demand times of day, and effects of climate change (CEC 2016).

Natural gas demand forecasts are based on economic outlook, California Public Utilities Commission-mandated energy efficiency standards and programs, renewable electricity goals, and conservation savings linked to Advanced Metering Infrastructure (CGEU 2018).

It is anticipated that electricity and natural gas demands by most other projects would be accounted for in the above-referenced demand forecasts. Other projects would be subject to independent CEQA review, including analysis of impacts to electricity and natural gas supplies. Implementation of all feasible mitigation measures would be required for any significant impacts identified. Cumulative impacts would be less than significant, and project impacts would not be cumulatively considerable.

#### 5.16.5.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval impact 5.16-6 would be less than significant.

## 5. Environmental Analysis

### UTILITIES AND SERVICE SYSTEMS

#### 5.16.5.7 MITIGATION MEASURES

No mitigation measures required.

#### 5.16.5.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval impact 5.16-5 would be less than significant.

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## 5. Environmental Analysis UTILITIES AND SERVICE SYSTEM

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## 5. Environmental Analysis UTILITIES AND SERVICE SYSTEMS

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