IV.O UTILITIES

1. INTRODUCTION

This section of the Draft EIR provides a discussion of utilities, applicable laws, and regulations associated with utilities and analysis of the potential effects resulting from implementation of the proposed Project.

2. ENVIRONMENTAL SETTING

Existing Conditions

Water Supply

The Long Beach Water Department (LBWD) provides water to the majority of Long Beach (City), including the Project Site.[1] A majority of the water provided to the City is imported water that is purchased wholesale from the Metropolitan Water District of Southern California (MWD). Other sources of water include groundwater pumped and treated by LBWD, and recycled water. **Table IV.O-1: Existing and Future Water Supplies (AFY)** shows the current and planned water supplies for Long Beach in acre-feet per year (AFY).[2]

Table IV.O-1
Existing and Future Water Supplies (AFY)

	Year						
Source	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**
Groundwater – Central Basin	21,932	37,126	37,126	41,126	41,126	41,126	41,126
Groundwater – West Coast Basin	0	0	0	0	0	0	0
Imported	29,472	30,900	30,900	30,900	30,900	30,900	30,900
Recycled	13,495	13,500	13,500	13,500	13,500	13,500	13,500
Total	*64,898*	*84,752*	*84,752*	*88,752*	*88,752*	*88,752*	*88,752*

Source: Long Beach Water Department, 2020 Urban Water Management Program, Table 6-5.

1 Long Beach Water Department, 2020 Urban Water Management Program (*Public Draft*), https://www.lbwater.org/wp-content/uploads/2021/05/LBWD_UWMP2020_PublicReviewDraft.pdf, accessed July 2021.

2 An acre-foot is 325,585 gallons.

Local Water

The City retrieves groundwater from wells located throughout the City limits and has water rights to pump approximately 33,000 AFY; this amount fulfills about 60 percent of the City's overall needs.[3] The major aquifers beneath the City are known as the 400-foot Gravel, the 200-foot Sand, and the Gaspur Zone.[4] These aquifers have a capacity for storing approximately 30 million acre-feet of water. Aquifers provide the source of water found in groundwater basins, which are used for domestic water supply. Groundwater use for domestic water supply is a major beneficial use of groundwater basins in Los Angeles County. The City retrieves its groundwater from the Central Basin and the West Coast Basin. The Central Basin was seriously over drafted by the 1940's, which led to adjudication of the basin in the 1960's and LBWD becoming the owner of the largest allowable pumping allocation (APA)[5] in the Central Basin.[6] Since the adjudication, the combination of limits on groundwater extractions and active replenishment have allowed the basin to recover to sufficient levels. Replenishment of groundwater basins occurs mainly by percolation of precipitation throughout the region via permeable surfaces, spreading grounds, and groundwater migration from adjacent basins, as well as injection wells designed to pump freshwater along specific seawater barriers to prevent the intrusion of salt water. The Long Beach Water Reclamation Plant (LBWRP) processes the City's water that has already undergone primary and secondary treatment and is then redistributed throughout the City. The LBWRP treats approximately 18 million gallons of water per day (MGD) which can be used for watering large parks, golf courses, cemeteries, and athletic fields or other non-potable needs throughout the City.[7] Recycled water is also incorporated into the City's supplies through percolation and natural runoff as it seeps into the groundwater basin.[8] This process is a reliable source of replenishment during times of fluctuations.

Imported Water

The LBWD purchases water wholesale from MWD to supplement local groundwater and recycled water. The water imported by MWD originates from the Colorado River Aqueduct, which is controlled by MWD.

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3 Long Beach Water, Ground and Imported Water, https://www.lbwater.org/water-sources/ground-and-imported-water/#ground-water. Accessed March 2021.

4 City of Long Beach General Plan, Conservation Element, http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/1973-conservation-element, accessed March 2021.

5 The total annual right to extract water on an on-going basis.

6 Long Beach Water Department, 2020 Urban Water Management Program (*Public Draft*), https://www.lbwater.org/wp-content/uploads/2021/05/LBWD_UWMP2020_PublicReviewDraft.pdf, accessed July 2021.

7 Long Beach Water Department, Reclaimed/Recycled Water, https://www.lbwater.org/water-sources/reclaimed-recycled-water/, accessed May 2021.

8 Long Beach Water Department, 2020 Urban Water Management Program (*Public Draft*), https://www.lbwater.org/wp-content/uploads/2021/05/LBWD_UWMP2020_PublicReviewDraft.pdf, accessed July 2021.

The MWD provides about half the water consumed annually by the 19 million people in the Southern California coastal plain.[9]

Wastewater Conveyance and Treatment

The LBWD operates and maintains the City's sanitary sewer system and the City's wastewater treatment services are provided by the Sanitation Districts of Los Angeles County (LACSD). The LACSD operates and maintains the regional wastewater collection system, which includes approximately 1,400 miles of sewers, 48 pumping plants and 11 wastewater treatment plants.[10] The LACSD own, operate and maintain the large trunk sewers that form the backbone of the regional wastewater conveyance system within a service area that includes 850 square miles and 78 cities and unincorporated areas in the county. The Project is within the Joint Water Pollution Control Plant (JWPCP) service area located at 24501 South Figueroa Street in Carson.[11] This facility currently provides primary and secondary treatment for a capacity of 400 million gallons of wastewater per day and serves over 4.8 million residents, businesses, and industries. Before discharging, treated wastewater is disinfected and the effluent is sent to the Pacific Ocean through a network of outfalls.

Solid Waste

The majority of solid waste produced in the City is taken to the Southeast Resource Recovery Facility (SERRF).[12] The SERRF is jointly owned by the LACSD and the City.[13] The facility accepts nonhazardous municipal solid waste and converts it to energy through incineration. In 2019, the City was reported to have disposed of approximately 502,098 tons of waste.[14] Solid waste from the Project Site would be collected and trucked to the SERRF, as the closest active solid waste facility operated by LACSD. SERRF performs "front-end" and "back-end" recycling by recovering items such as white goods prior to incineration and collecting metals removed from the boilers after incineration. The incineration process starts with a thorough search of the solids, making sure that no radioactive material or noncombustible material is left over.[15] The waste is then incinerated and any ash is quickly discharged into a water tank to

9 Long Beach Water Department, 2020 Urban Water Management Program (*Public Draft*), https://www.lbwater.org/wp-content/uploads/2021/05/LBWD_UWMP2020_PublicReviewDraft.pdf, accessed July 2021.

10 Los Angeles County Sanitation Districts (LACSD), About Us, https://www.lacsd.org/aboutus/default.asp, accessed April 2021.

11 LACSD, Wastewater Treatment Plants, https://www.lacsd.org/services/wastewater/wwfacilities/wwtreatmentplant/jwpcp/default.asp, accessed April 2021.

12 City of Long Beach, Waste Reduction, http://www.longbeach.gov/sustainability/green-urban-services/waste-reduction/, accessed April 2021.

13 LACSD, Refuse to Energy Facilities, https://www.lacsd.org/services/solidwaste/rtefac/serrf/default.asp, accessed April 2021.

14 CalRecycle, Disposal Rate Calculator, https://www2.calrecycle.ca.gov/LGCentral/AnnualReporting/DisposalRateCalculator, accessed May 2021.

15 City of Long Beach, Energy Resources, SERRF, http://www.longbeach.gov/energyresources/about-us/serff/, accessed April 2021.

remove the particulates from the air and a Thermal DeNox system injects ammonia into the chamber to control nitrogen oxides. Then, the combustion gases move through a dry scrubber and baghouse to remove additional toxic gases such as sulfur dioxide, hydrochloric acid, and additional particulate matter. Steam generated from this process is partially used to operate the facility and the rest is sold to SCE for redistribution. The leftover ash is treated and used as road base material. Solid waste that cannot be processed in this facility was previously transported to the Puente Hills Landfill. However, as of October 2013, the Puente Hills Landfill closed after 56 years of operation.[16] In addition to the SERFF, the County continues to address landfill capacity through the preparation of annual County of Los Angeles Integrated Waste Management Plan (CoIWMP) reports, which evaluates and plans for future landfill capacity based on expected growth forecasts.[17]

Stormwater Conveyance

The Stormwater and Environmental Compliance Division of the City's Public Works Department is responsible for maintaining the storm drain system and monitoring stormwater quality within the City in coordination with the Los Angeles County Flood Control District (LACFCD). The Project Site does not currently have a drainage system. The highest elevation on-site is approximately 52.96 feet near the northeast corner of the Project Site and the lowest elevation is approximately 29.69 feet at the westerly boundary of the Project Site within Baker Street. The higher elevations tend to be along the easterly boundary of the Site and the lower elevations tend to be along the westerly boundary of the Site. Within the center of the Site are large basins which are remnants from the former water treatment facility. Most of the Project Site drains into one of these basins due to their lower elevation when compared to the rest of the Site. A portion of Golden Avenue and Baker Street also drains into the Site.[18] There is a City maintained storm drain system available adjacent to the Project Site which drains into the Los Angeles River.

Energy

Southern California Edison (SCE) and the Long Beach Energy Resources (LBER) provide electricity and natural gas services to the City.

16 LACSD, Landfills, https://www.lacsd.org/services/wastewater/wwfacilities/wwtreatmentplant/jwpcp/default.asp, accessed April 2021.

17 Los AngelesCounty Integrated Waste Management Plan, https://pw.lacounty.gov/epd/swims/ShowDoc.aspx?id=14372&hp=yes&type=PDF

18 Preliminary Drainage Study, Appendix IV.I.1, April 22, 2020.

Electricity

The Project Site is within the SCE service area. The SCE service area covers 50,000 square miles and includes 15 counties, which serve approximately 15 million people in central, coastal, and Southern California.[19] The SCE planning area used approximately 105,162 GWh of electricity in 2019.[20] The SCE estimates that electricity consumption within its planning area would be approximately 125,000 GWh annually by 2027, when the proposed Project would be fully built out.[21]

Furthermore, SCE supplies power to homes and businesses via different plan options, including "Green Rates."[22] The Green Rate gives consumers the opportunity to purchase renewable energy. By participating in the Green Rate, consumers support local solar power, reducing greenhouse gas (GHG) emissions associated with electricity. To support this effort, SCE purchases additional renewable energy to meet the needs of Green Rate participants from solar renewable developers within the SCE service territory. This is a voluntary program available to both residential and nonresidential energy users who receive power generation, metering, and related services from SCE. In 2017, SCE released *The Clean Power and Electrification Pathway* (Pathway) which presents SCE's integrated blueprint to meet the State's goal of 40 percent reduction in GHG emissions from 1990 levels by 2030.[23] Specifically, SCE's Pathway calls for:

- An electric grid supplied by 80 percent carbon-free energy;
- More than 7 million electric vehicles on California roads; and
- Using electricity to power nearly one-third of space and water heaters, in increasingly energy-efficient buildings.

The nearest transmission lines to the Project Site include two north/south 220 kilovolt (kV) lines and one north/south 69 KV line approximately 0.33 miles to the west.[24] No electricity is currently used on the vacant Project Site.

19 Southern California Edison (SCE), Southern California Edison's Service Area, https://www.sce.com/about-us/who-we-are/leadership/our-service-territory. Accessed April 2021.
20 CEC, California Energy Consumption Database, Electricity Consumption by Planning Area, http://ecdms.energy.ca.gov/elecbyplan.aspx. Accessed April 2021.
21 CEC, Demand Analysis Office, California Energy Demand 2018-2030 Revised Forecast, https://efiling.energy.ca.gov/getdocument.aspx?tn=223244. Accessed April 2021.
22 SCE, Green Rates, https://www.sce.com/residential/rates/standard-residential-rate-plan/green-rates. Accessed April 2021.
23 SCE, The Clean Power and Electrification Pathway, https://www.edison.com/home/our-perspective/clean-power-and-electrification-pathway.html. Accessed April 2021.
24 California Energy Commission, Electric Infrastructure Map, https://cecgis-caenergy.opendata.arcgis.com/app/ad8323410d9b47c1b1a9f751d62fe495. Accessed April 2021.

Natural Gas

According to the CEC's California Energy Consumption Database, the State of California consumed 13,158 million Therms[25] of natural gas in 2019,[26] with demand projected to decrease to 12,800 million Therms in 2030,[27] the furthest year of currently available projections.

Natural gas for the proposed Project area is provided by the City Energy Resources Department (LBER). LBER provides natural gas to approximately 500,000 residents and businesses in Long Beach and Signal Hill and delivers gas through more than 1,800 miles of pipelines.[28] Natural gas for LBER is purchased on the open competitive market. Based on the 2020 California Gas Report, LBER supplied approximately 26.3 millions of cubic feet (MMcf) of natural gas per day in 2020 and is expected to remain consistent and supply 26.3 MMcf of natural gas per day in 2027, when the proposed Project would be fully built out.[29] The Project Site is currently vacant and no natural gas is used.

Telecommunications

Spectrum Communications, Frontier Communications, and AT&T U-verse provide telecommunication and internet services to the City.[30] All three companies hold a franchise issued by the State's Public Utility Commission to be able to provide their services to residents.

In addition, the City owns approximately 60 miles of fiber optic cable in the City. This fiber optic network connects the Long Beach Airport, the Fire Headquarters, and Police Field Support within the City. The City intends on expanding the capacity of existing facilities and adding more fiber optic facilities to address the growing demand for faster cable speeds, greater bandwidths, more reliable data transmission, and to accommodate more flexibility for the future.[31]

25 One Therm is equivalent to 100,000 British thermal units (BTU) or 100 kBTU. A Therm is approximately the energy equivalent of burning 100 cubic feet (1 cf) of natural gas. The conversion of kBTU to cubic feet uses the factor of 1 cf to 1.037 kBTU.

26 CEC, California Energy Consumption Database, Gas Consumption by County, https://ecdms.energy.ca.gov/gasbycounty.aspx. Accessed April 2021.

27 CEC, Final 2019 Integrated Energy Policy Report, https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2019-integrated-energy-policy-report. Accessed April 2021.

28 City of Long Beach, Energy Resources, http://www.longbeach.gov/energyresources/. Accessed April 2021.

29 California Public Utilities Commission, 2020 California Gas Report, https://www.socalgas.com/sites/default/files/2020-10/2020_California_Gas_Report_Joint_Utility_Biennial_Comprehensive_Filing.pdf. Accessed April 2021.

30 Long Beach, Technology and Innovation, http://longbeach.gov/ti/telecommunications/, accessed April 2021.

31 City of Long Beach. Recirculated Draft EIR- General Plan Land Use and Urban Design Elements Project. June 2019. Accessed April 30, 2021.

3. REGULATORY SETTING

Federal

Water Supply

Clean Water Act (CWA)

The federal Clean Water Act (CWA) establishes regulatory requirements for potable water supplies, including raw and treated water quality criteria. Long Beach is required to monitor water quality and conform to the regulatory requirements of the CWA.

Safe Drinking Water Act (SDWA)

The federal Safe Drinking Water Act (SDWA) establishes standards for contaminants in drinking water supplies. Maximum contaminant levels and treatment techniques are established for each of the contaminants. The listed contaminants include metals, nitrates, asbestos, total dissolved solids, and microbes.

Solid Waste

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) is the nation's primary law governing the disposal of solid and hazardous waste. The RCRA sets national goals for reducing the amount of waste generated and for ensuring that wastes are managed in an environmentally sound manner. The Solid Waste Program, established under RCRA, encourages states to develop comprehensive plans to manage nonhazardous industrial solid waste and municipal solid waste, sets criteria for municipal solid waste landfills, and prohibits the open dumping of solid waste. RCRA regulations also encourage source reduction and recycling and promote the safe disposal of municipal waste. RCRA and the California Hazardous Waste Control Law regulations are enforced by the California Department of Toxic Substances Control, the State Division of Occupational Safety and Health, the County Department of Health, and the County Fire Department. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.[32] The Federal Hazardous and Solid Waste Amendments (HSWA) are the 1984 amendments to RCRA that focused on waste minimization and phasing out land disposal of hazardous waste, as well as corrective action for releases.[33] Some of the other mandates of this law include increased enforcement authority for EPA, more

32 United States Environmental Protection Agency, Summary of Resource Conservation and Recovery Act, https://www.epa.gov/laws-regulations/summary-resource-conservation-and-recovery-act, accessed April 2021.

33 United States Environmental Protection Agency, Summary of Resource Conservation and Recovery Act, https://www.epa.gov/laws-regulations/summary-resource-conservation-and-recovery-act, accessed April 2021.

stringent hazardous waste management standards, and a comprehensive underground storage tank program.

Building-Related Construction and Demolition Materials Amounts

Construction and demolition (C&D) materials are generated when new structures are built and when existing structures are renovated or demolished (including deconstruction activities). Structures include all residential and nonresidential buildings, as well as public works projects, such as streets and highways, bridges, utility plants, piers, and dams.[34] The U.S. Environmental Protection Agency (USEPA) has targeted C&D materials for reduction, reuse, and recovery as part of its Resource Conservation Challenge (RCC). The RCC is a national effort to conserve natural resources and energy by managing materials more efficiently. The goals of the RCC are to prevent pollution and promote reuse and recycling, reduce priority and toxic chemicals in products and waste, and conserve energy and materials.

State

Water Supply

Safe Water Drinking Act (1976)

California enacted its own Safe Water Drinking Act. The California Department of Health Services (DHS) has been granted primary enforcement responsibility for the SDWA. Title 22 of the California Administrative Code establishes DHS authority and stipulates drinking water quality and monitoring standards. These standards are equal to or more stringent than federal standards

California Plumbing Code

Part 5 of the California Building Code establishes the California Plumbing Code.[35] The California Plumbing Code sets forth efficiency standards (i.e., maximum flow rates) for all new federally-regulated plumbing fittings and fixtures, including showerheads and maximum lavatory faucets. The maximum flow rate for public lavatory faucets is 0.5 gallon per minute (gpm). In addition, all water closets (i.e., flush toilets) are limited to 1.28 gallons per flush, wall mounted urinals are limited to 0.125 gallon per flush, and floor mounted urinals are limited to 0.5 gallon per flush. The 2019 California Building Code became effective January 1, 2020.

34 United States Environmental Protection Agency, Estimating 2003 Building Related Construction and Demolition Materials Amounts, https://www.epa.gov/sites/production/files/2017-09/documents/estimating2003buildingrelatedcanddmaterialsamounts.pdf, accessed April 2021.

35 California Code of Regulations, Title 24.

California Urban Water Management Planning Act

Section 10610 of the California Water Code contains the California Urban Water Management Planning Act (CUWMPA), which requires urban water suppliers to initiate planning strategies to ensure an appropriate level of reliability in its water service. Under the CUWMPA, every urban water supplier that provides water to 3,000 or more customers, or that annually provides more than 3,000 acre-feet of water service, should make every effort to ensure the appropriate level of reliability in its water service to meet the needs of its various categories of customers during normal, dry, and multiple-dry years. The CUWMPA describes the contents of UWMPs as well as methods for urban water suppliers to adopt and implement the plans.

Senate Bill X7-7 (California Water Code Section 10608)

In February 2008, the California legislature introduced a seven-part comprehensive plan for improving the Sacramento-San Joaquin Delta. As part of that effort, several State agencies were directed to develop a plan to reduce per capita water use Statewide by 20 percent by the year 2020. Legislation titled the "Water Conservation Act of 2009" (SBX7-7) enacted the 20 x 2020 plan. As part of the 20 x 2020 plan, all retail water agencies in the State are required to detail how they plan to achieve the mandatory reductions through their UWMP. Retail water agencies who have either 3,000 or more connections or provide 3,000 AF or more of water per year, are required to comply with SBx7-7.

Statewide Water Reductions – Executive Orders B-29-15, B-36-15, and B-37-16

In response to California's drought conditions, in January 2014, Governor Edmund G. Brown, Jr. (Governor Brown) proclaimed a State of Emergency and directed State officials to take all necessary action to make water available. The following April, Governor Brown issued Executive Order B-29-15 calling for mandatory water reduction measures directed at conserving water use, streamlining the State's drought response, and investing in new technologies to make the State more drought resilient. The governor ordered that the

> *SWRCB shall impose restrictions to achieve a Statewide 25 percent reduction in potable urban water usage through February 28, 2016. These restrictions require water suppliers to California's cities and towns to reduce usage as compared to the amount used in 2013 and consider the relative per capita water usage of each water suppliers' service area, and require that those areas with high per capita use achieve proportionally greater reductions than those with low use.*

On July 15, 2015, the SWRCB released the water-use reduction targets that were imposed on each individual urban water supplier. Then based on rainfall the reduction targets were revised and the new targets became effective March 1, 2016.

On November 13, 2015, Governor Brown issued Executive Order B-36-15, which called for additional actions to build on the State's response to record dry conditions and assist recovery efforts from devastating wildfires. These include extensions of previous executive orders, prioritization of projects that enhance water conservation, support for the extension of water restrictions, and support for projects that remediate wildfire damage and restore power plant operation.

On May 9, 2016, Governor Brown issued Executive Order B-37-16 "Making Water Conservation a California Way of Life" which builds on temporary Statewide emergency water restrictions set forth by Governor Brown and the SWRCB in 2015, to establish longer-term water conservation measures for California. In response to the extreme and persistent drought conditions along with warmer weather and reduced snowpack expected for the State, the 2016 executive order directs permanent changes to use water more wisely, eliminate water waste, strengthen local drought resistance, and improve agricultural water use efficiency and drought planning. The order requires permanent monthly water use reporting, and new permanent water use standards in California communities. To help eliminate water waste, the SWRCB is to prohibit wasteful water practices such as hosing off sidewalks, driveways and other hardscapes, or watering lawns in a manner that causes runoff.

On April 7, 2017, Governor Brown issued Executive Order B-40-17, which lifted the drought emergency in all California counties except Fresno, Kings, Tulare, and Tuolumne, where emergency drinking water projects continued to help address diminished groundwater supplies. B-40-17 also rescinded two emergency proclamations from January and April 2014 and four drought-related Executive Orders issued in 2014 and 2015. Executive Order B-40-17 built on actions taken in Executive Order B-37-16, which remains in effect, to continue making water conservation a way of life in California.

Sustainable Groundwater Management Act of 2014

On September 16, 2014, Governor Jerry Brown signed into law a three-bill legislative package, composed of AB 1739, SB 1168, and SB 1319, collectively known as the Sustainable Groundwater Management Act (SGMA). SGMA requires governments and water agencies of high and medium priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins should reach sustainability within twenty years of implementing their sustainability plans. For critically over-drafted basins, which would be 2040. For the remaining high and medium priority basins, 2042 is the deadline. Through the Sustainable Groundwater Management Program, DWR provides ongoing support to local agencies through guidance and financial and technical assistance. SGMA empowers local agencies to form Groundwater Sustainability Agencies (GSAs) to manage basins sustainably and requires those GSAs to adopt Groundwater Sustainability Plans (GSPs) for crucial

groundwater basins in California.[36] The City retrieves its water supply from the local groundwater basin known as the Central Basin.[37] Up until 2015, LBWD has been consistently working with MWD and the Water Replenishment District (WRD) to use a portion of its APA to replenish the groundwater basin through in-lieu means. Therefore, each year LBWD retires the rights to pump a portion of its APA and receives compensation from WRD to purchase additional imported water from MWD. LBWD has not had to use in-lieu means to utilize a portion of its APA from the 2016 – 2019 timeframe but did so for 5,000AF in 2020. Additionally, over the years, more sustainable groundwater management has been achieved and the basin is able to be replenished through precipitation, recycled water, in-lieu replenishment, imported water, and seawater barrier operations. LBWD's supplies from groundwater, imported water purchased from MWD, and recycled water are expected to be reliable for at least the next 30 years.

Solid Waste

California Integrated Waste Management Act of 1989 (AB 939)

The California Integrated Waste Management Act of 1989 required each city or county's source reduction and recycling element to include an implementation schedule showing that a city or county must divert 50 percent of solid waste from landfill disposal or transformation on and after January 1, 2000. SB 1016, passed in 2008, now requires the 50 percent diversion requirement to be calculated in a per capita disposal rate equivalent.

Stormwater Conveyance

National Pollution Discharge Elimination System (NPDES)

The CWA requires coverage under an NPDES construction permit for stormwater discharges to surface waters associated with various construction activities, except activities that result in disturbance of less than 1 acre of total land area which are not part of a larger common plan of development or sale. The SWRCB has issued a Statewide NPDES Construction General Permit for stormwater discharges from construction sites (Water Quality Order No. 2009-0009-DWQ). Any project that disturbs an area of more than 1 acre, as well as linear underground/overhead project's disturbing over 1 acre, require a NOI to discharge under the Construction General Permit. The Construction General Permit includes three levels of risk for construction sites based on calculated project sediment and receiving water risk. The Construction General Permit includes measures to eliminate or reduce pollutant discharges through implementation of a Stormwater Pollution Prevention Plan (SWPPP), which describes the implementation

36 California Department of Water Resources, SGMA Groundwater Management, https://water.ca.gov/Programs/Groundwater-Management/SGMA-Groundwater-Management, accessed April 2021.

37 Long Beach Department of Water, 2020 Urban Water Management Plan (*Public Draft*), https://www.lbwater.org/wp-content/uploads/2021/05/LBWD_UWMP2020_PublicReviewDraft.pdf, accessed July 2021.

and maintenance of Best Management Practices (BMPs) to reduce or eliminate pollutants in stormwater discharges and authorized non-stormwater discharges from the Site during construction. The Construction General Permit contains receiving water limitations that require stormwater discharges to not cause or contribute to a violation of any applicable water quality standard. The permit also requires implementation of programs for visual inspections and sampling for specified constituents (e.g., nonvisible pollutants). In addition, based upon particular project risk levels, monitoring is required for stormwater discharges.

Electricity

California Code of Regulations Title 24

Title 24 of the California Code of Regulations, which is known as the energy efficiency standards, regulates energy consumption in new construction. The standards regulate energy consumed in buildings for heating, cooling, ventilation, water heating, and lighting. Title 24 is implemented through the local plan check and permit process.

Local

Water Supply

Long Beach Water Department 2020 Urban Water Management Plan

Urban water suppliers are required by California state law to submit an Urban Water Management Plan (UWMP) to the State Department of Water Resources at designated time periods; roughly once every five years, effective first on January 1, 1984. On June 25, 2021, the Long Beach Water Department (LBWD) submitted their draft 2020 UWMP after releasing it for public review on May 10, 2021. The 2020 UWMP is a detailed and comprehensive planning document that addresses a broad array of issues including: (1) future water demands in five-year increments over a minimum 20-year period; (2) the availability of future water supplies necessary to meet demands during average year conditions, both in a single dry water year and in multi-year droughts; (3) actions that would be taken if water supplies are reduced by as much as 50 percent; and (4) reasonable and practical efficient uses of water, recycling, and conservation activities in its service area. Instead of the typical 20-year forecast, LBWD's 2020 UWMP makes a 30-year forecast to allow for reference in future assessments completed between 2020 and 2025 when the next update is expected. Total water demand is projected to decline through 2030 as water efficiency continues to increase, then projected to continue to hold steady through 2040 as increasing water demand from population and economic growth are canceled out by reductions from conservation. By 2040, water demand is then projected to begin increasing to approximately 44,000 acre-feet by 2050 as population and economic growth surpasses the reductions in demand from conservation. Under this forecast, water use across all sectors are projected to remain steady or decline with the exception of irrigation water use, which is anticipated to increase. LBWD's supplies from groundwater, imported water purchased from MWD, and recycled water are expected to be reliable for at least the next 30 years.

Wastewater Treatment and Conveyance

Long Beach Municipal Code – Title 15 Chapter 15.01

Title 15, Public Utilities, of the City Municipal Code (LBMC) includes seven chapters regulating wastewater line connections and the development of new wastewater facilities. Specifically, Chapter 15.01, Sewer-Rules, Regulations, and Charges, establishes that the current edition of the rules, regulations, and charges governing water and sewer service are to be approved by the Board of Water Commissioners. Chapter 15.08, Sewers-Permits, specifies that only employees of the water department are allowed to construct or alter a public sewer, a sewage pumping plant, a private sewer in a public street, or a house connection or make a connection from a building sewer to a house connection unless a permit from the general manager has been provided. Chapter 15.20, Sewers-Use Regulations, prohibits the discharge of the following items into any public sewer in the City:

- Earth, sand, rocks, ashes, gravel, plaster, concrete, glass, metal filings or metal objects, or other materials which would not be carried by the sewer stream or anything which may obstruct the flow of sewage in the sewer or any object which would cause clogging of a sewage pump or a sewage sludge pump;
- Any garbage which has not been first shredded so that each particle is not more than three eights of an inch in any dimension or any garbage containing broken glass
- Any solid or semisolid material such as garbage, trimmings, cuttings, offal, or other waste produced in the processing of meats, fruits, vegetables, foodstuffs or similar materials except garbage produced which meets the requirements of Chapters 15.04 through 15.28 and the rules, regulations, and charges governing water and sewer service;
- Any volatile liquids or substances which can produce toxic or flammable atmospheres in the sewer;
- Any compounds which may produce strong odors in the sewer or sewage treatment plant;
- Any storm water or runoff from any roof, yard, driveway, or street;
- Any materials which would cause damage to any part of the sewer system or abnormal supplied generation or abnormal maintenance or operation costs of any part of the sewer system or which may cause any part of the sewer system to become a nuisance or a menace to public health or a hazard to workers or which would cause objectionable conditions at the final point of disposal of the sewage;
- Any liquid having a temperature in excess of 120 degrees Fahrenheit (ºF);
- Unpolluted water from refrigeration systems, air conditioning systems, industrial cooling systems, swimming pools, or other unpolluted water from any origin except as authorized by the general manager; or
- Any radioactive waste which constitutes or may constitute a public health hazard or endanger workmen charged with the maintenance of public sewers.

Chapter 15.20 also includes regulations regarding building sewer lines across another lot; maintenance; existing sewers; backflow prevention; backflow noncompliance; septic tank abandonment; dumping contents of septic tanks or cesspools; opening manholes; damaging sewers; disposal of uncontaminated water; cellar and shower drainage; maintenance of facilities; and inspections. Finally, Chapters 15.24 and 15.28 include regulations for installations and inspections, respectively.

Solid Waste

Long Beach Municipal Code – Chapter 8.60

Chapter 8.60 of the LBMC addresses solid waste, recycling, and litter prevention in the City. Sections 8.60.025 and 8.60.020 establish standards and guidelines regarding refuse and recycling receptacles for removing and conveying waste, Section 8.60.080 addresses waste requiring special handling (e.g., material likely to become airborne), and Section 8.60.080 discusses permitting surrounding refuse transportation. Chapter 18.67 discusses regulations surrounding the City's construction and demolition recycling program. Section 18.67.020 applies to all construction projects issued a building permit after January 1, 2008, and requires that each project having a valuation greater than $75,000 to divert at least 60 percent of all project-related construction and demolition material.

Construction & Demolition Debris Recycling (C&D) Program

In response to State-mandated waste reduction goals, and as part of the City's commitment to sustainable development, the City adopted an ordinance that requires certain demolition and/or construction projects to divert at least 65 percent of waste either through recycling, salvage, or deconstruction. The C&D Program—which took effect on November 5, 2007—aims to encourage permit applicants to recycle all C&D materials through a refundable performance deposit. The C&D program also encourages the use of green building techniques in new construction and promotes reuse or salvaging of recyclable materials in demolition, deconstruction, and construction projects.

Waste Management Plan (WMP)

In accordance with the C&D program, a Waste Management Plan (WMP) must be completed and approved prior to permits being issued. The WMP details how the project would meet the requirement to divert 60 percent of C&D waste either through recycling, salvage, or deconstruction. At the conclusion of the project, a final report detailing the amount of reuse, recycling, and disposal actually generated from the project must be submitted and approved prior to the Applicant receiving refund of the performance deposit. Projects that do not meet the 60 percent requirement may receive a partial refund in proportion to actual diversion.[38]

38 California Waste Services (CWs), "City of Long Beach," https://www.californiawasteservices.com/es/long-beach.html, accessed May 2021.

4. ENVIRONMENTAL IMPACTS

Thresholds of Significance

To assist in determining whether the proposed Project would have a significant effect on the environment, the City finds the proposed Project may be deemed to have a significant impact related to utilities and service systems if it would:

Threshold IV. UTI-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?**

Threshold IV. UTI-2: **Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?**

Threshold IV.UTI-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?**

Threshold IV.UTI-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?**

5. METHODOLOGY

Methodologies for Evaluating Significance

The analysis provided below is based on proposed Project's forecasted utility usage as compared to the existing capacity of utility facilities that serve the Project Site.

Water supply

The analysis of the Project's impacts relative to water supply is based on information contained in the LBWD 2020 Public Draft UWMP.[39] The 2020 UWMP summarizes future water demands over a 30-year period, the availability of future water supplies necessary to meet demands, actions that need to be taken if water supplies reduce more than 50 percent, and current and future programs that would encourage conservation of water supplies. According to the 2020 UWMP, LBWD water supplies are expected to be consistent for the future use. However, the City has continued to provide water conservation programs and other efforts to reduce the demand on the water supply and meet the urban water use reduction targets.

39 Long Beach Water Department, 2020 Urban Water Management Program (*Public Draft*), https://www.lbwater.org/wp-content/uploads/2021/05/LBWD_UWMP2020_PublicReviewDraft.pdf, accessed July 2021.

The estimated water demand for the proposed Project is estimated using demand factors for domestic and irrigation demands in the UWMP and analyzed relative to the available water supply during average/normal years and dry years projected in the UWMP. Existing off-site water infrastructure within the vicinity of the Project Site is also examined to determine whether connections to such infrastructure would create proposed Project impacts. Impacts to the water supply are considered potentially significant if the Project would not have sufficient water supplies available from existing entitlements and resources.

Wastewater

The analysis of proposed Project impacts on wastewater and treatment capacity is based on the requirements and guidelines presented by the Regional Water Quality Control Board (RWQCB). The increase in wastewater generation is expected to occur with the implementation of the proposed Project was estimated using wastewater generation factors from the LACSD. Impacts to wastewater infrastructure would be considered significant is the Project would result in sewer line or treatment plant system deficiencies requiring new or expanded facilities.

Solid Waste

The proposed Project would have a significant impact on solid waste if the landfill that serves the proposed Project does not have sufficient capacity or if the proposed Project fails to comply with federal, State, or local statutes and regulations. Analysis of solid waste generation includes disposal of inert demolition and construction debris during the Project's construction phase and solid waste during the operation.

Stormwater Conveyance

The proposed Project would have a significant impact on stormwater conveyance if additional storm water drainage facilities or expansion of existing facilities would be required. A Preliminary Drainage Study (see **Appendix IV.I-1**) was prepared for the Project to assess and calculate stormwater collection on-site and to determine if the construction of new storm water drains would be necessary for the completion of the Project. Additional discussion of this study can be found in **Section IV.I: Hydrology and Water Quality**.

Energy

To evaluate potential impacts relative to energy, this analysis evaluates whether adequate energy systems within the Project Site would be available to accommodate the proposed residential development. Electricity and natural gas demand analysis is based on information obtained from the South Coast Air Quality Management District (SCAQMD), CalEEMod developed by the California Air Pollution Control Officers Association (CAPCOA), California Air Resources Board (CARB) Emission Factors' (EMFAC) model 2017 model. Daily trip generation calculations produced by CalEEMod are found in **Appendix IV.G.1** and supporting calculations using the EMFAC 2017 are found in **Appendix IV.E.1**.

6. PROJECT IMPACTS

Threshold IV.UTI-1: Require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water draining, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?

Construction

Water Supply

A short-term demand for water would occur during Project construction, primarily for the use of dust control, concrete mixing, cleaning of equipment, and other related construction activities. The amount of water used during construction would vary depending on weather, soil, and site-specific operations, but would not amount to a substantial quantity. Water would be provided through a construction-metered connection from existing potable lines within the vicinity of the Project Site. Water tankers would also provide water for dust control as needed. As shown in **Table IV.O-1**, existing water supplies for the City were calculated at 64,898 AF for the year 2020. According to the 2020 UWMP, total urban retail sales based on 2019 billing data consisted of 48,212 AF.[40] The difference in existing supply and total urban retail sales amounts to 16,686 AF. In addition to this, demand for water is projected to decrease with the use of conservation methods such as recycling water. As such, an adequate supply of water would be available during construction considering the temporary status and the minimal amount of water that would be used during this time. Construction impacts to the relocation or construction of new or expanded water facilities would be less than significant.

Wastewater

Project construction activities would result in a temporary increase in wastewater generation as a result of construction work on-site. Generation of wastewater would occur over the course of the construction period of about three and a half to four years but would be minimal, limited to wastewater generated as stormwater for dust control and human waste mostly confined to portable sanitation facilities. Construction contractors working on-site would be provided portable, on-site sanitation facilities that would be serviced at approved disposal facilities and/or treatment plants. Portable on-site sanitation facilities would be cleaned, as appropriate, and the wastewater would be transported to the JWPCP for treatment.

The LBWD operates and maintains over 700 miles of sanitary sewer lines that are capable of collecting and delivering over 40 million gallons of wastewater per day to the Sanitation District of Los Angeles County

40 City of Long Beach, 2020 Urban Water Management Plan (*Public Draft*), https://www.lbwater.org/wp-content/uploads/2021/05/LBWD_UWMP2020_PublicReviewDraft.pdf, accessed July 2021.

for treatment.[41] The JWPCP, part of the LACSD, currently has a capacity of 400 MGD and serves over 4.8 million residents, businesses and industries within its service area.[42] As of 2019, the JWPCP treated an average of 260 MGD. After receiving primary and secondary treatment, the wastewater is transported to the Long Beach Water Reclamation Plant (LBWRP).[43] Here, the water is treated once more and classified as "disinfected tertiary recycled water" and can be used for irrigation of parks, golf courses, cemeteries, recharge for groundwater, and street sweeping. The LBWRP treated an estimated 12 MGD in 2020 with a capacity of 25 MGD.[44] With the addition of construction wastewater that would be generated from the proposed Project being minimal and temporary, the proposed Project would have a less than significant impact on wastewater relocation or construction of new or expanded wastewater facilities during construction.

Solid Waste

Construction of the proposed Project is anticipated to occur over a period of approximately three and a half to four years. Waste generated during the construction period would result in an incremental and intermittent increase in solid waste disposal. As part of the California Green Building Standards Code and the City's requirements for sustainable development, at least 65 percent of waste created by construction and or demolition projects must be diverted from the waste stream as recycling, salvage, or deconstruction.[45] Site preparation activities needed to develop the Project Site would require the removal of the existing water treatment infrastructure, removal of existing vegetation, and other related construction activities mentioned in **Section II: Project Description**. Site remediation activities described in **Section II** would require removal of soil from the Project Site. Remediation would also include capping the area of the proposed park with an subsurface, engineered barrier system. All construction materials are expected to create typical construction debris such as wood, paper, glass, plastic, metals, cardboard, and green wastes.

The SERRF where the proposed Project's solid waste would be diverted to, contains a capacity of 2,240 tons per day.[46] This facility would sort and process solid waste materials that are able to be recycle or converted into energy. Materials that would not be able to be processed here would be taken to landfills

41 Long Beach Water, Sewer, https://www.lbwater.org/customer-services/sewer/#:~:text=Long%20Beach%20Water%20operates%20and%20maintains%20over%20700,by%20the%20Sanitation%20Districts%20of%20Los%20Angeles%20County, accessed May 2021.

42 Long Beach Water, Joint Water Pollution Control Plant, https://www.lacsd.org/services/wastewater/wwfacilities/wwtreatmentplant/jwpcp/default.asp, accessed May 2021.

43 Long Beach Water, Reclaimed/Recycled Water, https://www.lbwater.org/water-sources/reclaimed-recycled-water/, accessed May 2021.

44 Long Beach Water Department, 2020 Urban Water Management Plan (*Public Draft*), https://www.lbwater.org/wp-content/uploads/2021/05/LBWD_UWMP2020_PublicReviewDraft.pdf, accessed July 2021.

45 LBMC, Ch. 18, 18.67.020 - Threshold for covered projects, accessed May 2021.

46 SWIS Facility/Site Activity Details, Southeast Resource Recovery Facility, https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/3070?siteID=1423, accessed May 2021.

in Orange, San Bernardino and Riverside counties. In accordance with the C&D program, a WMP must be completed and approved by the Long Beach Development Services Department prior to permits being issued to the proposed Project. The WMP explains how the proposed Project would meet the requirement of 65 percent of C&D waste either through recycling, salvage, or deconstruction. With the approval of this plan, the Project would meet the requirements of the City for waste diversion and would not significantly impact on relocation or construction of new or expanded solid waste facilities during construction.

Storm Water

During the construction of the proposed Project, a Construction General Permit would be required under the National Pollutant Discharge Elimination System (NPDES) since more than an acre of soil would be disturbed. This requires the proposed Project to create a Storm Water Pollution Prevention Plan (SWPPP) to implement BMPs during construction to minimize the discharge or pollutants in stormwater runoff as well as control erosion, sediment, non-stormwater, and materials management. Stormwater management is discussed at length within **Section IV.I**. With these requirements, impacts to stormwater relocation or construction of new or expanded stormwater facilities during construction would be less than significant.

Electricity

During construction, energy would be consumed in the form of electricity associated with the conveyance of water used for dust control, and on a limited basis, powering lights, electronic equipment, or other construction activities necessitating electrical power. A total of approximately 4,847 kilowatt-hours (kWh) of electricity would be needed for the construction phases of the proposed Project (see **Appendix IV.E.1** for calculations). The electricity demand at any given time would vary throughout the construction period based on the construction activities being performed and would cease upon completion of construction. When not in use, electric equipment would be powered off so as to avoid unnecessary energy consumption. Additionally, Title 24 requirements would apply to construction lighting if duration were to exceed 120 days, which includes limits on the wattage allowed per specified area for energy conservation. Due to the relatively short duration of the total construction process, and the fact that the extent of electricity consumption is inherent to construction projects of this size and nature, electricity consumption impacts would not be considered excessive or substantial with respect to regional supplies. The Project would have less than significant impacts on relocation or construction of new or expanded electricity facilities during construction.

Natural Gas

Construction activities, including the construction of new buildings and facilities, typically do not involve the consumption of natural gas. Accordingly, natural gas would likely not be needed to support

construction activities; thus, there would be little to no demand generated by construction. No impacts would occur.

Telecommunications

Construction activities would not significantly increase local telecommunications' usage as construction workers typically lives within the region or locally and would be serviced by existing telecommunications facilities. Because of this, current infrastructure supporting telecommunications for the City would not require expansion or additions due during construction duration of the proposed Project. Telecommunications facilities would not be impacted during the construction phases of the proposed Project.

Operation

Water Supply

According to the 2020 UWMP, the LBWD projects that supplies including both potable and recycled water would be sufficient to meet all demand through the year 2050 during a single dry year and multiple dry years.[47] The calculations used to estimate water supply for the City included conservative estimates during dry years, even though previous data has shown that through community effort and public awareness water usage during this time is reduced. During normal year, single dry year, and multiple dry year conditions, water supply surpluses were found ranging from 30,788 AF to 36,182 AF based on potable and recycled water demand projections and historical water demand decreases due to voluntary and mandatory water restrictions. Voluntary restrictions have been implemented by residents with the efforts of retail suppliers who provide public education and outreach to encourage water reduction where possible. Also, mandatory restrictions like the City's adopted water waste prevention mandates enforce "prohibited uses of water" such as excess use, excessive runoff from irrigation, or operating water systems for prolonged periods of time. With the City's reduction in per capita water use through conservation and recycling of water supplies, the demand for water within the City has been reduced. This has led to an increasing surplus of water supplies forecasted over the next 30 years.

Water generated by the proposed Project was analyzed using demand factors provided by the 2020 UWMP. Estimated water demand for the Project Site would be approximately 89.50 AFY or about 79,900.5 gallons of water per day which would equate to 353.5 gallons per day per unit. As shown in **Table IV.O-2: Estimated Water Demand**, the proposed Project would constitute around an 0.19 percent increase in the City's water usage, which was 45,794 AFY in 2020.

47 City of Long Beach, 2020 Urban Water Management Plan (*Public Draft*), https://lbwater.org/wp-content/uploads/2019/09/LBWD-2015-UWMP-FINAL-Board-Adopted-3.pdf, accessed April 2021.

Table IV.O-2
Estimated Water Usage Based on 2020 Demand

Land Use	Units	Generation Rate (AFY)	Total (AFY)
Single-Family	226	0.39	89.50

Notes: 1 AFY = 892 gallons per day (gpd)
Generation Rate (18,136 AF/45,794 AF = 0.39AFY)
*Project Rate (226*0.39 = 89.50 AFY per unit)*

Looking at the City's forecasted surplus for the year 2025, including normal year, single dry year, and multiple dry years, the surplus was calculated at 30,788 AFY. The Project demand of 89.50 AFY represents 0.29 percent of the City's surplus water supply during the year of 2025 for all hydrology. With a surplus of 30,788 AF projected for the year before Project operation, there would be sufficient supplies for operation of the proposed Project.

In addition to this, the Project would include numerous water supply efficiency features and be required to adhere to strict Leadership in Energy and Environmental Design (LEED) requirements during operation of the proposed Project. The City requires certain types of development to meet LEED certification standards at a minimum as outlined in the LBMC.[48] The green building standards for public and private development outlined by the municipal codes instructs development to be designed, built, renovated, operated, or reused in a resource-efficient manner. In regard to water usage, LEED requires all newly constructed projects to reduce aggregate water consumption by 20 percent from the baselines shown in **Table IV.O-3: Baseline Water Consumption of Fixtures and Fittings.**[49] Additionally, all newly installed toilets, urinals, private lavatory faucets, and showerheads that are eligible for labeling must be WaterSense labeled. The WaterSense label is set forth by the EPA for products that meet strict requirements for water efficiency. Outdoor water use must also be reduced by at least 30 percent from the calculated baseline for the Site's peak watering month. These reductions can be achieved through specific plant species, such as drought tolerant plants and irrigation system efficiency. With these requirements in place, the proposed Project would use water efficiently. The projected surplus of water supplies within the City coupled with the efficiency requirements of the Project design would reduce impacts to the water supply to less than significant.

48 LBMC, Ch. 21, Section 21.45.400 – Green building standards for public and private development.
49 U.S. Green Building Council (USGBC), LEED v4 for Building Design and Construction, July 2019, https://www.usgbc.org/sites/default/files/LEED%20v4%20BDC_07.25.19_current.pdf, accessed May 2021.

Table IV.O-3
LEED Baseline Water Consumption of Fixtures and Fittings

Fixture or Fitting	Baseline (IP units)	Baseline (SI units)
Toilet	1.6 gpf	6 lpf
Urinal	1.0 gpf	3 lpf
Public restroom faucet	0.5 gpm at 60 psi	1.9 lpm at 415 kPa
Private restroom faucet	2.2 gpm at 60 psi	8.3 lpm at 415 kPa
Kitchen faucet	2.2 gpm at 60 psi	8.3 lpm at 415 kPa
Showerhead	2.5 gpm at 80 psi per shower stall	9.5 lpm at 550 kPa per shower stall

Notes: lpf = liters per flush, lpm = liters per minute, kPa = kilopascals, gpf = gallons per flush, gpm = gallons per minute, psi = pounds per square inch

Wastewater

The proposed Project would result in the net increase of 226 single-family residences. **Table IV.O-4: Estimated Wastewater Generation** shows the estimated wastewater generated by the proposed Project using information from the 2020 UWTP.

Table IV.O-4
Estimated Wastewater Generation

Land Use	Units	Generation Rate (gallons/day/unit)	Total (gallons/day)
Single-Family	226 dwelling units	260*	58,760

Notes: 1 AFY = 892 gallons per day (gpd)
**Source: LACSD Average Wastewater Generation Factors. Table 1, Loadings for Each Class of Land Use. Accessed at http://www.lacsd.org/civica/filebank/blobdload.asp?BlobID=3531*

The JWPCP, part of the LACSD would serve the Project Site. This facility currently has a capacity of 400 MGD and currently treats an average 260 MGD in a service area of over 4.8 million residents, businesses and industries. The net increase in wastewater generated by the proposed Project would be 58,760 gallons per day or approximately 0.059 MGD. The proposed Project's wastewater would represent 0.02 percent of the anticipated available daily capacity of the JWPCP. Therefore, the estimated wastewater flow from the proposed Project would be within the existing capacity of the JWPCP. Furthermore, the LACSD regularly prepares an Integrated Regional Water Management Plan (IRWMP) to guide the development and management of its facilities over 20-year planning horizons based on forecasted growth. As the Project

is within the expected growth of the City of Long Beach, it is within the capacity planning already conducted by LACSD.[50]

The current Project Site is not supported by substantial wastewater pipeline and additional infrastructure would be needed on site to support the proposed development. Existing wastewater infrastructure in the vicinity of the Project Site lies to the east of the Site and includes a gravity main line owned and controlled by the Los Angeles County Sanitation District and a pressure main connected to the gravity main that is owned by LBWD.[51] The majority of pipelines provided by LBWD range in size from 8-inch in diameter to 48-inches, with smaller pipelines found near lift stations or at the top of collection systems. Additionally, the majority of City sewer infrastructure consists of mainly vitrified clay pipes and some concrete pipes and polyvinyl chloride (PVC). The City has a majority of existing pipes that are around 61-80 years old with a little less than one third being 81-110 years old. All LBWD owned pipelines connect to LACSD pipes which then run through either the JWPCP or the LBWRP.

The LBWD owned gravity main near the Site, located immediately southwest of an existing pump station on the opposite of the I-405 freeway is less than 8-inches in size. Any new and replaced utilities installed underground would be connected to existing municipal and regional utility providers and the wider utility infrastructure. Existing utilities near the Project Site would be inspected prior to connection considering the majority age of the existing pipelines in the City. Improvements to establish utility connections at and around the site would be implemented as part of the construction of the Project and would not result in distinct environmental impacts. The proposed Project would represent an additional 0.06 percent in generated wastewater and is within the population growth forecasts used by LACSD in facility planning. As such, additional wastewater infrastructure would not be needed and the proposed Project would have a less than significant impact to the overall amount of wastewater generated by the City.

Solid Waste

In 2019, the City estimated an annual per capita resident landfill disposal rate of 4.3 pounds per day (ppd).[52] As noted before, the SERRF would serve the Project's solid waste generation. This facility has a maximum capacity of 2,240 tons per day.[53] The proposed Project would add 226 new single-family

50 https://www.lacsd.org/documents/wastewater-publications-reports/integrated-regional-water-management-plans
51 Long Beach Water Department, Sewer System Management Plan, https://lbwater.org/wp-content/uploads/2019/10/LBWD-SSMP-2019-2024-final-Combined-files-incld-attchmnts.pdf, accessed May 2021.
52 CalRecycle, Disposal Rate Calculator, https://www2.calrecycle.ca.gov/LGCentral/AnnualReporting/DisposalRateCalculator, accessed May 2021.
53 SWIS Facility/Site Activity Details, Southeast Resource Recovery Facility, https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/3070?siteID=1423, accessed May 2021.

residences, which would result in an estimated 624 residents.[54] The proposed Project would result in increased generation of solid waste and increased demand for solid waste services. Total solid waste generated by the Project during operation is estimated at approximately 2,683 ppd as shown in **Table IV.O-5: Estimated Solid Waste Generation**.

The approximately 1.3 tons per day of solid waste generated by the proposed Project would require approximately 0.06 percent of the currently available daily capacity at the SERRF. The total amount of solid waste produced by the proposed Project would equate to an estimated 474.5 tons per year, 65 percent of which must be diverted or 308.4 tons per year. This additional amount generated by the proposed Project would be easily accommodated by SERRF.

Table IV.O-5
Estimated Solid Waste Generation

Land Use	Estimated Population	Solid Waste Generation Rate (ppd)	Total (ppd)
Single-Family	624 residents	4.3	2,683.2
Total for Proposed Project (ppd)			*2,683.2*
Total Net Increase in Solid Waste (tons/day)			*1.3*

Notes: 1 ton/year = 5.48 ppd

Additionally, efficiency requirements of the City and LEED at the certified level for residential Building Construction and Design (BC+D) would be adhered to during operation of the proposed Project. In order to reduce waste generated by building occupants, LEED requires dedicated areas that are accessible to waste haulers as well as occupants, for collection and storage of recyclable materials. Having accessible recycling facilities on the property would encourage more solid waste to be recycled. LEED certification also includes the option to conduct a life-cycle assessment of the Project's solid waste generation and reduce that by a minimum of 10 percent in at least three of the following categories:

- global warming potential (greenhouse gases), in kg CO2e;
- depletion of the stratospheric ozone layer, in kg CFC-11;
- acidification of land and water sources, in moles H+ or kg SO2;
- eutrophication, in kg nitrogen or kg phosphate;

54 Based on average household size reported by US Census Bureau. See page 59 of the Initial Study, provided In Appendix I of this DEIR.

- formation of tropospheric ozone, in kg NOx, kg O3 eq, or kg ethene; and
- depletion of nonrenewable energy resources, in MJ

With these LEED requirements would result in the proposed Project having a less than significant impact on solid waste.

Stormwater

Operation of the proposed Project would introduce sources of potential stormwater pollutants that are typical of residential uses (e.g., cleaning solvents, pesticides for landscaping, and petroleum products associated with circulation areas). Stormwater runoff from precipitation events could potentially carry urban pollutants into municipal storm drains. A RWQCB compliant SUSMP would be implemented on site in accordance with the low-impact development (LID) program which was developed as part of the municipal stormwater program at the City. Further, applicable postconstruction BMPs have been incorporated into the design of the Project.

The Conceptual LID BMP Calculations document (see **Appendix IV.I.2**) was prepared to support a feasibility analysis to determine the most appropriate BMP for the first flush or initial surface runoff.[55] Calculations were performed for infiltration, capture and use, and/or biofiltration BMPs. Infiltration along with Capture & Use was deemed infeasible due to potential soil contamination from the historic use of the Site by oil companies. Biofiltration planters (flow through planters) were chosen for management of the residential portion of the Project's water quality design volume. An approximately 10-foot deep portion of the entry drive at Wardlow Road would allow stormwater to flow into the right of way of Wardlow Road and enter the public storm drain system through a curbside drain east of the Project. Calculations show biofiltration basins used to capture runoff would be sufficient in reducing the contamination from the soil into the groundwater (see **Appendix IV.I.2**). The Project area would experience minimal change in peak discharge with proposed Project buildout and no negative impacts to downstream receiving waters would occur with the implementation of biofiltration.

Additionally, the proposed Project would comply with the Long Beach LID BMP Design Manual, which requires BMPs to be implemented and includes biofiltration basins, such as those stated in the Conceptual LID BMP document. Specifically, a biofiltration system would be installed that use landscaped basins in which stormwater is collected and flows through vegetation, gravel and other bioretention media to filter out pollutants. The proposed Project would comply with NPDES guidelines to reduce operation impacts related to surface and groundwater quality. Based on the findings of the Conceptual LID BMP Calculation

55 KHR Associates, Conceptual LID BMP Calculations, April 22, 2020, Appendix IV.I.2.

and compliance with existing policies and regulation the proposed Project would have a less than significant impact to local surface and groundwater quality.

Electricity

As shown in **Table IV.O-6: Summary of Electricity Use During Operation**, buildout of the proposed Project would result in a projected increase in the on-site demand for electricity, totaling 1,533,221 kWh (1.5 GWh) per year. Southern California Edison (SCE) estimates that electricity consumption within its planning area would be approximately 125,000 GWh annually by 2027, when the proposed Project would be fully built out.[56] The proposed Project would account for less than 0.01 percent of the 2027 annual consumption in SCE's planning area.[57]

In addition to complying with Title 24 and California Green Building Standards Code (CALGreen), the proposed Project would provide for indirect energy savings, such as permitting individual solar panels to be applied to the proposed residential uses. This would be installed in compliance with Title 24 Section 110.10, which includes mandatory regulations for solar-ready buildings and would not preclude the use of alternate energy sources.

Table IV.O-6
Summary of Electricity Use During Operation

Source	Units	Quantity
Electricity		
Condo/Townhouses	kWh/yr	627,950
Single-Family Residences	kWh/yr	594,973
Parking Areas	kWh/yr	60,069
Water	kWh/yr	250,229
Electricity Total	*kWh/yr*	*1,533,221*

Consistent with Section 21.45.400 of the LBMC, the proposed Project would also be required to meet the LEED program at the certified level for residential BC+D and comply with the City's green building program. Green buildings are designed to meet certain objectives such as protecting occupant health; improving employee productivity; using energy, water and other resources more efficiently; and reducing the overall impact to the environment. Therefore, operation of the proposed Project would not result in wasteful,

56 CEC, Demand Analysis Office, California Energy Demand 2018-2030 Revised Forecast, https://efiling.energy.ca.gov/getdocument.aspx?tn=223244. Accessed April 2021.
57 1.5 GWh/ 125,000 GWh = 0.000012

inefficient or unnecessary consumption of electricity and impacts would be less than significant. For additional discussion of Energy impacts, see **Section IV.E** of this DEIR.

Natural Gas

As shown in **Table IV.O-7: Summary of Natural Gas Use During Operation**, with compliance with Title 24 standards and applicable CALGreen requirements, buildout of the proposed Project is projected to generate an on-site demand for natural gas totaling 516,770 kBTU per year or 11,933 cf (0.01 MMcf) per day.[58]

Table IV.O-7
Summary of Natural Gas Use During Operation

Source	Units	Quantity
Natural Gas		
Condo/Townhouses	kBTU/yr	2,483,650
Single-Family Residences	kBTU/yr	2,033,120
Natural Gas Total	*kBTU/yr*	*4,516,770*

Based on the 2020 California Gas Report, LBER is expected to supply 26.3 MMcf of natural gas per day in 2027, when the proposed Project would be fully developed.[59] The proposed Project would account for approximately 0.03 percent of the 2027 daily forecasted consumption in LBER's planning area. As previously mentioned, LEED certification is required within the City and measures such as submetering would be implemented to detect any sudden fluctuations of natural gas use. New appliances using natural gas would be efficient and reduce unnecessary and wasteful consumption of natural gas during operation. Therefore, operation of the proposed Project would not result in wasteful, inefficient or unnecessary consumption of natural gas and impacts would be less than significant. For additional discussion of Energy impacts, see **Section IV.E** of this DEIR.

Telecommunications

The City owns approximately 60 miles of fiber optic cable throughout the City. This fiber optic network connects the Long Beach Airport, the Fire Headquarters, and Police Field Support within the City. The City intends on expanding the capacity of existing facilities and adding more fiber optic facilities to address the growing demand for faster cable speeds, greater bandwidths, more reliable data transmission, and to

58 The conversion of kBTU to cubic feet uses the factor of 1 cf to 1.037 kBTU. Based on 365 days per year.
59 California Public Utilities Commission, 2020 California Gas Report, https://www.socalgas.com/sites/default/files/2020-10/2020_California_Gas_Report_Joint_Utility_Biennial_Comprehensive_Filing.pdf. Accessed April 2021.

accommodate more flexibility for the future.[60] Spectrum Communications, Frontier Communications, and AT&T U-verse provide telecommunication and internet services to the City. The proposed Project could result in the need for additional telecommunications facilities.

It is expected that Spectrum, Frontier, and AT&T would continue to expand infrastructure capacity if necessary to meet demand increases within their service area. The Project would be served by the existing telecommunications infrastructure surrounding the Project Site and would be anticipated to incorporate site-specific infrastructure improvements, as appropriate. Therefore, the Project would result in less than significant impacts to the telecommunication infrastructure in the surrounding area.

Threshold IV.UTI-2: Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Construction

As discussed previously, short-term water usage would occur during the construction phases of the Project, mainly to control dust, mix concrete, clean equipment, and other related construction activities. These activities would occur incrementally throughout the build-out of the proposed Project and are temporary in nature. The amount of water used during construction would vary depending on the conditions of the soil, weather, size of the area being worked, and site-specific operations, but is not expected to be substantial. As shown previously in **Table IV.O-1**, existing and future water supplies for the City were calculated at 64,898 AF for the year 2020. The 2020 UWMP showed water demand for all sectors in the City at a total of 45,794 AFY for the year 2020.[61] The City has had a history of successful operation of the Central Basin, which provides groundwater to the City. Additional rights to pump could become available if needed, but with the current demand and projected future demand it does not seem necessary. Imported water supplies are also expected to meet the demand of the City in future years as demand fluctuates. As such, water supplies in the City would be able to accommodate the temporary and incremental use during the construction of the proposed Project.

Operation

As previously discussed, **Table IV.O-2** shows the estimated water demand for the operation of the proposed Project at 89.50 AFY. It was also stated that surplus water would be available over the projected 30-year period, increasing over time due to conservation of supplies and improved reclamation efforts.

60 City of Long Beach. Recirculated Draft EIR- General Plan Land Use and Urban Design Elements Project. June 2019. Accessed April 30, 2021.

61 City of Long Beach, 2020 Urban Water Management Plan (*Public Draft*), https://www.lbwater.org/wp-content/uploads/2021/05/LBWD_UWMP2020_PublicReviewDraft.pdf, accessed July 2021.

The water supply forecast for normal, single dry, and multiple dry years including conservative estimates, found surpluses ranging from 30,788 AF to 36,182 AF. Also, the proposed Project would be required to incorporate LEED certified designs such as water efficient faucets and fixtures to the interior of the homes and facilities. Outdoor water use would also be LEED certified and require reduced irrigation for landscaping by at least 30 percent from the calculated baseline for the Site's peak watering month. As such, an adequate supply of water would be available during proposed Project operation. Impacts to City water supply during the operation of the proposed Project would not be significant.

Threshold IV.UTI-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?

Construction

As discussed previously, Project construction activities would result in a temporary increase in wastewater generation as a result or construction workers on-site. Portable on-site sanitation facilities would be cleaned, as appropriate, and the wastewater would then be transported to the JWPCP for treatment. The current capacity of the facility is 400 million gallons of wastewater per day and current treatment is estimated at 260 MGD according to 2019 data. The Project Site would also be served by the LBWRP which has a capacity of 25 MGD and treated an estimated 12 MGD in 2020. The total amount of construction wastewater that would be generated by the Project would be negligible when compared to the average daily treatment of 12 MGD. Therefore, impacts related to wastewater generation as a result of construction of the proposed Project would be less than significant.

Operation

As discussed previously, the Project would generate approximately 58,760 gallons per day or approximately 0.059 MGD of wastewater. The JWPCP has a capacity of 400 MGD with an estimated daily treatment of 260 MGD. The Project would constitute 0.02 percent of the anticipated available daily capacity of the facility. As such, an adequate amount of treatment capacity would be available for the Project during operation. Therefore, the Project would not significantly affect the treatment capacity of the JWPCP and no significant impacts would occur.

Threshold IV.UTI-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?

Construction

The Project would comply with the California Green Building Standards Code and the City's requirements for sustainable development including the requirement for 65 percent reduction in waste generated and recycling requirements. This would include recycling a majority of materials through the SERRF. Any materials that cannot be processed at the SERRF would be sent to a landfill in either Orange, San Bernardino, or Riverside counties. As such, the Project would promote material reduction and recycling consistent with applicable federal, State, and local guidelines related to solid waste. Therefore, construction of the proposed Project would not conflict with applicable statutes and regulations regarding solid waste. Impacts associated with construction solid waste policies would be less than significant.

Operation

As previously discussed, the proposed Project would generate approximately 2,683 ppd or 1.3 tons per day of solid waste. The daily capacity at the SERRF facility is approximately 2,240 tons per day, so the Project would account for an estimated 0.06 percent of the daily maximum. Additionally, the Project would be required to divert 65 percent of annual solid waste generated away from the landfill. Based on the estimated solid waste generated per day by the Project, approximately 474.5 tons per day. An estimated 65 percent of the solid waste generated would equate to 308.42 tons per day. This would be feasible to accommodate through the SERRF facility, constituting approximately 13.8 percent of the capacity. It is therefore reasonable that the Project would be able to meet the City's current and future recycling goals and meet the City's waste management ordinance to divert at least 65 percent of potential waste disposal. Additionally, in accordance with the C&D program, a Waste Management Plan (WMP) must be completed and approved prior to permits being issued to the Project. The WMP explains how the Project would meet the requirement of 65 percent of C&D waste either through recycling, salvage, or deconstruction. With the approval of this plan, the Project would meet the requirements of the City for solid waste diversion. Compliance with this ordinance and the feasibility of staying within the capacity of the City's SERRF facility, a majority of the Project's solid waste would be reduced. As such, the proposed Project would not create a significant impact on solid waste generation.

7. CUMULATIVE IMPACTS

Water

As previously discussed in **Section IV.I**, operation of the proposed Project would constitute around an 0.19 percent increase in the City's water usage, which was 45,794 AFY in 2020. This is within the existing water supply at the City. The proposed Project would implement water reduction measures in accordance with LEED requirements to ensure efficient use of water on site during operation. Additionally, according to the 2020 UWMP, the LBWD projects that supplies including both potable and recycled water would be sufficient to meet all demand through the year 2050 during normal, single dry year, and multiple dry years.[62] The calculations used to estimate water supply for the City included conservative estimates during dry years, even though previous data has shown that through community effort and public awareness water usage during this time is reduced. During normal year, single dry year, and multiple dry year conditions, water supply surpluses were found ranging from 30,788 AF to 36,182 AF. With the City's reduction in per capita water use through voluntary and mandatory conservation and recycling of water supplies, the demand for water within the City has been reduced. This reduction has led to an increasing surplus of water supplies forecasted over the next 30 years. Cumulative Project impact to water supply would be less than significant.

Wastewater

The proposed Project would be serviced by JWPCP, a wastewater treatment facility that is part of the LACSD. This facility currently has a capacity of 400 MGD and serves over 4.8 million residents, businesses and industries within its service area. The net increase in wastewater generated by the proposed Project would be 58,760 gallons per day or approximately 0.059 MGD. The proposed Project's wastewater would represent 0.02 percent of the anticipated available daily capacity of the JWPCP. As previously mentioned, the increase in population at the proposed Project is consistent with the population forecasts produced by Southern California Association of Governments (SCAG) which is used for long-range planning documents. Therefore, the estimated wastewater treatment capacity is anticipated to be able to support foreseeable growth within the service area of JWPCP. Cumulative Project impact to wastewater treatment capacity would be less than significant.

Stormwater

Operation of the proposed Project would incorporate postconstruction BMPs into the design of the proposed Project. A Conceptual LID BMP Calculations document was prepared to determine the most

62 City of Long Beach, 2020 Urban Water Management Plan (*Public Draft*), https://www.lbwater.org/wp-content/uploads/2021/05/LBWD_UWMP2020_PublicReviewDraft.pdf, accessed July 2021.

appropriate BMPs to be implemented on site including considerations for infiltration, capture and use, and/or biofiltration BMPs. Biofiltration planters (flow through planters) were chosen for management of the residential portion of the proposed Project's water quality design volume. With the implementation of stormwater BMP measures, calculations show capture runoff would be sufficient in reducing the contamination from the soil into the groundwater. Additionally, the Project area would experience minimal change in peak discharge with proposed Project buildout and no negative impacts to downstream receiving waters would occur with the implementation of biofiltration. With sufficient reduction in contamination from Project Site runoff and minimal change in peak discharge, the proposed Project would not significantly contribute to cumulative impacts in an additive sense. Cumulative stormwater impacts would be less than significant.

Electricity

As discussed in **Section IV.E**: **Energy**, buildout of the proposed Project, related projects, and additional forecasted growth in SCE's service area would cumulatively increase the demand for electricity supplies and infrastructure capacity. A total of approximately 4,847 kWh of electricity is anticipated to be consumed during construction of the proposed Project. Due to the relatively short duration of the construction process, and the fact that the extent of electricity consumption is inherent to construction projects of this size and nature, electricity consumption impacts would not be considered excessive or substantial with respect to regional supplies. Moreover, SCE estimates that electricity consumption within its planning area will be approximately 125,000 GWh annually by 2027, when the proposed Project would be fully built out.[63] The proposed Project would account for less than 0.01 percent of the 2027 annual consumption in SCE's planning area.[64]

Additionally, the proposed Project is consistent with the population forecasts for the subregion as adopted by SCAG which has been utilized in future planning documents for the SCE service area. Additionally, Project operational activities would be within the demand forecast for the SCE service area. Although development of the proposed Project would result in the use of electricity resources during construction and operation, which could limit future availability, the use of such resources would be on a relatively small scale when compared to regional consumption and would be reduced through compliance with the latest CALGreen code requirements. Furthermore, as with the proposed Project, other future development projects would be expected to incorporate energy conservation features, comply with applicable regulations including CALGreen and State energy standards under Title 24, and incorporate energy design features, as necessary during construction and operation. Therefore, the proposed Project's

63 CEC, Demand Analysis Office, California Energy Demand 2018-2030 Revised Forecast, https://efiling.energy.ca.gov/getdocument.aspx?tn=223244. Accessed April 2021.

64 1.5 GWh/ 125,000 GWh = 0.000012

contribution to cumulative impacts related to wasteful, inefficient, and unnecessary use of electricity would not be cumulatively considerable. Cumulative electricity impacts would be less than significant.

Natural Gas

As discussed in **Section IV.E**: **Energy**, buildout of the proposed Project, related projects, and additional forecasted growth in SoCalGas service area would cumulatively increase the demand for natural gas supplies and infrastructure capacity. Based on the 2020 California Gas Report, LBER is expected to supply 26.3 MMcf of natural gas per day in 2027, when the Project would be fully built out.[65] The proposed Project would account for approximately 0.03 percent of the 2027 daily forecasted consumption in LBER's planning area. Natural gas would likely not be needed to support construction activities.

Although development of the proposed Project would result in the use of natural gas resources, which could limit future availability, the use of such resources would be on a relatively small scale, would be reduced by measures rendering the proposed Project more energy efficient, consistent with growth expectations for the LBER service area. Furthermore, future development projects would be expected to incorporate energy conservation features, comply with applicable regulations including CALGreen and State energy standards under Title 24, and incorporate mitigation measures, as necessary. Therefore, the proposed Project's contribution to cumulative impacts related to wasteful, inefficient, and unnecessary use of natural gas would not be cumulatively considerable. Cumulative natural gas consumption impacts would be less than significant.

Telecommunications

The City owns approximately 60 miles of fiber optic cable throughout the City. This fiber optic network connects the Long Beach Airport, the Fire Headquarters, and Police Field Support within the City. The City intends on expanding the capacity of existing facilities and adding more fiber optic facilities to address the growing demand for faster cable speeds, greater bandwidths, more reliable data transmission, and to accommodate more flexibility for the future.[66] With the planned expansion of capacity of existing facilities to address the growing demand in and around the City, and the fact the proposed Project is within the SCAG projection for future population growth in the area, the proposed Project's cumulative impact on telecommunications would be less than significant.

65 California Public Utilities Commission, 2020 California Gas Report, https://www.socalgas.com/sites/default/files/2020-10/2020_California_Gas_Report_Joint_Utility_Biennial_Comprehensive_Filing.pdf. Accessed April 2021.

66 City of Long Beach. Recirculated Draft EIR- General Plan Land Use and Urban Design Elements Project. June 2019. Accessed April 30, 2021.

8. MITIGATION MEASURES

The proposed Project would have a less than significant impact on utilities and service system resources. Therefore, no mitigation measures would be required.

9. LEVEL OF SIGNIFICANCE AFTER MITIGATION

The proposed Project would have a less than significant impact on utilities and service system resources. Therefore, no mitigation measures would be required.