# 3.17 Utilities and Service Systems

## 3.17.1 Introduction

This section evaluates whether implementation of the proposed project has the potential to result in adverse impacts to utilities and service systems. Utilities and service systems include water supply and distribution systems, wastewater (sewage) conveyance and treatment, and solid waste collection and disposal. This analysis is based on review of the existing infrastructure and levels of service, the relevant regulatory requirements, a discussion of the methodology and thresholds used to determine whether the proposed project would result in significant impacts, and identifies any improvements necessary to accommodate the project. This section identifies the potential for both project-level and cumulative environmental impacts, as well as feasible mitigation measures that could reduce or avoid the identified impacts. Impacts to hydrology (e.g., flooding), storm drainage systems, and water quality can be found in Section 3.8, *Hydrology and Water Quality*. This section analyzes the potential for both project-level and cumulative environmental impacts.

Information sources for the analysis presented in this section include reference documents regarding water use (City of Long Beach 2016; LBWD 2016; BOMP 2017a), wastewater (LACSD 2017a; LBWD 2016), stormwater (City of Long Beach 2008), and solid waste (CalRecycle 2008, 2009, 2014; County of Los Angeles 2016; County of Orange 2017a, 2017b; LACSD 2017a, 2017b, 2017c, 2017d, 2017e; Waste Management 2017; Wilson Mikami 2017b). All information sources used are included as citations within the text; sources are listed in Section 3.17.5, References.

## 3.17.2 Environmental Setting

### 3.17.2.1 Water Supply

The Long Beach Water Department (LBWD) provides water service to the City of Long Beach (City), including the four project locations (LBWD 2016). The LBWD service area is located in the southwest corner of the County of Los Angeles, and essentially overlays the boundaries of the City. LBWD owns, operates, and maintains 29 active groundwater wells, 907 miles of water mains, 6,501 fire hydrants, and 750 miles of sanitary sewer lines.

LBWD primarily relies on groundwater extracted locally to meet customer water demands. LBWD then purchases imported water from the Metropolitan Water District of Southern California (MWD) to make up the difference between demand and groundwater supplies. LBWD also provides recycled water to an increasing number of customers to replace the use of potable water for watering landscaping at golf courses, parks, and medians on City-owned property. As discussed in Section 3.8, *Hydrology and Water Quality*, all 29 groundwater supply wells are outside of the project area and on the far side of the Alamitos Barrier Project.

The LBWD existing and projected water supply for 2015 through 2040 is quantified in **Table 3.17-1, Existing and Projected Water Supplies (in acre-feet)**. The volumes show the projected LBWD annual groundwater extraction rights. LBWD anticipates purchasing additional rights to extract water from the Basin (i.e., increasing its allowable pumping allocation), over the next 25 years, if and when cost-effective opportunities to do so become available.

**Table 3.17-1 Existing and Projected Water Supplies (in acre-feet)**

| Water Supply | 2015 | 2020 | 2025 | 2030 | 2035 | 2040 |
|---|---|---|---|---|---|---|
| Groundwater | 32,693 | 33,001 | 33,501 | 34,001 | 34,501 | 35,001 |
| Imported | 35,100 | 35,100 | 35,100 | 35,100 | 35,100 | 35,100 |
| Recycled | 9,190 | 9,190 | 9,190 | 9,190 | 9,190 | 9,190 |
| **Total** | **76,983** | **77,291** | **77,791** | **78,291** | **78,791** | **79,291** |

SOURCE: LBWD, 2016.

LBWD projects that water supplies would be sufficient to meet all demands through the year 2040 during normal, single dry year, and multiple dry year hydrologic conditions (LBWD 2016). Historical precedent has consistently shown that water demands decrease in dry years due to voluntary and mandatory water use restrictions and a general increase in public awareness of the need for water conservation; however, future water demand projections take a conservative approach to planning, by assuming that water demand will remain steady rather than decrease during dry years. The projected LBWD water supply and demand are compared in **Table 3.17-2, Existing and Projected Water Supplies Demand and Surplus (in acre-feet)**, which quantifies the projected water supply surplus through 2040. LBWD water supplies are projected to exceed demand through 2040 even in future dry years, as in recent droughts (LBWD 2016).

**Table 3.17-2 Existing and Projected Water Supplies Demand and Surplus (in acre-feet)**

| | 2020 | 2025 | 2030 | 2035 | 2040 |
|---|---|---|---|---|---|
| Total Supplies | 77,291 | 77,791 | 78,291 | 78,791 | 79,291 |
| Total Demands | 63,643 | 63,410 | 63,454 | 63,609 | 64,137 |
| Surplus | 13,648 | 14,381 | 14,837 | 15,182 | 15,154 |

SOURCE: LBWD, 2016.

### 3.17.2.2 Wastewater

The LBWD is also responsible for operating and maintaining the sanitary sewer lines in the City. Through these sanitary sewer lines, the LBWD delivers wastewater to two of the Los Angeles County Sanitation District (LACSD) facilities (LACSD 2017a). The LACSD provides wastewater services for the project area, including the current practice of accepting produced water from oil extraction on the Synergy Oil Field and City Property sites.[78] LACSD is a public agency created under State law to manage wastewater and solid waste on a regional scale and consists of 24 independent special districts serving approximately 5.5 million people in Los Angeles County, including the City.

The LBWD delivers over 40 million gallons per day (mgd) of wastewater to LACSD facilities. A portion of the wastewater is delivered to the LACSD Joint Water Pollution Control Plant (JWPCP) in Carson and the remainder of the wastewater is delivered to the Long Beach Water Reclamation Plant (LBWRP) (LBWD 2016). The JWPCP treats approximately 260 mgd and has a total permitted design capacity of 400 mgd (LACSD 2017f). The LBWRP treatment capacity is approximately 25 mgd (LBWD 2016; LACSD 2017g). The LBWRP is expected to reach full capacity sometime during the next 25 years (at least by 2040) and LACSD is not expected to increase the capacity because there is no open space at the site to accommodate an expansion; however, the

[78] Over 95 percent of the fluid pumped from the Synergy Oil Field site and City Property site oil wells is saline water.

influent streams to LACSD facilities are interconnected such that influent can be diverted from one LACSD facility to another.

Currently, the majority of the wastewater generated at the project site consists of about 0.5 mgd of produced water from the oil extraction and processing operations, which is currently disposed of into the sanitary sewer system (BOMP 2017a).

### 3.17.2.3 Stormwater Drainage

Within the City, there are approximately 383 miles of active stormwater carriers, including pipes, open channels, ditches, culverts, connector pipes, and drains (City of Long Beach 2008). In addition, the City owns 3,872 catch basins and 23 pump stations, all of which are cleaned repeatedly throughout the year.

As described in Chapter 2, *Project Description*, and depicted in Figure 2-4, Synergy Oil Field Site, the Synergy Oil Field site is divided between the southern active oil field and the northern remnant tidal marsh that includes an area of tidally influenced salt marsh, and the Steamshovel Slough. Stormwater in the northern area drains into the Steamshovel Slough or the Los Cerritos Channel, both of which are tidally influenced and drain west to Alamitos Bay. The active oil field area in the center and south portion of the Synergy Oil Field site drains from west to east toward the existing access road to Studebaker Road (Wilson Mikami 2016). Stormwater then enters the curb-and-gutter system to the storm drains.

The City Property site drains from northeast to southwest towards existing developed parcels. Stormwater then enters the curb-and-gutter system to the storm drains. Although the southernmost border of this site is adjacent to the San Gabriel River, the site does not drain to the river.

The Pumpkin Patch site drains from south to north and toward Studebaker Road (Wilson Mikami 2016, 2017a). Because the site is not paved, some stormwater infiltrates into the subsurface. Stormwater then enters the curb-and-gutter system to the storm drains. Although the site is adjacent to the San Gabriel River to the southeast, the site does not drain to the river.

The Los Cerritos Wetland Authority (LCWA) site is not paved and some stormwater infiltrates into the subsurface. The remaining stormwater flow drains from east to west and toward an existing asphalt access road (Wilson Mikami 2016, 2017a). Portions of the on-site flow also sheet flow toward Studebaker Road and Westminster Avenue. Stormwater then enters the curb-and-gutter system to the storm drains.

### 3.17.2.4 Solid Waste Services

According to the most recent *County of Los Angeles, Countywide Integrated Waste Management Plan, 2015 Annual Report*, the City disposed 474,740 tons of solid waste in 2015 (County of Los Angeles 2016). A majority of the City's solid waste is sent to the Southeast Resource Recovery Facility (SERRF), a transfer facility located in Long Beach about 8 miles from the project area. In 2015, approximately 195,800 tons, or 50 percent of the solid waste generated by Long Beach residents and businesses were sent to the SERRF for processing. Materials that can be recycled are segregated out of the waste stream, combustible materials are burned to generate electricity, and solid waste that cannot be processed at the SERRF is taken to landfills. The landfills that are closer to the project site, as well as the SERRF, include the Olinda Alpha Landfill, Frank R. Bowerman, the El Sobrante Landfill, Azusa Land Reclamation, and the Waste Management Simi Landfill. The distances from the project site, maximum permitted daily capacities, remaining available capacities, and

expected closure dates are listed in **Table 3.17-3, Landfills in the Project Region**. Hazardous waste (Class I waste) is not accepted by SERRF or the listed landfills and would be sent to the Kettleman Landfill, as discussed in Section 3.7, *Hazards and Hazardous Materials*.

**Table 3.17-3 Landfills in the Project Region**

| Landfill | Address | Distance from Project Site | Maximum Permitted Daily Tons | Average Remaining Capacity (tons) | Expected Closure Date |
|---|---|---|---|---|---|
| Olinda Alpha Landfill | 1942 Valencia Ave. in Brea, CA | 19.4 miles | 8,000 | 51,300,000 | 2030 |
| Frank R. Bowerman | 11002 Bee Canyon Access Road in Irvine, CA | 24.6 miles | 11,500 | 307,500,000 | 2053 |
| El Sobrante Landfill | 10910 Dawson Canyon Road in Corona, CA | 36 miles | 16,000 | 145,530,000 | 2045 |
| Waste Management Simi Landfill | 2801 North Madera Rd., Simi Valley, CA | 68 miles | 8,750 | 306,250 | 2052 |
| Azusa Land Reclamation | 1211 West Gladstone, Azusa CA | 33 miles | 6,000 | 120,000 | 2037 |
| **Totals** | | | **50,250** | **504,756,250** | |

SOURCES: CalRecycle, 2008, 2009, 2014; County of Orange, 2017a, 2017b; Waste Management, 2017.

# 3.17.3 Regulatory Framework

## 3.17.3.1 Federal

### *Resource Conservation and Recovery Act (42 USC 6901 et seq.)/ Toxic Substances Control Act (15 USC 2605)/Hazardous and Solid Waste Act*

The combination of the Resource Conservation and Recovery Act (RCRA) of 1976 and the Toxic Substances Control Act of 1976 authorized the USEPA to regulate the generation, transportation, treatment, storage, and disposal of hazardous waste and non-hazardous waste, and underground storage tanks. Solid waste consists of solids, liquids and gases, including garbage, also known as municipal solid waste (e.g., milk cartons and coffee grounds); refuse (e.g., metal scrap, wall board, and empty containers); sludges from waste treatment plants, water supply treatment plants, or pollution control facilities (e.g., scrubber slags); industrial wastes (e.g., manufacturing process wastewaters and non-wastewater sludges and solids); and other discarded materials, including solid, semisolid, liquid, or contained gaseous materials resulting from industrial, commercial, mining, agricultural, and community activities (e.g., boiler slag). Currently, all 50 states and territories have been granted authority to implement RCRA. State RCRA programs must be at least as stringent as the federal requirements, but states can adopt more stringent requirements as well. California has implemented additional requirements, as discussed further below.

The RCRA was amended in 1984 by the Hazardous and Solid Waste Act, which affirmed and extended the "cradle to grave" system of regulating hazardous wastes. Contractors would be required to comply with state regulations including the Hazardous Materials Release Response Plans and Inventory Act, Unified Hazardous Waste and Hazardous Materials Management Regulatory Program, License to Transport Hazardous Materials, and Hazardous Materials Storage and Handling, which would make the proposed action consistent with the Toxic Substances Control Act.

## 3.17.3.2 State

### *Senate Bill 610 (Water Code Sections 10910 et seq.)*

Senate Bill (SB) 610 requires the preparation of a water supply assessment for certain types of projects. As discussed in Section 3.8.3, Regulatory Framework, in Section 3.8, *Hydrology and Water Quality*, the proposed project does not include development of any of the specified categories, nor does the project generate a water demand equal to or greater than the demand generated by a 500-dwelling-unit project (i.e., approximately 125 acre-feet per year [AFY]). Therefore, a water supply assessment is not required for the project.

### *Sustainable Groundwater Management Act of 2014*

The Sustainable Groundwater Management Act of 2014 (SGMA) requires the creation of a Groundwater Sustainability Agency that would develop and implement a Groundwater Sustainability Plan that would manage and use groundwater in a manner that can be maintained during the planning and implementation horizon without causing undesirable results. Relative to Utilities and Public Services, preventing undesirable results would include a significant and unreasonable depletion of water supply. SGMA is noted but discussed in Section 3.8.3.

### *Statewide Water Reductions (Executive Orders B-29-15, B-36-15, and B-37-16)*

These state executive orders were implemented by Governor Brown in response to the drought. The required actions are focused on reducing potable water use, reducing waste, and improving water supplies provided by water supply agencies. The orders direct urban water suppliers (e.g., the LBWD) to develop new water use targets. Actions for the proposed project that would be consistent with these orders would include storing and recycling hydrostatic testing water to reduce overall potable water use and injecting produced water back into the production zones to prevent subsidence that could adversely affect aquifers that could supply usable groundwater.

### *California Integrated Waste Management Act of 1989 and Assembly Bill 341*

The California Integrated Waste Management Board (CIWMB) oversees, manages, and tracks waste generated in California. The authority and responsibilities of the CIWMB were promulgated in Assembly Bill (AB) 939 and SB 1322, which were signed into law as the California Integrated Waste Management Act of 1989 (Public Resources Code [PRC], Division 30). The California Integrated Waste Management Act, as modified by subsequent legislation, mandated all California cities and counties to implement programs to reduce, recycle, and compost at least 50 percent of wastes by 2000 (PRC Section 41780). In January 2010, the CIWMB changed its name to the California Department of Resources, Recycling, and Recovery (CalRecycle).

AB 341, which amends the Integrated Waste Management Act of 1989 and was adopted by the California legislature in October 2011, directs CalRecycle to adopt a state policy that actively seeks to achieve a goal of diverting 75 percent of solid waste from landfills by 2020. The new legislation focuses largely on commercial waste generators, as this sector was identified as the most in need of improved waste management. AB 341 does not alter the 50 percent diversion mandate; rather, it is a "legislative declaration of policy" to guide CalRecycle's administration of the California Integrated Waste Management Act.

A jurisdiction's diversion rate is the percentage of total generated waste it diverts from disposal through source reduction, reuse, and recycling programs. The state determines compliance with the 50 percent diversion mandate through a complex formula. Use of the formula requires cities and counties to conduct empirical

studies to establish a base-year waste generation rate against which future diversion is measured. The diversion rate in subsequent years is determined through deduction instead of direct measurement. Rather than counting the amount of material recycled and composted, the city or county tracks the amount of material disposed of at landfills and then subtracts that amount from the base-year amount; the difference is assumed to be diverted (PRC Section 41780.2).

## 3.17.3.3 Regional

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

The California Integrated Waste Management Act of 1989 (AB 939) requires that the responsibility for solid waste management be shared between state and local governments. The State of California has directed the County to prepare and implement a local integrated waste management plan in accordance with AB 939. The Los Angeles County Integrated Waste Management Plan Executive Summary presents the County-wide goals and objectives for integrated solid waste management and describes the County's system of governmental solid waste management infrastructure and the current system of solid waste management in the cities and unincorporated areas of the County. This document also summarizes the types of programs planned for individual jurisdictions and describes countywide programs that could be consolidated.

The Los Angeles County Integrated Waste Management Plan, *2015 Annual Report on the Countywide Summary Plan and Countywide Siting Element*, describes the County's approach to dealing with a broad range of solid waste issues, including processing capacity; markets for recovered materials; waste reduction mandates; waste disposed at Class I (i.e., hazardous waste–only landfills) and Class II (i.e., landfills that accept specified hazardous waste and non-hazardous wastes) disposal facilities; allocation of "orphan" waste (waste that comes from an unknown origin); the accuracy of the state Disposal Reporting System (DRS); and the CIWMB enforcement policy. This document also includes the Los Angeles County Integrated Waste Management strategies to maintain adequate solid waste disposal capacity through 2030. The proposed project would be subject to the Los Angeles County Integrated Waste Management Plan (County of Los Angeles 2016).

## 3.17.3.4 Local

### *Los Angeles County Sanitation District*

As briefly described above the LACSD provides wastewater treatment services for the project area. LACSD is a public agency created under state law to manage wastewater and solid waste on a regional scale and consists of 24 independent special districts serving approximately 5.5 million people in Los Angeles County, including the City.

Capital improvements to the LACSD water reclamation plants are funded by 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 member districts are set forth in the Connection Fee Ordinance for each respective district available on LACSD's website. Most of the City, including the project area, is in District 3 of the LACSD (LACSD 2017a).

### *Long Beach Water Department 2015 Urban Water Management Plan*

Urban Water Management Plans (UWMP) are comprehensive planning documents that project water supplies and water demands 25 years into the future. These plans also describe efforts to promote the efficient use and management of limited water resources. The current version for the City is the 2015 UWMP. The projected public water supply available to the proposed project is based on the 2015 UWMP, as analyzed below in Impact 3.17-2.

### *Long Beach Water Department 2016 Water Conservation and Water Supply Shortage Plan*

The Water Conservation and Water Supply Shortage Plan for the LBWD is described in Resolution WD-1354, adopted June 2, 2016. This plan has the objectives of preventing water supply shortages through water management programs such as conjunctive use, water conservation, water education, and the use of reclaimed water. The plan prohibits excessive use, loss through leaks and breaks, landscape irrigation between 4:00 p.m. and 9:00 a.m. or during rainfall, or allowing unreasonable runoff or waste. The control of runoff and limits on irrigation would apply to the proposed project. The plan also describes emergency procedures in the event of a water supply shortage, which could limit the use of water for the proposed project.

### *Long Beach MS4 Permit*

The City is covered under the Long Beach MS4 Permit: Waste Discharge Requirements for Municipal Separate Storm Sewer System Discharges from the City; Order No. R4-2014-0024. The Long Beach MS4 is noted but discussed in Section 3.5.3, Regulatory Framework, in Section 3.5, *Geology, Seismicity, and Soils*.

### *Southeast Area Development and Improvement Plan and Draft Southeast Area Specific Plan*

The Southeast Area Development and Improvement Plan (SEADIP) is noted here, but consistency with SEADIP policies is analyzed in Section 3.9, *Land Use and Planning*.

In July 2016, the City circulated a draft of the SEASP, which is a planning document for the project area, including re-designating land uses for the project site (City of Long Beach 2016). Upon approval, SEASP would replace SEADIP. It is anticipated that the Southeast Area Specific Plan (SEASP) will be completed and issued in its final form within the lifetime of the proposed project are provided here for informational purposes. The portions relevant to utilities and service systems are provided below.

#### Chapter 8, Infrastructure, Section 8.1.2, Storm Drains

Any new projects in the SEASP area will have to comply with the MS4 Permit for the City and include stormwater LID Best Management Practices (BMPs). Application of LID BMPs would ensure any increases in runoff from proposed land use changes will be sustainably managed and that the 85th percentile, 24-hour storm event would be treated through a variety of LID features. The 85th percentile storm event is measured by rainfall depth; for example, if the 85th percentile storm event equals 0.5 inch, then 85 percent of all rainfall events would be equal to 0.5 inch or less of precipitation.

As required by the MS4 permit, the use of LID features shall be consistent with the prescribed hierarchy of treatment provided in the permit: infiltration, evapotranspiration, harvest/reuse, and biotreatment. For areas of the site where LID features are not feasible or that do not meet the feasibility criteria, treatment control BMPs with biotreatment enhancement design features must be used.

Typical water quality BMPs for new development in mixed-use areas include stormwater planters (raised or at grade), cisterns and reuse distribution systems (primarily for landscaping), proprietary detention/biotreatment flow-through systems, and subterranean infiltration systems. Since increased density is anticipated in mixed-use areas, the majority of the proposed features should be located within the landscaping along the perimeter of the project, adjacent to the buildings, or in some cases, within the buildings themselves.

## 3.17.4 Analysis of Impacts

This section describes the impact analysis relating to utilities and service systems for the proposed project. It describes the methods and applicable thresholds used to determine the impacts of the proposed project.

### 3.17.4.1 Significance Criteria

*CEQA Guidelines* Appendix G provides that a project would have a significant utilities and service systems impact if it would:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Require or result in the construction of new stormwater drainage facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed;
- Result in a determination by the wastewater treatment provider that would serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- Comply with federal, state, and local statutes and regulations related to solid waste.

### 3.17.4.2 Methodology

The analysis related to wastewater treatment requirements identifies the types of wastewater that are anticipated to be generated by implementation of the project and regulations related to wastewater. The analysis of sewer infrastructure capacity focuses on the changes in the nature and volume, if any, of wastewater and wastewater treatment from the proposed project over the 40-year planning period.

The analysis of water supply is focused on the change in levels of water use from implementation of the proposed project. The primary resources used for this analysis include information from the LBWD 2015 UWMP. The projected increase in water demand over the 40-year planning period of the proposed project is compared to future available supplies. The demand generated by the proposed project compared to water supplies available determines whether an impact from implementation of proposed project would occur.

The analysis of the proposed project's impact on stormwater drainage facilities identifies the general increase or decrease in stormwater runoff that is anticipated to occur from implementation of the proposed project, and identifies the existing drainage infrastructure that serves the project area.

The analysis of the proposed project's impact on landfill facilities identifies solid waste that is anticipated to be generated during both construction and operation of the project. The analysis identifies the anticipated amount of non-hazardous construction debris and operational solid waste that would be generated from implementation of the project and the amount that would be disposed of in landfills after compliance with recycling/diversion requirements. The results (i.e., solid waste after recycling/diversion) are compared with the available capacity of the landfill serving the project areas to assess the significance of the project's solid waste generation during construction and during operation. The analysis of the proposed project's impact related to solid waste regulations identifies the non-hazardous solid waste that is anticipated to be generated during both construction and operation of the project, and how the project would implement the regulations related to disposal of that solid waste. Hazardous waste is analyzed in Section 3.7, *Hazards and Hazardous Materials*; however, the capacity of the nearest landfill permitted to accept hazardous waste is analyzed herein.

As stated in Chapter 1, *Introduction*, on April 28, 2016, the City sent an NOP to responsible, trustee, and federal agencies, as well as to organizations, and individuals potentially interested in the project to identify the relevant environmental issues that should be addressed in the EIR. Comments were received from the LACSD noting the presence of trunk sewers under the Synergy Oil Field and City Property sites and requesting that the project applicant send the project plans for their review to ensure no conflicts. No buildings would be constructed over the trunk sewers and no conflicts are anticipated; however, the grading of the Synergy Oil Field site may occur over the trunk sewer, and, if this occurs, the project plans would be sent to the LACSD for their review and approval as a part of the permitting process.

## 3.17.4.3 Impact Evaluation

**Impact UT-1: The project would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board. (Less than Significant)**

### *Construction*

The proposed project would consolidate existing oil operations and implement wetlands habitat restoration. Existing oil operations on the Synergy Oil Field, City Property, and Pumpkin Patch sites would be removed over time and new oil production facilities constructed on the Pumpkin Patch and LCWA sites. The northern portion of the Synergy Oil Field site would be remediated as needed and restored to a natural wetland area. During project construction activities, including demolition and removal of existing oil production facilities, well (plugging) abandonment, and construction of non-oil and oil production facilities including oil well drilling, a minimal amount of wastewater would be generated by construction workers and collected by portable toilet facilities. All wastewater generated in portable toilets would be collected by a permitted portable toilet waste hauler and appropriately disposed of at one of the County identified liquid waste disposal stations. These waste disposal stations are permitted by the LARWQCB. Therefore, because no wastewater treatment requirements would be exceeded, there would be no impact.

### *Operation*

As discussed in Impact UT-2b (wastewater discussion), the majority of wastewater generated by the proposed project would be saline water produced as a result of oil extraction operations. In addition, some wastewater is generated during the processing of the extracted oil, largely through the cleaning of oil processing equipment. Currently, the produced water and processing water is disposed of into the sanitary sewer system for treatment at LACSD treatment facilities. The proposed project would change this practice by installing injection wells on the

Pumpkin Patch and LCWA sites. The produced water and processing water would be treated and injected back into the oil production zones. The re-injection would remove this wastewater from the current practice of discharge to the sewer system to the LACSD treatment facilities. This would eliminate the potential to conflict with RWQCB wastewater treatment requirements and would result in no impact.

Operation of the proposed visitors center at the Synergy Oil Field site has the potential to result in a nominal increase of the amount of sanitary wastewater generated due to the use of the visitors center. Sanitary wastewater generated by the visitors center would be treated at the existing LACSD treatment facilities. LACSD has been issued a facility-specific NPDES permit by the LARWQCB. Waste discharge requirements (WDRs) for the proposed project are based on all applicable State and federal regulations, policies, and guidance. Although the volume of wastewater would nominally increase, the nature of wastewater disposed to the sanitary sewer system would remain unchanged and would, therefore, still be acceptable under the existing site discharge requirements. The proposed project would continue to be served by existing sewer systems located within public streets and rights-of-way and the LACSD treatment facilities. Therefore, the impact of the additional wastewater from the visitors center would be less than significant.

The transfer of oil production operations personnel to the Pumpkin Patch site would relocate the existing sanitary wastewater source from the Synergy Oil Field to the Pumpkin Patch site. The sanitary waste would still be discharged to the same sewer distribution system and to the same LACSD treatment facilities, all under the same discharge requirements and regulations. Therefore, there would be no impact.

**Mitigation Measures:** None required.

**Significance Determination:** Less than Significant.

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**Impact UT-2a: The project would not require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (Less than Significant)**

### *Water Treatment Facilities—Construction and Operation*

The current operational water use is about 0.15 AFY. During construction activities, the installation of oil production wells and produced-water injection wells on the Pumpkin Patch and LCWA sites would require water to mix drilling muds used to keep boreholes open and cool drill bits during drilling, and for mixing with cement for surface well seals and well head pads. The plugging and abandonment of existing wells on the Synergy Oil Field, City Property, and Pumpkin Patch sites would require water for mixing with bentonite clay and cement to plug the wells. Hydrostatic testing would use water under pressure to test for leaks in new pipelines and storage tanks. The amount of water that would be used for hydrostatic tests would be minimized by transferring water from one use to another and storing in a storage tank when not in use. The construction of the new facilities on the Pumpkin Patch and LCWA sites (buildings, well cellars, pads for storage tanks, oil processing equipment, and associated infrastructure) would require water for mixing with cement. In addition, relatively minor amounts of water would be used as necessary for the cleaning of equipment and dust suppression during construction on all the individual sites.

During operations, water would be used for the routine processing of oil every year. In addition, the northern 76.52-acre area would be irrigated for the first 2 years to ensure vegetation is established. Drinking water and other potable water use would be nominal at the visitors center and the Pumpkin Patch Operations Building.

Water for construction and operations would be provided by the LBWD. The projected water use for construction activities and operations that would be acquired from the LBWD over the next 60 years is summarized below in **Table 3.17-4, Summary of Projected Annual Water Usage**. Both construction and operations water use are listed because the activities overlap over time. The listed years are the anticipated years; the specific well removal schedule is unknown at this time; however, well plugging and abandonment would occur with half of the wells removed within 20 years from the New Occupancy Date (defined as the date of occupancy of the new office building on the Pumpkin Patch site) and the balance removed within 40 years from the New Occupancy Date. In any case, the maximum combined construction and operations water use would be about 124 acre-feet from the third year through eleventh year when oil wells would be constructed at the Pumpkin Patch and LCWA sites. Water use would be less in all other years. As previously discussed in Section 3.17.2, Environmental Setting, the LBWD expects to have at least 76,983 AFY of available surplus water, which exceeds the needs of the proposed project for any year.

**Table 3.17-4 Summary of Projected Annual Water Usage**

| Project Year | Acre-Feet per Year | | | | | |
|---|---|---|---|---|---|---|
| | Well Installation | Well Plugging/Abandonment | Hydrostatic Testing | Operations | Irrigation | Subtotal per Year |
| 1 | 0 | 0 | 8.1 | 2.8 | 65.7 | *77* |
| 2 | 0 | 0 | 4.0 | 2.8 | 43.8 | *51* |
| 3 | 121 | 0 | 0.1 | 2.8 | 0 | *124* |
| 4 | 121 | 0 | 0.1 | 2.8 | 0 | *124* |
| 5 | 121 | 0 | 0.1 | 2.8 | 0 | *124* |
| 6 | 121 | 0 | 0.1 | 2.8 | 0 | *124* |
| 7 and 8 | 121 | 0 | 0.1 | 2.8 | 0 | *124* |
| 9 | 121 | 0 | 0.1 | 2.8 | 0 | *124* |
| 10 and 11 | 121 | 0 | 0.1 | 2.8 | 0 | *124* |
| 12 and 13 | 61 | 0 | 0 | 2.8 | 0 | *64* |
| 14 to 19 | 0 | 0 | 0 | 2.8 | 0 | *2.8* |
| 20 | 0 | 0.5 | 0 | 2.8 | 0 | *3.3* |
| 21 to 23 | 0 | 0.5 | 0 | 2.8 | 0 | *3.3* |
| 24 | 0 | 0.7 | 0 | 2.8 | 0 | *3.5* |
| 25 | 0 | 0 | 0 | 2.8 | 0 | *2.8* |
| 26 to 28 | 0 | 0 | 0 | 2.8 | 0 | *2.8* |
| 29 and 30 | 0 | 0 | 0 | 2.8 | 0 | *2.8* |
| 31 | 0 | 0 | 0 | 2.8 | 0 | *2.8* |
| 32 | 0 | 0 | 0 | 2.8 | 0 | *2.8* |
| 33 | 0 | 0 | 0 | 2.8 | 0 | *2.8* |
| 34 | 0 | 0 | 0 | 2.8 | 0 | *2.8* |
| 35 | 0 | 0 | 0 | 2.8 | 0 | *2.8* |
| 36 | 0 | 0 | 0 | 2.8 | 0 | *2.8* |
| 37 | 0 | 0 | 0 | 2.8 | 0 | *2.8* |
| 38 | 0 | 0 | 0 | 2.8 | 0 | *2.8* |
| 39 | 0 | 0 | 0 | 2.8 | 0 | *2.8* |
| 40 to 43 | 0 | 0.5 | 0 | 2.8 | 0 | *2.8* |
| 44 | 0 | 0.6 | 0 | 2.8 | 0 | *3.0* |
| 45 to 60 | 0 | 0 | 0 | 2.8 | 0 | *2.8* |

SOURCE: BOMP, 2017a.

The proposed project would continue to receive water supplies through the existing water lines that serve the project area. The visitors center on the Synergy Oil Field site would connect a water supply pipeline to the existing water supply pipeline in 2nd Street on the south side of the site. The Pumpkin Patch site would connect a water supply pipeline to the existing water supply pipeline in the Pacific Coast Highway near the western corner of the site. The LCWA site would connect a water supply pipeline to the existing water supply pipeline in Studebaker Road on the west side of the site. The operations water use estimate includes processing and site irrigation. The City Property site would not require water service. Although construction of the on-site public water main and distribution lines would be required to support the operations facility, no extensions or expansions to the water pipelines supplying the project site would be required. The necessary water supply line improvements are included as part of the proposed project and would not result in any physical environmental effects beyond those identified in this EIR. Therefore, although the proposed project would result in an increased volume of water used for some years, the proposed project would not require or result in the construction of new water facilities or expansion of existing facilities, the construction of which could cause significant environmental effects, and impacts would be less than significant.

**Mitigation Measure:** None required.

**Significance Determination:** Less than Significant.

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**Impact UT-2b: The project would not require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (No Impact)**

### *Wastewater Treatment Facilities*

#### Construction

Drilling wells for the proposed project would require the use of water for mixing the drilling mud; however, upon completion, the drilling mud would be sent off site for disposal to a landfill permitted to accept drilling mud. The mud would not be sent to a wastewater treatment facility.

All wastewater generated during construction, including water from washing down trucks, equipment, and concrete construction pads, would be stored on site within temporary storage tanks. These tanks would store all wastewater and would be periodically hauled off site by vacuum trucks. Construction workers would use portable sanitary units during construction activities for the proposed project. Wastewater generated during construction of the proposed project would be minimal and would not require the construction of new wastewater treatment facilities. After settling out the solids, the waste water would be sent to the LACSD treatment facilities for treatment and disposal. Because construction of new or expanded facilities is not required to accommodate the construction of the project, there would be no construction impacts associated with the provision of these facilities to serve the project.

#### Operation

Currently, the majority of wastewater associated with the project site is the saline water produced as a result of oil extraction operations. As previously noted, the majority of fluids extracted from oil wells consists of saline water referred to as produced water. Currently, this produced water is conveyed to the sanitary sewer system for treatment at LACSD treatment facilities. During 2016, an average of 0.5 mgd was discharged to the sanitary sewer (BOMP 2017a). The proposed project would install produced-water injection wells on the

Pumpkin Patch and LCWA sites, and would no longer convey saline water into the sewer system. Instead, the produced water would be injected back into the oil production zones, which would prevent subsidence in the project area (see Section 3.5, *Geology, Seismicity, and Soils*, for subsidence discussion). This injection practice would decrease the volume of wastewater currently discharged to the sanitary sewer system for treatment generated by oil field operations.

In addition, area drains on the Pumpkin Patch and LCWA sites would be routed to the well cellars, which would provide the capacity to contain a 25-year 24-hour rainstorm. The stormwater would be processed through into the facility's water treatment system and then injected into the oil production zones, preventing any on-site rainfall from being discharged from the facilities. Stormwater that accumulates within the curbed areas around process equipment would be held within the curbed area until it can be visually inspected before being drained to the well cellars, processed through the water treatment system and then injected into the oil production zones. Similarly, stormwater that accumulates within the containment walls around the storage tanks would be held until it can be pumped to the water treatment system and then injected into the oil production zones.

The volume of sanitary wastewater (e.g., toilets, washrooms) would increase due to the increase of employees and by the public using the visitors center. As discussed above, the JWPCP treats approximately 260 mgd but has a total permitted design capacity of 400 mgd. In addition, the LBWRP treatment capacity is not yet using its full capacity of 25 mgd. Therefore, the combined wastewater treatment facility capacities would be accommodated by the existing LACSD treatment plants.

Because of the comparatively large reduction in waste water generated from oil production, there would be no requirement for the construction of new or expanded wastewater treatment facilities to serve the proposed project. Additionally, the existing sewer lines are sized to accommodate the volume of wastewater produced from the project. Because construction of new or expanded facilities is not required to accommodate the proposed project and the overall volume of wastewater would decrease, there would be no operational impacts associated with the provision of these facilities to serve the project.

**Mitigation Measures:** None required.

**Significance Determination:** No Impact.

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**Impact UT-3: The project would not require or result in the construction of new stormwater drainage facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects. (Less than Significant)**

Stormwater runoff from the area around the visitors center of the Synergy Oil Field site would be routed to bioretention basins that would control stormwater flow rates to be equal or less than the pre-developed condition. The northern portion of the Synergy Oil Field site would be restored where stormwater would flow naturally into the restored wetlands and ultimately into the Los Cerritos Channel. The proposed drainage patterns around the visitors center of the Synergy Oil Field site would be designed to have stormwater runoff sheetflow into swales, gutters, and biofiltration BMPs before discharging into the existing City-wide storm drain system. Per the recommendations of the project LID Plan, water quality BMPs would be implemented on all individual sites except the City Property site.

All stormwater on the Pumpkin Patch and LCWA sites would be routed to the well cellars designed to contain a 25-year 24-hour rainstorm event. The stormwater would then be pumped into the facility's on-site water treatment system to ultimately be injected into the oil reservoirs, preventing any on-site rainfall or stormwater from being discharged from the Pumpkin Patch and LCWA sites.

Therefore, the project would not require the expansion of any off-site stormwater drainage facilities. The construction of the on-site stormwater drainage facilities would be designed in accordance with the City Stormwater Manual and MS-4 Permit requirements. Overall, with the addition of on-site injection of stormwater (Pumpkin Patch and LCWA sites), implementation of the new BMPs proposed within the LID Plan, and compliance with applicable regulatory requirements, impacts related to the need to construct or expand stormwater drainage facilities would be less than significant.

**Mitigation Measures:** None required.

**Significance Determination:** Less than Significant.

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**Impact UT-4: The project would have sufficient water supplies available to serve the project from existing entitlements and resources. (Less than Significant)**

As discussed above in Impact UT-2a, the existing public water supply would have sufficient available surplus water supplies (at least 76,983 AFY) compared to the maximum 1-year needs of the project (124 acre-feet in Years 3 through 11 of the project). Therefore, impacts related to water supply would be less than significant.

**Mitigation Measures:** None required.

**Significance Determination:** Less than Significant.

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**Impact UT-5: The project would not result in a determination by the wastewater treatment provider that would serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. (Less than Significant)**

### *Construction*

Currently, wastewater flows from the Synergy Oil Field and City Property sites are conveyed to existing LACSD trunk sewer lines; no wastewater is currently generated at the Pumpkin Patch and LCWA sites. Wastewater generated during construction, including water from washing down trucks, equipment, and concrete construction pads would be stored on site within temporary storage tanks. Tanks would be used to store all wastewater to be hauled off site periodically by vacuum trucks. Hydrostatic test water would be acquired from the LBWD, and would be stored and reused on site to the extent possible. Then the water would be routed to the on-site injection wells and not routed to the sanitary sewer system. Wastewater generated during construction activities would be nominal compared to the 425 mgd capacity of the JWPCP and LBRP treatment facilities of the LACSD. Therefore, the proposed project would not result in substantial capacity impacts to LACSD and impacts related to the provision of wastewater treatment in addition to LACSD's existing commitments would be less than significant.

### *Operation*

As discussed above in Impact UT-2b, the majority of currently generated wastewater is produced water from oil extraction operations. The project would install injection wells that would return this produced water to the oil production zones, thus eliminating this wastewater source. This would reduce the volume of wastewater produced by the site by approximately 0.5 mgd or 566 AFY. Wastewater from facilities safety showers, wash down connections, and facility operations would be also sent to the injection wells. Wastewater generated from on-site employees and recreational visitors to the visitors center would be nominal compared to the 425 mgd capacity of the combined JWPCP and LBRP treatment facilities and no new or expanded facilities would be needed. Therefore, because the proposed project would result in an overall decrease in the volume of wastewater, there would be no impact to the operational capacity of the LACSD wastewater treatment facilities.

**Mitigation Measures:** None required.

**Significance Determination:** Less than Significant.

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**Impact UT-6: The project would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs. (Less than Significant)**

### *Construction*

As described in Chapter 2, *Project Description*, demolition and construction activities would generate solid waste from the demolition of existing structures (the existing oil wells, piping, and associated infrastructure to be removed from the Synergy Oil Field and City Property sites); the previously landfilled waste to be removed from the Pumpkin Patch site, if needed (see Section 3.7, *Hazards and Hazardous Materials*, for description); and construction activities at the Pumpkin Patch site, LCWA site, and the oil and utility pipeline connecting the Pumpkin Patch and LCWA sites. The solid waste would include metals, concrete, asphalt, wood, cardboard, glass, plastics, soil, and other materials.

The metals portion of the solid waste would consist of sections of pipelines, cut-up pieces of storage tanks, and other metallic waste. The majority of the metals waste would be recycled at local metals recyclers. Some other solid waste may also be recycled such as asphalt, concrete, and the boxes and crates used in the shipment of materials, depending on the nature of the material. For example, asphalt plants would be unlikely to accept asphalt mixed with soil. Consequently, it is anticipated that some of the listed demolition and construction waste may not be acceptable for recycling. The types and volumes of solid waste anticipated to be sent for disposal at landfills is summarized below in **Table 3.17-5, Anticipated Volumes of Solid Waste for Landfill Disposal During Construction**. The anticipated volumes conservatively assume that all of the landfill material at the Pumpkin Path would be removed.

**Table 3.17-5 Anticipated Volumes of Solid Waste for Landfill Disposal During Construction**

| Material | Cubic Yards | Tons |
|---|---|---|
| Pumpkin Patch Landfilled Waste | 63,000 | 94,000 |
| Concrete | 47 | 95 |
| Asphalt | 89 | 180 |
| Synergy Site Soil Waste | 5,250 | 8,338 |
| LCWA Site Soil Waste | 200 | 300 |
| Synergy Site Contaminated Soil | 15,237 | 24,200 |
| Wood | 66 | 40 |
| Plastic | 7 | 5 |
| Cardboard and paper | 16 | 10 |
| Trash and Other Materials | 26 | 35 |
| **Total** | **83,938** | **127,203** |

SOURCE: Pirzadeh & Associates, 2017; AEC, 2017; Wilson Mikami 2017b.

As discussed above, the five landfills that can serve the project have a combined remaining capacity of 504,756,250 tons and a combined daily maximum acceptance rate of 50,250 tons. These five landfills are projected to remain open until about 2030, 2053, 2045, 2052, and 2037, respectively. Based on the available capacity, these landfills would have the capacity to accept all of the solid waste. Therefore, construction and demolition activities of the proposed project would not result in the need to expand the existing landfill facilities or construct a new landfill facility. Contaminated soil would be segregated and disposed of at the Kettleman Landfill, which is permitted to accept hazardous waste. The Kettleman Landfill is in the process of expanding its hazardous waste unit capacity by an additional 4.9 million cubic yards, which is anticipated to provide an additional 8 to 9 years based on the typical rate of hazardous waste disposal (DTSC 2014). As a result, construction activities would result in less-than-significant impacts related to landfill facilities.

### *Operation*

Operation and maintenance of the proposed project would result in minimal trash generation, mainly personal waste generated by operation and maintenance crews. The new office building would recycle waste such as pallets, cardboard and paper boxes, paper, plastics, scrap steel, scrap aluminum, and scrap wire. Other office-type trash and rubbish would be collected in waste bins and disposed of by Long Beach waste haulers. The typical volume of operations waste that would be sent for disposal at an off-site landfill is anticipated to be about 13 tons per year. The project facilities would also generate solid waste from oil and gas production operations, primarily solids brought up from production wells during the extraction process. This material would be transported off site for further processing, likely to a petroleum processing facility.

As discussed above, the five landfills have 504,756,250 tons and a combined daily maximum acceptance rate of 50,250 tons, therefore the amount of trash generated by the proposed project would not adversely impact the capacity of these landfills. The proposed project would not result in the need to expand the existing landfill facilities or construct a new landfill facility. As a result, operational activities would result in less-than-significant impacts related to landfill facilities.

**Mitigation Measures:** None required.

**Significance Determination:** Less than Significant.

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**Impact UT-7: The project would comply with federal, state, and local statutes and regulations related to solid waste. (Less than Significant)**

### *Construction*

As previously discussed, the project would generate various materials that would be considered solid waste. This material would consist of the materials listed above in Table 3.17-5. A majority of this material would consist of non-hazardous materials that would be acceptable at the five previously discussed landfills under the waste acceptance criteria in their current operating permits. There are two sources of solid waste that may require disposal as a hazardous waste at a disposal facility permitted to accept hazardous waste.

Soil at the Synergy Oil Field and the City Property sites is currently being investigated (tested) for the presence of contaminants in soil at concentrations above screening levels (see Section 3.7, *Hazards and Hazardous Materials*, for discussion). If present, contaminated soil would be segregated and disposed of at the Kettleman Landfill, which is permitted to accept hazardous waste.

As discussed in Section 3.7, *Hazards and Hazardous Materials*, metal pipelines that have carried crude oil for extended periods of time have the potential to retain naturally occurring radioactive materials. All pipeline segments would be tested for radioactivity once demolished. Those that exceed action levels would be segregated from other materials for handling, disposed as low-level radioactive waste, and hauled to a facility designed to accept these wastes, likely the landfill in McKittrick, California.

For all remaining solid waste, the project would comply with all City and County construction and demolition requirements during construction of the proposed facilities as described above in Section 3.17.3, Regulatory Framework. All non-hazardous solid waste would be hauled off site by truck to one or more of the previously listed solid waste landfills. As previously discussed, the three landfills that can serve the project have the daily and total available capacity to accept the solid waste that would be generated from operation of the proposed project. The proposed project would comply with all federal, State, and local statues related to solid waste disposal. Therefore, the proposed project would result in less-than-significant construction solid waste impacts.

### *Operation*

The City is required to comply with the California Integrated Waste Management Act of 1989, requiring diversion of solid waste from landfills through reuse and recycling. The project would be required to recycle during its operation. As previously discussed, any recyclable materials would be segregated and sent to recycling facilities permitted to recycle the materials. Materials that cannot be recycled would be sent to disposal facilities licensed to accept the solid waste. Therefore, the project impacts related to potential noncompliance with solid waste statutes and regulations would be less than significant.

**Mitigation Measures:** None required.

**Significance Determination:** Less than Significant.

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## 3.17.4.4 Cumulative Impacts

The cumulative projects are listed in Table 3-1, List of Cumulative Projects, and the locations shown on Figure 3-1, Approximate Locations of Cumulative Projects. The cumulative projects within the vicinity of the proposed project would consist of residential, commercial, redevelopment projects, and infrastructure project such as road repaving and other improvements. None of the cumulative projects are oil production or habitat restoration projects.

### *Wastewater Treatment Regulations*

Cumulative wastewater treatment requirements impacts are considered on a system-wide basis and are associated with the operation of the wastewater disposal at the JWPCP or LBRP. In addition, and as previously discussed, the LACSD has the existing infrastructure to route sewage effluent to its other treatment facilities. Cumulative developments within the urban and developed areas of the City that are served by the JWPCP or LBRP would consist of infill and redevelopment projects. Cumulative development could also include industrial uses that could include similar uses to those that would be implemented by the proposed project. These similar land uses are not expected to discharge wastewater that contains harmful levels of toxins beyond the regulations of the LARWQCB, and all effluent would comply with the wastewater treatment standards of the RWQCB. Similar to the proposed project, industrial facilities that have the potential to discharge hazardous wastewater would require specific permitting by the RWQCB prior to connecting to the sewer system, which would ensure that flows are within the regulations of the LARWQCB. Therefore, impacts related to the potential for cumulative projects to exceed wastewater treatment requirements of the LARQCB would be less than significant.

As described above, implementation of the proposed project would not generate wastewater that contains harmful levels of toxins and all effluent would comply with the wastewater treatment standards of the LARWQCB. Therefore, the project would not generate wastewater that could combine with wastewater from related projects to result in an exceedance of the LARWQCB regulations. The project would result in a less than cumulatively considerable impact to wastewater treatment requirements of the LARWQCB.

### *Wastewater/Sewer Capacity*

#### Water

Cumulative water infrastructure impacts are considered on a system-wide basis and are associated with the capacity of existing and planned infrastructure. The cumulative system evaluated includes the LBWD infrastructure systems that are serving the project area and adjacent land uses in the City.

Cumulative projects in the project area could result in the need for new or upgraded water infrastructure. The construction activities associated with new or upgraded water facilities, if needed in by future cumulative projects, could result in significant environmental impacts. Those facilities, if required by other related projects, would be analyzed at such time discretionary approvals for those projects are considered. The proposed project has evaluated infrastructure needs for its water service and has included connections to existing water service pipelines to ensure that implementation of the project would be served by adequate infrastructure. Because the project would not require the construction of water facilities beyond the improvements that are part of the project, the project would not have a cumulatively considerable contribution to potential significant cumulative impacts associated with water infrastructure.

### Wastewater

Cumulative wastewater infrastructure impacts are considered on a system-wide basis and are associated with the capacity of existing and planned infrastructure. As previously discussed, the proposed project would reduce the volume of wastewater sent to the sewer system. Therefore, the project would not have a cumulatively considerable contribution to potential significant cumulative impacts associated with wastewater infrastructure.

### Water Supply

Cumulative water supply impacts are considered on a purveyor service area basis and are associated with the adequacy of the primary sources of water that include groundwater, imported water, and recycled water.

Groundwater rights are adjudicated in the Basin, which has regulated groundwater supplies. Management of the adjudicated Basin and the prescriptive allowable pumping rights for LBWD and other agencies that access the groundwater basin reduces the potential of incremental increases to groundwater pumping that could result in a cumulatively considerable impact on the groundwater supplies.

In addition, every water purveyor provides projections for water supply and demand through 2040 that includes imported water and recycled water sources. By using SCAG growth projections, each water supply agency within the project area should adequately be able to monitor supplies and plan accordingly. As a result, cumulative development would result in less-than-significant cumulative impacts to water supply.

Because the proposed project as well as cumulative projects would result in less-than-significant impacts, the implementation of the proposed project would not result in cumulatively considerable impacts to water supply.

### Storm Drain Capacity

The geographic scope for cumulative impacts on stormwater drainage includes the existing stormwater infrastructure that serves the project area, which is based on the regional drainage area. These facilities include pipelines and culverts that are owned and maintained by the Los Angeles County Flood Control District. Because the cumulative area is urban, developed, and is generally covered with impervious surfaces, development of cumulative projects would not result in a substantial increase in impervious surfaces in the area or substantially increase stormwater and runoff flows through the stormwater drainage system. In accordance with state and regional MS4, LID, and County SUSWMP regulations, projects are required to maintain pre-project hydrology, such that no net increase of off-site stormwater flows would occur. City of Long Beach MS4 Permit conditions require a hydrology/drainage study to demonstrate that all runoff would be appropriately conveyed and not leave the project site at rates exceeding pre-project conditions, prior to receipt of necessary permits. As a result, increases of runoff from cumulative projects that could cumulatively combine to impact stormwater drainage capacity would be less than cumulatively significant.

Areas surrounding the project area are generally covered with impervious surfaces and development of cumulative projects would not substantially increase the amount of impervious surfaces and runoff, such that existing storm drains would be overwhelmed because all development projects would be required to comply with the same SUSWMP, LID, and RWQCB permit requirements to retain the difference between the volume pre- and post-construction runoff volume. In addition, implementation of the proposed project would include installation of drainage inlets that lead to bioretention BMPs. The drainage facilities would help to capture, retain, and utilize some surface water runoff, which would reduce the amount of surface runoff in the storm drains. Overall, with implementation of new drainage/bioretention BMPs and compliance with applicable

regulatory requirements, the project's contribution to cumulative impacts related to stormwater drainage capacity would be less than cumulatively considerable.

### *Landfill Capacity*

The geographic scope of cumulative analysis for landfill capacity is the service area for the Olinda Alpha Landfill, Frank R. Bowerman Landfill, El Sobrante Landfill, Waste Management Simi Landfill, Azusa Land Reclamation, and Kettleman Landfill, which serve the project area. The projections of future landfill capacities are based on the projected waste stream going to these landfills. As described above, these landfills are projected to remain open until at least These five landfills are projected to remain open until about 2030 to up to 2053. The lifespan of these landfills include the existing and projected solid waste that is anticipated from the growth in the County. As a result, impacts from future growth on landfill capacity would be less than cumulatively significant. Although the proposed project would contribute solid waste to the landfills, the addition of up to approximately 103 tons of demolition and construction solid waste and 13 tons of operational solid waste per year would not substantially impact the permitted capacity of the landfills. Therefore, the increase in solid waste from operation of the proposed project in combination with planned growth within the County would not require construction of a new landfill or expansion of the existing landfill to meet capacity needs. As a result, the project's contribution to cumulative impacts on the capacities of the landfill facilities would be less than cumulatively considerable.

### *Solid Waste Regulations*

The geographic scope of cumulative analysis for compliance related to solid waste regulations is the service area for the landfills that serve the Los Angeles County region. Disposal of solid waste generated by cumulative development would be subject to the requirements set forth in AB 939, AB 341, and the policies within the Los Angeles County Integrated Waste Management Plan. Therefore, cumulative development would comply with all solid waste statutes and regulations, and cumulative development would result in no impacts.

Because disposal of solid waste generated by the proposed project would comply with all solid waste statutes and regulations, the proposed project would not contribute impacts related to conflicts with solid waste regulations. Therefore, the project would not contribute to cumulative impacts associated with compliance with solid waste statutes and regulations.

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