3.13 UTILITIES

The following section describes existing and planned utilities and evaluates the operation and capacity of these utilities with the development of the Avila Ranch Development Project (Project). Utilities utilized during construction and operation of the proposed Project include potable and recycled water, wastewater, solid waste disposal, and energy services. This section identifies the existing service capacity of these utilities and services provided by the City of San Luis Obispo (City) and utility companies and evaluates whether capacity exists to accommodate development of the Project site with residential and commercial uses. In order to assess impacts on utilities, existing and forecasted capacities of public and private utility service providers were obtained from the City General Plan Water and Wastewater Management Element (WWME) (2016), Urban Water Management Plan (2015), Wastewater Master Plan (2015), City's Potable Water Distribution System Master Plan (2016), Wastewater Collection System Infrastructure Renewal Strategy (2016), Water Reuse Master Plan (2004), and reports including a Project-specific Water Supply Assessment (WSA) performed by Cannon Corp (Cannon) for the Project (see Appendix M), the City's Water Resources Status Report (2015), and the Sewer Systems Management Plan (2014).

The City's WWME and coordination with the City's Utilities Department provided additional information used to establish levels of significance for water supply and distribution, and sewer system impacts.

3.13.1 LUCE Update EIR

The 2014 Land Use and Circulation Elements Update EIR (LUCE Update EIR) previously analyzed impacts to utilities related to the adoption and implementation of the 2014 Land Use and Circulation Elements (LUCE), including planned future land use development and proposed goals, policies, and programs. The LUCE Update EIR concluded that implementation of the General Plan policies would ensure that future land use and development under the adopted LUCE would not exceed service capacities for wastewater treatment, water supply, solid waste disposal, or energy services. In particular, the City's General Plan, Conservation and Open Space Element (COS), Policy 10.2.2, Ahwahnee Water Principles, promotes maximizing the use of recycled water for appropriate applications, including outdoor irrigation, toilet flushing, and commercial and industrial processes (City of San Luis Obispo 2014a). Accordingly, the LUCE Update EIR found utility impacts to be less than significant.

3.13.2 Environmental Setting

The City and Project vicinity are served by the following utilities, summarized in Table 3.13-1.

Table 3.13-1. Utilities Serving the Project Site

Category	Utility
Wastewater Treatment	City of San Luis Obispo, Utilities Department, Water Division
Water Supply	City of San Luis Obispo, Utilities Department, Water Division
Solid Waste	San Luis Garbage, Waste Connections, Inc. – franchised via City of San Luis Obispo Utilities Department
Electric	Pacific Gas & Electric Company (PG&E)
Natural Gas	Southern California Gas Company (SoCal Gas)

Note: Water and sewer service are not currently provided at the Project site.

3.13.2.1 Wastewater Treatment

The City owns and operates the Water Resource Recovery Facility (WRRF) located on Prado Road approximately 0.75 mile northwest from the Project site. The WRRF manages and treats wastewater in accordance with the standards of the State Water Resources Control Board (SWRCB) to remove solids, reduce the amount of nutrients, and eliminate bacteria in the treated wastewater before it is discharged to San Luis Obispo Creek. The City provides municipal wastewater treatment within City limits and, through agreement, also provides service to California Polytechnic State University San Luis Obispo (Cal Poly) and the San Luis Obispo County Regional Airport (Airport).

WRRF Treatment Capacity

The WRRF has a treatment capacity for dry-weather flow of 5.1 million gallons per day (MGD) (City of San Luis Obispo 2014b). Currently, the WRRF receives an average of 2.74 MGD of dry-weather flows (City of San Luis Obispo 2015c). Therefore, the estimated remaining capacity of the WRRF is 2.36 MGD or 46.3 percent of the total dry-weather wastewater treatment capacity.

The WRRF removes solids, reduces the amount of nutrients, and eliminates bacteria in the treated wastewater before it is discharged to San Luis Obispo Creek.

Under buildout of the LUCE, future dry-weather flows to the WRRF are anticipated to reach 5.4 MGD, of which 0.471 MGD would be generated from Cal Poly and 4.93 MGD would be generated from the City (City of San Luis Obispo 2015c). In anticipation of increased future use, the City is upgrading the WRRF to increase treatment capacity and meet the terms of the City's new National Pollutant Discharge Elimination System (NPDES) permit to treat future flows and loading, as well as replace aging equipment, maximize the production of recycled water, and incorporate interpretive features and public amenities. The WRRF will be modified to increase capacity to 5.4 MGD, which will handle the full build-out dry-weather wastewater flows in the City. The program is expected to be completed in 2020 (City of San Luis Obispo 2015b).

During wet-weather conditions, however, wastewater flows can vastly exceed the WRRF's existing capacity. The City's sewer system has long experienced problems associated with wet-weather infiltration and inflow where saturated soils result in rainwater overloading sewer lines. During periods of significant rain events, the WRRF can be hydraulically overwhelmed with instantaneous peak flows exceeding 20 MGD. Under heavy rain conditions, instantaneous peak flows to the WRRF can reach up to 25 MGD, which presents operational challenges (City of San Luis Obispo 2014a). These events can result in effluent violations and the release of partially treated wastewater to San Luis Obispo Creek. Planned improvement to the WRRF to increase treatment capacity to 5.4 MGD would help to address wet-weather conditions (City of San Luis Obispo 2014b).

Wastewater Infrastructure

The City's wastewater collection system serves residential, commercial, and industrial customers. Sewer service is provided only to properties within the City limits, with the exception of a few residential properties located just outside of the City limits, Cal Poly, and the Airport (City of San Luis Obispo 2010). Currently, there are approximately 14,400 service connections. The collection system is divided into 18 flow basins with nine sewage lift stations, 136 miles of gravity sewer lines, and 3 miles of force mains. The gravity sewer lines range in size from 6 to 48 inches in diameter, and the force main lines range in size from 4 to 10 inches in diameter (City of San Luis Obispo 2014b). The 2015 Wastewater Collection System Infrastructure Renewal Strategy prepared for the City identifies sewer line segments with substandard infrastructure and prioritizes replacement and maintenance projects within the wastewater collection system in order to meet the future demand. Parts of the collection system are over 100 years old and are anticipated to exceed their design life. Portions of the collection system require frequent preventive maintenance because of

root intrusion, poor grade, and/or degraded pipe conditions. The City has also identified portions of the system that have reached their design capacity and will require modifications to accommodate future development. Many lift stations and force mains are also at the end of their service life and will require replacement in the next five years (City of San Luis Obispo 2014b). The Wastewater Collection System Infrastructure Renewal Strategy determined that in order to maintain the collection system in its current state, a minimum of 2 miles per year should be rehabilitated (Water Systems Consulting, Inc. 2015).

Currently, the Project site is undeveloped and there are no sewer lines or wastewater treatment infrastructure within the Project site. The closest sewer main tie in is located along Tank Farm Road approximately 0.45 mile northeast of the site. The existing Tank Farm Lift Station is located on Tank Farm Road, approximately 0.4 mile north of the Project site, and has a capacity to pump 2,000 gallons per minute (gpm) using four pumps. The Project site, as with all properties within the Airport Area Specific Plan (AASP), lies downgrade of the existing WRRF, which means that force sewer mains and/or lift stations are needed in this area to transport flows to the gravity flow lines that feed into the WRRF. The City prepared a Wastewater Master Plan for the AASP, which was revised for the Project. Alternative A was selected as the preferred alternative, which would direct the Project's wastewater flow to the Tank Farm Lift Station (City of San Luis Obispo 2015a).

3.13.2.2 Water Supply

Current City Water Sources

The City is the sole purveyor of potable water within City limits. This requirement allows the City to maintain uniformity in its water service, distribution standards, infrastructure, and consistency in developing and implementing water policy. The City obtains its potable water from five sources, including Salinas Reservoir (Santa Margarita Lake), Whale Rock Reservoir, Nacimiento Reservoir, recycled water from the City's WRRF, and a limited amount of groundwater. These sources are described below (see Table 3.13-2).

Table 3.13-2. Current Storage within the City of San Luis Obispo's Reservoirs

	Whale Rock	Salinas	Nacimiento
Total Current Storage (AF)	13,8407	3,131.3	125,195.0
Max Capacity (AF)	38,966.5	23,842.9	377,900.0
% of Total Capacity	35.52	13.13	33.13

Source: City of San Luis Obispo 2016c.

Reservoirs

Salinas Reservoir - The Salinas Reservoir (also known as Santa Margarita Lake) is located on the upper Salinas River, approximately 12 miles northeast of the Project site near the community of Santa Margarita. The City has an agreement with the U.S. Army Corps of Engineers (USACE) for up to 45,000 acre-feet (AF) of the water from the reservoir, although the reservoir only has storage capacity of 23,842.9 AF. This discrepancy is due to the City's water rights which were allocated when the original design of the dam included a gate in the spillway to increase the storage capacity. The operation and maintenance of the Salinas Reservoirs' dam and water conveyance system are the responsibility of San Luis Obispo County Flood Control and Water Conservation District. The City pays all operating and capital costs associated with the reservoir and transmission system. Water from the reservoir is pumped through the Cuesta Tunnel (a 1.0-mile-long tunnel through the mountains of the Cuesta Ridge) and then flows by gravity to the City's WRRF. The total current storage is 3,131.30 AF, which is 13.13 percent of total capacity. In 2015, the City received 1,122 AF from the Salinas Reservoir (City of San Luis Obispo 2010; 2016a; 2016c).

Whale Rock Reservoir - Whale Rock Reservoir is located on Old Creek approximately 18 miles northwest of the Project site in Cayucos. The reservoir is shared by three groups, including the City, Cal Poly, and California Men's Colony, which comprise the Whale Rock Commission. Whale Rock Reservoir is formed by an earthen dam and was historically able to store an estimated 40,662 AF of water at the time of construction in 1961. Water is delivered via 17.6 miles of 30-inch pipeline and two pumping stations. The total current storage is 13,840.7 AF, which is 35.52 percent of total capacity. The City owns 55.05 percent of the current 38,966.5-AF storage capacity of this reservoir (approximately 21,451 AF) and received 1,718 AF in 2015 (City of San Luis Obispo 2010; 2016a; 2016c).

Nacimiento Reservoir - Nacimiento Reservoir is owned by the Monterey County Water Resources Agency and is located approximately 35 miles north of the Project site near San Miguel in San Luis Obispo County (County). The reservoir has a storage capacity of 377,900 AF. Since 1959, the San Luis Obispo County Flood Control and Water Conservation District has had entitlements to 17,500 acre-feet per year (AFY) of water from the reservoir for use in the County. Of that, the City has a contractual entitlement to 3,380 AFY of water. The total current storage is 127,635 AF, which is 33.77 percent of

total capacity. In 2015, the City received 1,891 AF from Nacimiento Reservoir (City of San Luis Obispo 2010; 2016a; 2016c).

Recycled Water

Recycled water is highly-treated wastewater approved for reuse by the California Department of Public Health for a variety of applications, including landscape irrigation and construction dust control. In 1994, the City completed a major capital improvement project at the WRRF that included addition of tertiary treatment and other unit processes required to meet stringent effluent quality limits intended to protect and enhance the receiving waters of San Luis Obispo Creek. The City received regulatory approvals for diversion of treated effluent for offsite landscape irrigation and other approved uses in 2002. In 2006, the City's Water Reuse Project created the first new source of water for the City since the construction of the Whale Rock Dam 1961. This has resulted in 2,800 AFY of non-potable water resources. The project included improvements at the City's WRRF and an initial 8 miles of distribution pipeline. In 2015, the City provided 168 AF of recycled water (City of San Luis Obispo 2015c). Further, the City is required to release 1,807 AFY of flow to the San Luis Obispo Creek for environmental enhancement. Ultimately, the Water Reuse Project has the capacity to provide approximately 1,000 AFY of recycled water for irrigation throughout the City in years to come (Cannon 2015). In the future, the WRRF is planned for expansion to have a design capacity of 5.4 MGD, which will result in a future non-potable water resource availability of up to 4,159 AFY (City of San Luis Obispo 2016b). Currently there is no recycled water infrastructure on the Project site. The closest existing recycled water main is in Earthwood Lane and South Higuera Street.

Groundwater

The City overlies the San Luis Obispo Valley Groundwater Basin which covers approximately 12,700 acres in the San Luis Obispo and Edna Valleys. The City currently operates one well that supplies the City with water for domestic and agricultural use, while an additional two wells supply water for irrigating the City golf course, and one well for construction purposes at the Corporation Yard (City of San Luis Obispo 2016b). The one domestic well produces approximately 10 AF per month (up to 120 AFY), which is approximately 2 percent of the total City water use. In 2015, the City used 89 AF of groundwater. The groundwater basin is relatively small and recharges very quickly following normal rainfall periods, but it also lowers relatively quickly following the end of the rainy season. Extensive use of groundwater sustained the City through the drought of 1986-1991, where groundwater supplied 50 percent of the City's needs during this period.

However, the City's two historically largest producing wells, the Auto Parkway and Denny's wells, were shut down when elevated nitrate levels were detected. This loss of groundwater resources meant the City could not rely on groundwater for future drought protection (City of San Luis Obispo 2016b). According to the 2015 Urban Water Management Plan, the City will continue to use groundwater for domestic purposes when available, but will not consider this source of supply as part of its water resource planning or water supply availability (City of San Luis Obispo 2016b). The City stopped supplying groundwater to its drinking water system in 2015 due to new regulatory requirements. The City's groundwater wells currently remain in operable condition and are on standby should the use of groundwater be required in the future (City of San Luis Obispo 2016a). As such, the WWME does not consider groundwater a source of supply due to the limitations on use.

City Water Demand and Annual Availability

The City's General Plan includes policies addressing the distribution of water to new and existing development. These sources are described below and capacities are shown in Table 3.13-3.

Table 3.13-3. City of San Luis Obispo's Water Resource Annual Availability

Water Resources	2016 Annual Availability	
Salinas Reservoir (Santa Margarita Lake) and Whale Rock Reservoir	6,940 AF	Safe Annual Yield[1]
Nacimiento Reservoir	5,482 AF	Contractual Limit[2]
Recycled Water	187 AF	2015 Annual Usage[3]
Siltation (from 2010 to 2060)	(-500) AF	Policy A 4.2.2[4]
Total	**12,109 AF**	

[1] Safe Annual Yield determined from computer model, which accounts for siltation loss through 2010 (per WWME Policy A 4.2.1).
[2] Dependable Yield is the contractual amount of water the City has rights to from Nacimiento Reservoir.
[3] The quantity of recycled water included is the actual prior year's recycled water usage (calendar year 2015) per WWME Policy A 7.2.2.
[4] Reservoir siltation is a natural occurrence that reduces storage capacity over long periods, resulting in the reduction of safe annual yield.
Source: City of San Luis Obispo 2016b.

The total water availability for the City for 2016 is estimated to be 12,109 AFY, which includes 187 AFY of recycled water (City of San Luis Obispo 2016b).

During 2015, 68 percent of water use in the City was for single- and multi-family residential uses. The City's 2015 per capita potable water use was 97.3 gallons per capita

per day (gpcd) for approximately 45,802 people. The City's projected water demand is based on the 10-year average of per capita water usage. Using the City's 10-year average of 114.4 gpcd, and an estimated 45,802 City populous, the City's water demand for 2015 was 5,873 AFY. However, the City is proposing to change the per capita water usage factor to 117 gpcd in order to establish a more conservative approach, as the 10-year average rate is influenced by drought years (City of San Luis Obispo 2016b). Therefore, using the proposed 117 gpcd water usage factor, the water demand using the 2015 population estimate is 6,007 AFY. Moreover, based on this conclusion of the City's estimated water demand and Safe Annual Yield, the City has approximately 6,102 AF of water surplus available to allocate to new developments within the City (see Table 3.13-4). Further, using the General Plan's estimated buildout population of 57,200 at year 2035, water demand is projected to be 7,330 AFY, which is 4,779 AFY less than the 2016 annual availability of 12,109 AFY (City of San Luis Obispo 2016b).

Table 3.13-4. Current Water Demand and Water Availability in the City of San Luis Obispo

Water Yield and Demand	AFY
Current Annual Availability (2016)	12,109
2015 Water Demand[1]	6,007
Surplus Remaining	**6,102**

[1] The City is proposing to replace the use of the 10-year running average per capita water demand (currently 114.4 gpcd) with 117 gpcd.

Source: City of San Luis Obispo 2016a; 2016b.

Drought and Climate Change

The City is currently experiencing its fourth consecutive year of drought conditions, yet has been able to maintain a 36.5 percent water reserve, which exceeds the amount needed for full buildout or severe unforeseen circumstances (such as drought). The City's required reduction of water use due to the drought is 12 percent from 2013 conditions. The City exceeded this requirement in 2015, achieving a 26 percent reduction in July and 25 percent reduction in August 2015; followed in 2016 by an approximate 23 percent reduction in July and 22 percent reduction in August 2016 from 2013 conditions. The City has successfully reduced water consumption in response to the new regulations and is on target to meet the state's requirement. Climate change could have a significant impact on future water availability in the form of droughts or increased siltation in the reservoirs as a result of wildland fires which could affect the safe annual yield of the City's reservoirs. The City

continues to research this topic and will monitor the potential for long-term impacts to its water supply resources (City of San Luis Obispo 2016a; 2016b; Cannon 2015).

Water Distribution Infrastructure

The City's water distribution system delivers potable water from the WRRF and one groundwater well to customers and fire hydrants via two storage reservoirs, seven pump stations, 11 water tanks, and approximately 185 miles of water mains (Table 3.13-5). The City has over 14,800 metered potable water customers. The goal of the distribution system is to provide an uninterrupted water supply at adequate pressures to meet all fire and domestic flow requirements while minimizing water loss due to leakage. Concurrent with the LUCE Update, the City prepared a hydraulic model and Potable Water Distribution System Master Plan to identify and prioritize replacement of aged and undersized water distribution facilities. The Plan was approved by the City Council in January 2016.

The access point to the water main on Earthwood Lane immediately north of the Project site. Currently, the water line is stubbed out within the Earthwood subdivision.

Table 3.13-5. Water Distribution Infrastructure

Asset Type	Quantity
Water Mains	185 Miles
Water Services	10,000+
Meters	14,800+
Isolation Valves	5,011
Fire Hydrants	1,867
Air Vacs	81
Pressure Reducing Valves	31
Storage Tanks	11
Pump Stations	7

Source: City of San Luis Obispo 2016c.

Current agricultural water use at the Project site is from a private well (non-City water) that has produced 90 to 95 AFY to support agricultural activity (Cannon 2015).

Existing City water distribution system infrastructure in the vicinity of the Project site includes tie-ins to the public water system located along an 18-inch main in South Higuera Street and an existing 12-inch main in Suburban Road, and new potable and recycled water mains on Earthwood Lane. The Project site is within the Edna Saddle pressure zone and would be served by the existing 3.8-million gallon Edna Saddle Tank which was installed in 1974. Construction of a 10-inch main line within the Earthwood Lane Phase I right-of-way project has recently been completed. This line is stubbed approximately one-third of the way into the Earthwood Lane subdivision from Suburban Road, with plans for a Phase II extension of the road and utilities to the north end of the Project site. Additionally, the adjacent Dioptics project is served by water originating from an existing private offsite well, and a private water line which runs within Vachell Lane.

3.13.2.3 Solid Waste Disposal

The Cold Canyon Landfill is the landfill for municipal waste from the City. San Luis Garbage is the solid waste service provider for the City, including the Project vicinity. San Luis Garbage is a municipal waste hauling company and is owned by Waste Connections, Inc. (San Luis Garbage 2015). San Luis Garbage collects solid waste, recyclables, and green waste, which is then transported to Cold Canyon Landfill. At Cold Canyon Landfill, waste is processed at the Resource Recovery Park (RRP) and Materials Recovery Facility (MRF). The landfill does not compost, but green waste and wood waste are processed (chipped/ground) for either use as cover for the working face of the landfill, or being hauled to another out-of-county facility. Commercial operations that use roll-off services and/or construction and demolition waste removal services may choose any permitted hauler. Currently, garbage collection services are not provided at the Project site.

The RRP includes a public drop-off facility, a construction and demolition (C&D) recycling operation, a household hazardous waste drop-off facility, a universal and electronic waste recycling center, and an equipment maintenance facility. Materials collected, sorted, and recovered in the bunkers include cardboard, metal and appliances, green waste, wood waste, concrete/asphalt/brick, trash, tires, drywall, and other paper and plastic materials.

The MRF accepts recyclable waste from the curbside pickup services and industrial and commercial consumers. In addition, it receives recyclable material sorted at the RRP. The

MRF processes up to 18 tons per hour of glass, plastic, paper, cardboard, aluminum, tin, and other metals. The MRF is capable of accepting up to 400 tons per day (CalRecycle 2016). The sorting process produces less than 5 percent residuals (materials which cannot be recycled) (City of San Luis Obispo 2012).

Currently, the maximum permitted throughput to the landfill is limited to 1,650 tons per day (CalRecycle 2016). However, the Cold Canyon Landfill recently received approvals from the County and the state in 2013 to allow continued waste expansion and disposal operations through 2040. With planned expansions through 2040, the maximum total throughput would increase to 2,050 tons (City of San Luis Obispo 2012). The landfill has a design capacity of 23,900,000 cubic yards (cy) and a remaining capacity of 14,500,000 cy, or 60.7 percent. Utilizing the MRF and RRP, Cold Canyon Landfill diverts approximately 65 percent of waste from the landfill. Additional potential solid waste disposal sites that could serve the City include the Chicago Grade and/or Paso Robles landfills, or at out-of-county waste disposal facilities. The Chicago Grade and Paso Robles Landfills have remaining infill capacities of 832,699 cy (93 percent) and 5,327,500 cy (82 percent), respectively (CalRecycle 2016).

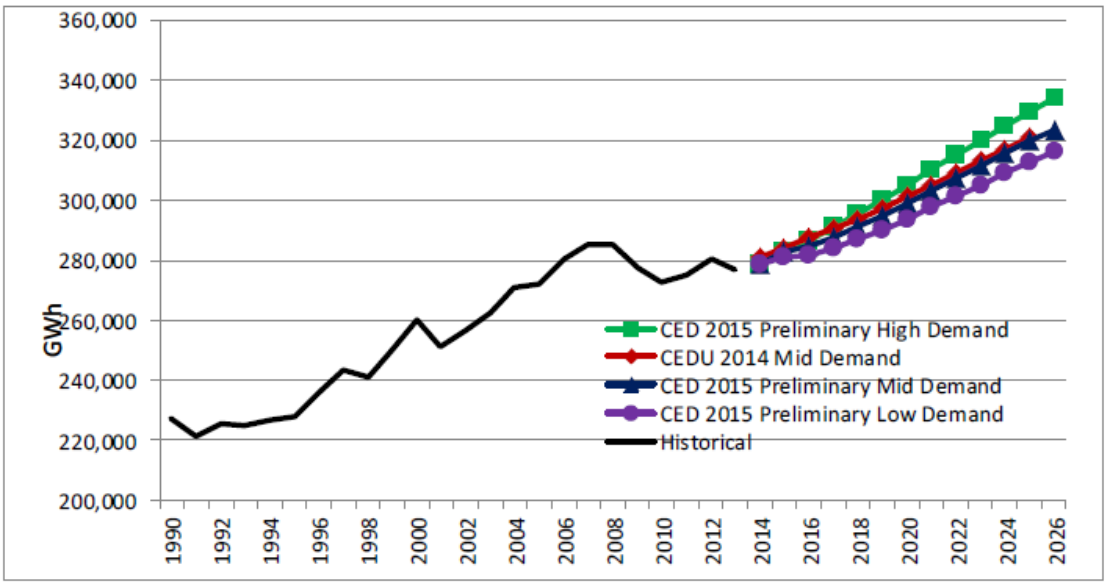
In 2010, the County sent 226,987 tons of solid waste to landfills. In 2011, the City generated 49,979 tons of solid waste that was disposed at the Cold Canyon Landfill. The target disposal rate for the San Luis Obispo region is 7.4 pounds per person per day for residents and 18.7 pounds per person per day for employees. The target rates were set at 50 percent of 2006 waste disposal levels. Between 2007 and 2010, the population-related solid waste disposal rate ranged between 4.4 and 5.4 pounds per person, and the employment solid waste disposal rate ranged between 11.7 and 13.8 pounds per person. In addition to existing solid waste diversion, the City's Climate Action Plan includes the goal to reduce the community waste stream to as close to zero waste as possible, with a 75 percent diversion rate by the year 2020 (City of San Luis Obispo 2012).

3.13.2.4 Energy Services

Electricity

Electricity is produced by converting energy resources (including natural gas, coal, water, nuclear, and renewable sources such as wind, solar, and geothermal) to electrical energy by various types of power plants. Of the electricity generated in California, 61.1 percent is generated by natural gas-fired power plants, 0.8 percent is generated by coal-fired power plants, 11.7 percent comes from large hydroelectric dams, and 9.3 percent comes from

nuclear power plants. The remaining 17.1 percent in-state total electricity production is supplied by renewable sources including solar, wind power, and other sources (CEC 2015a).



Statewide Baseline Annual Energy Consumption

Source: (CEC 2015a).

In 2013, Californians consumed 296,628 gigawatt hours (GWh) of electricity, while future annual electricity consumption is projected to increase to approximately 340,000 GWh by 2024. This reflects an annual average consumption growth rate of approximately 1.74 percent (CEC 2015a). Pacific Gas and Electric Company (PG&E) provides electrical services for the City. Currently, electrical services are considered adequate and no deficiencies in service capacities have been identified. The Project site receives electricity from existing infrastructure.

Natural Gas

Natural gas is a fossil fuel formed when layers of buried organic matter are exposed to intense heat and pressure over thousands of years. The energy is stored in the form of hydrocarbons and can be extracted in the form of natural gas. Natural gas is combusted to generate electricity, enabling this stored energy to be transformed into usable power or to be used directly for heating, cooking, and other use. Natural gas consumed in California is largely extracted from onshore and offshore sites from the Southwestern U.S. (42 percent), Rocky Mountain States (23 percent), Canada (22 percent), and within California (12

percent) (CEC 2015b). Californians consumed 2,418 billion cubic feet of natural gas in 2013 (not including gas used in natural gas-fired power plants) (USEIA 2015a). By 2024, annual customer demand is projected to grow by between 0.93 and 1.34 percent (CEC 2015a); this annual rate of growth would result in future annual natural gas consumption increasing to approximately 2,920 billion cubic feet of natural gas by 2024.

Natural gas in the City is provided by the Southern California Gas Company (SoCal Gas), which provides natural gas to 21.4 million consumers through 5.9 million meters in more than 500 communities. The company's service territory encompasses approximately 20,000 square miles throughout central and southern California, from Visalia to the Mexican border (Southern California Gas Company 2015).

Existing gas infrastructure in the vicinity of the Project site includes a 16-inch high pressure gas main that extends southerly along Vachell Lane and easterly along Suburban Road.

3.13.3 Regulatory Setting

3.13.3.1 Federal

Clean Water Act

The federal Water Pollution Control Act, also known as the Clean Water Act (CWA), is the primary statute governing water quality. The Clean Water Act establishes the basic structure for regulating discharges of pollutants into the waters of the U.S. and gives the U.S. Environmental Protection Agency (EPA) the authority to implement pollution control programs, such as setting wastewater standards for industries. The statute's goal is to regulate all discharges into the nation's waters and to restore, maintain, and preserve the integrity of those waters. The CWA sets water quality standards for all contaminants in surface waters and makes it unlawful for any person to discharge any pollutant from a point source into navigable waters unless a permit is obtained under its provisions. The CWA mandates permits for wastewater and storm water discharges, requires states to establish site-specific water quality standards for navigable bodies of water, and regulates other activities that affect water quality, such as dredging and the filling of wetlands. The CWA also funds the construction of sewage treatment plants and recognizes the need for planning to address nonpoint sources of pollution.

3.13.3.2 State

California Integrated Waste Management Act (AB 939) (1989)

This Act requires all jurisdictions to divert 25 percent of waste stream by 1995, and 50 percent by 2000 through source reduction, recycling, and composting to limit reliance on landfills.

Assembly Bill (AB) 341 (2011)

This bill established a state policy goal that no less than 75 percent of solid waste generated be source reduced, recycled, or composted by 2020, and requires CalRecycle to provide a report to the legislature that recommends strategies to achieve the policy goal by January 1, 2014. AB 341 builds on the existing AB 939 requirement that every jurisdiction divert at least 50 percent of its waste. The bill also mandates local jurisdictions to implement commercial recycling by July 1, 2012. AB 341 requires any business (including schools and government facilities) that generates 4 cubic yards or more of waste per week, and multifamily buildings with five or more units to arrange for recycling services.

Sustainable Groundwater Management Act (SGMA)

The SGMA is a statewide policy that empowers local agencies to adopt groundwater management plans that relate to the needs and resources of their communities. It is the intent of the SGMA to:

- Provide for the sustainable management of groundwater basins;
- Enhance local management of groundwater consistent with rights to use or store groundwater and Section 2 of Article X of the California Constitution. It is the intent of the Legislature to preserve the security of water rights in the state to the greatest extent possible consistent with the sustainable management of groundwater;
- Establish minimum standards for sustainable groundwater management;
- Provide local groundwater agencies with the authority and the technical and financial assistance necessary to sustainably manage groundwater;
- Avoid or minimize subsidence;
- Improve data collection and understanding about groundwater;
- Increase groundwater storage and remove impediments to recharge;
- Manage groundwater basins through the actions of local governmental agencies to the greatest extent feasible, while minimizing state intervention to only when

necessary to ensure that local agencies manage groundwater in a sustainable manner; and

- Provide a more efficient and cost-effective groundwater adjudication process that protects water rights, ensures due process, prevents unnecessary delay, and furthers the objectives of this part.

The State of California Water Resources Control Board (SWRCB)

The SWRCB has adopted a statewide construction general permit that applies to storm water and non-storm water discharges from construction activities. This general permit, which is implemented and enforced in the Five Cities region by the Central Coast Regional Water Quality Control Board (RWQCB), requires all owners of land where construction activity occurs to:

- Eliminate or reduce non-storm water discharges to storm water systems and other waters of the U.S.;
- Develop and implement a Storm Water Pollution Prevention Plan (SWPPP) emphasizing storm water Best Management Practices (BMPs); and
- Perform inspections of storm water pollution prevention measures to assess their effectiveness.

The CEQA Guidelines Appendix F includes state guidelines for the discussion of energy conservation in environmental documents. In addition, the following state regulation applies to the consumption of energy by the Project:

- Title 24, Part 6 of the California Code of Regulations, California's Energy Efficiency Standards for Residential and Non-Residential Buildings. This law is the primary legislation governing energy use in new buildings in the state. Relevant prescriptive and mandatory requirements of this law include, but are not limited to:
  - Incorporation of cool-roofs on non-residential buildings;
  - Skylights for daylighting buildings; and,
  - Installation of certified insulation materials.

On May 18, 2016, the SWRCB adopted new emergency conservation regulations that repeal and replace its prior drought regulations. The new regulations, which are effective from June 2016 through January of 2017, now allow local agencies to develop conservation standards based upon their unique circumstances. The new standards require local agencies to ensure a three-year water supply even assuming a continuous shortage such as experienced in 2012–2015. Water agencies will be required to meet a conservation standard

equal to the projected shortage in their supplies. From there the regulations enable urban providers to "Self-Certify" their supply reliability and to report to the SWRCB.

California Governor's Drought Declarations

California Governor Brown proclaimed a State of Emergency for state drought conditions on January 17, 2014 and directed state officials to take all necessary actions to make water immediately available. On April 25, 2014, Governor Brown issued an executive order to speed up actions necessary to reduce harmful effects of the drought, and called on all Californians to redouble their efforts to conserve water. On December 22, 2014, Governor Brown issued Executive Order B-28-14, extending directives to the Department of Water Resources and the Water Board to take actions necessary to make water immediately available through May 31, 2016 and to extend California Environmental Quality Act (CEQA) suspensions for certain water supply projects. On April 1, 2015, Governor Brown issued Executive Order B-29-15. Key provisions included ordering the SWRCB to impose restrictions to achieve a 25 percent reduction in potable urban water usage through February 28, 2016. On May 9, 2016, Governor Brown issued Executive Order B-37-16, establishing longer-term water conservation measures through the end of January 2017, which include monthly water use reporting, strengthened urban drought contingency plans, elimination of wasteful water use practices, and mandated adjustments to emergency water conservation regulations and restrictions during extended drought conditions. These extended water conservation measures recognize differing water supply conditions for many communities, and require that communities develop water efficiency measures and conservations plans specific to the conditions of their respective water supply. The Governor's drought declaration also calls upon local urban water suppliers and municipalities to implement their local water shortage contingency plans immediately in order to avoid or forestall outright restrictions that could become necessary later in the drought season.

3.13.3.3 Local

City of San Luis Obispo General Plan

The City is the provider of water and wastewater treatment services to residents of the City. Applicable regulations that would affect the provision of City utilities are based on local policies and other regulations that place requirements on the level of service that must be provided. Established policies and regulations that would apply to the Project are provided below.

Land Use Element

Policy LU 1.1.1 Growth Management. The City shall manage its growth so that:

A. The natural environment and air quality will be protected.
B. The relatively high level of services enjoyed by City residents is maintained or enhanced.
C. The demand for municipal services does not outpace their availability.
D. New residents can be assimilated without disrupting the community's social fabric, safety, or established neighborhoods.
E. Residents' opportunities for direct participation in City government and their sense of community can continue.

Policy LU 1.1.2 Development Capacity & Services. The City shall not designate more land for urban uses than its resources can be expected to support.

Policy LU 1.13.1 Water and Sewer Service. The City shall not provide nor permit delivery of City potable water or sewer services to the following areas. However, the City will serve those parties having valid previous connections or contracts with the City.

A. Outside the City limits;
B. Outside the urban reserve line;
C. Above elevations reliably served by gravity-flow in the City water system;
D. Below elevations reliably served by gravity-flow or pumps in the City sewer system.

Policy LU 1.13.2 Recycled Water. Provision of recycled water outside of City limits may only be considered in compliance with Water and Wastewater Element Policy A 7.3.4 and the following findings:

A. Non-potable/recycled water is necessary to support continued agricultural operations.
B. Provision of non-potable/recycled water will not be used to increase development potential of property being served.
C. Non-potable/recycled water will not be further treated to make it potable.
D. Prior to provision of non-potable/recycled water, the property to be served will record a conservation, open space, Williamson Act, or other easement instrument to maintain the area being served in agriculture and open space while recycled water is being provided.

Policy LU 1.13.10 Solid Waste Capacity. In addition to other requirements for adequate resources and services prior to development, the City shall require that adequate solid waste disposal capacity exists before granting any discretionary land use approval which would increase solid waste generation.

Policy LU 1.14.7 Development Fee Programs. The City shall maintain a development fee program that covers the costs associated with serving projects with City services and facilities. This maintenance will include periodic review of the fees collected to ensure they are adequate to cover City costs.

Policy LU 3.7.4 Utility Service. The City shall require Services and Manufacturing uses to connect to the City water and sewer systems, unless other means of providing service are identified in a City-adopted plan.

Water & Wastewater Management Element (WWME)

Policy WWME A 2.2.1 Multiple Water Sources. The City shall utilize multiple water resources to meet its water supply needs.

Policy WWME B 2.2.2 Service Capacity. The City's wastewater collection system and Water Reclamation Facility shall support population and related service demands consistent with the General Plan.

Policy WWME B 2.2.3 Wastewater Service for New Development. New development shall pay its proportionate or "fair share" of expanded treatment and collection system capacity and upgrades. New development will only be permitted if adequate capacity is available within the wastewater collection system and/or Water Reclamation Facility.

Conservation and Open Space (COS) Element

Policy COS 4.3.4 Use of Energy Efficient, Renewable Energy Resources. The City will promote the use of cost effective, renewable, non-depleting energy sources wherever possible, both in new construction projects and in existing buildings and facilities.

Policy COS 4.3.6 Energy Efficiency and Green Building in New Development. The City shall encourage energy-efficient "green buildings" as certified by the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Program or equivalent certification.

Policy COS 4.4.1 Pedestrian- and Bicycle-friendly Design. Residences, work places and facilities for all other activities will be located and designed to promote travel by pedestrians and bicyclists.

Policy COS 4.4.2 Alternative Transportation. The City's transportation and circulation systems shall foster travel by modes other than motor vehicles, including walking, bicycles and public transit.

Policy COS 4.5.1 Solar Access Standards. To encourage use of solar energy, reasonable solar access shall be provided and protected. The City will protect reasonable solar exposure for existing collectors and likely locations of future collectors, both active and passive. Standards for the subdivision and development of property should assure desirable solar access.

Policy COS 4.5.7 Unwanted Solar Heat Gain. Sites and buildings should be designed to avoid unwanted heat gain from solar exposure. Features that provide shading at suitable times of the day and year and generally should be "passive" or automatic, avoiding the need for occupants to regularly monitor or adjust them.

Policy COS 4.6.5 Encourage Sustainable Employee Commuting Practices. Encourage alternatives to employees commuting as occupants of individual vehicles powered by nonsustainable fuels.

Policy COS 4.6.8 Energy Efficient Project Design. Encourage energy-efficient project design by emphasizing use of daylight and solar exposure, shading and natural ventilation, as opposed to designing a particular image and relying on mechanical systems to maintain functionality and comfort. Educate City staff, citizen advisers, developers and designers on ways to exceed minimum state energy standards.

Policy COS 4.6.9 Solar Access for New Development. Address solar access in all plans needing City discretionary approval, considering both structures and vegetation. Shading by vegetation is also subject to the California Solar Shade Control Act. This act prohibits the placement of vegetation that would shade a solar collector on another's property, if the collector meets certain height and setback criteria. The City will advise those seeking permits for solar collectors to document vegetation existing when the collector is installed or built.

Policy COS 5.4.3 Material Recycling in Private Development, Businesses, and Operation. The City will promote waste diversion and material recycling in private

development, business and operations, and will encourage businesses or nonprofit entities to provide building materials recycling and source reduction services.

Policy COS 5.5.8 Recycling Facilities in New Development. During development review, the City shall require facilities in new developments to accommodate and encourage recycling.

Policy COS 10.2.2 Ahwahnee Water Principles. In planning for its water operations, programs and services, the City will be guided by the Ahwahnee Water Principles and will encourage individuals, organizations, and other agencies to follow these policies:

A. Community design should be compact, mixed use, walkable and transit-oriented so that automobile generated urban runoff pollutants are minimized and the open lands that absorb water are preserved to the maximum extent possible.

B. Natural resources such as wetlands, flood plains, recharge zones, riparian areas, open space, and native habitats should be identified, preserved and restored as valued assets for flood protection, water quality improvement, groundwater recharge, habitat, and overall long-term water resource sustainability.

C. Water holding areas such as creekbeds, recessed athletic fields, ponds, cisterns, and other features that serve to recharge groundwater, reduce runoff, improve water quality and decrease flooding should be incorporated into the urban landscape.

D. All aspects of landscaping from the selection of plants to soil preparation and the installation of irrigation systems should be designed to reduce water demand, retain runoff, decrease flooding, and recharge groundwater.

E. Permeable surfaces should be used for hardscape. Impervious surfaces such as driveways, streets, and parking lots should be minimized so that land is available to absorb storm water, reduce polluted urban runoff, recharge groundwater and reduce flooding.

F. Dual plumbing that allows grey water from showers, sinks and washers to be reused for landscape irrigation should be included in the infrastructure of new development, consistent with State guidelines.

G. Community design should maximize the use of recycled water for appropriate applications including outdoor irrigation, toilet flushing, and commercial and industrial processes. Purple pipe should be installed in all new construction and remodeled buildings in anticipation of the future availability of recycled water.

H. Urban water conservation technologies such as low-flow toilets, efficient clothes washers, and more efficient water-using industrial equipment should be incorporated in all new construction and retrofitted in remodeled buildings.

I. Ground water treatment and brackish water desalination should be pursued when necessary to maximize locally available, drought-proof water supplies.

Policy COS 10.3.1 Efficient Water Use. The City will do the following in support of efficient water use, and will encourage individuals, organizations, and other agencies to do likewise:

A. Landscaping:
    1. Choose plants that are suitable for the climate and their intended function, with emphasis on use of native and drought-tolerant plants.
    2. Prepare soils for water penetration and retention.
    3. Design and operate suitable and efficient irrigation systems.
    4. The City will encourage drought-tolerant landscaping, vegetable gardens and fruit trees in lieu of large expanses of lawn or other more water-demanding plantings.
    5. Landscape maintenance: Landscaped areas will be properly designed for upkeep and replacement of low-flow irrigation fixtures and equipment.
    6. Facilitate use of tertiary-treated water and seek to legalize use of grey water for non-potable household purposes.

San Luis Obispo Municipal Code

- San Luis Obispo Municipal Code, Title 13 - Public Services
- San Luis Obispo Municipal Code, Chapter 8.05, Mandatory Construction and Demolition Debris Recycling Program (Ordinance 1381)
- San Luis Obispo Municipal Code, Chapter 17.18, Performance Standards - Section 17.18.080, Energy Conservation (Ordinance 1265)

Airport Area Specific Plan

Policy 7.2.1 Engineering Feasibility Study (Water). Before specific project review and approval of projects in the area east of the airport and south of the 1994 URL, the project proponent will submit a detailed engineering assessment of the project's water demand and an assessment of the ability of the City's infrastructure system to handle the project in question. The scope of the study shall be to the approval of the Public Works Director and the Utilities Director.

Policy 7.2.1 Engineering Feasibility Study (Wastewater). Before specific project review and approval of projects the project proponent will submit a detailed engineering assessment of the project's wastewater generation and an assessment of the ability of the City's infrastructure system to handle the project in question. The scope of the study shall be to the approval of the Public Works Director and the Utilities Director.

3.13.4 Environmental Impact Analysis

3.13.4.1 Thresholds for Determining Significance

Thresholds are based upon Appendix G of the 2016 CEQA Guidelines. Implementation of the Project would have significant adverse impacts on utilities if the Project would:

a) Require or result in the construction of new water facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
b) Fail to have sufficient water supplies available to serve the project from existing entitlements and resources, or new or expanded entitlements are needed;
c) 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;
d) Result in a determination that the wastewater treatment provider does not have adequate capacity to serve projected demand in addition to existing commitments;
e) Result in not being served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs;
f) Comply with federal, state, and local statutes and regulations related to solid waste; or
g) Result in wasteful, inefficient, and unnecessary consumption of energy during project construction, operation, or maintenance.

3.13.4.2 Impact Assessment Methodology

Projected water demand for proposed facilities at the Project site was compared to the Orcutt Area Specific Plan, as the most recently approved specific plan within the City, for water available for allocation within the City. Usage estimates for the Project for water, wastewater, and solid waste are based on duty factors found within the General Plan as well as information provided within the WSA.

As the energy providers (PG&E and SoCal Gas) for the Project are also service providers for much larger and encompassing service areas, the Project would only incrementally increase demand for electricity and natural gas. This incremental increase would be negligible and, therefore, impacts to energy services are not discussed. Additionally, impacts related to storm water, site hydrology, and drainage are addressed in Section 3.7, *Hydrology and Water Quality* and are, therefore, not addressed in this section.

3.13.4.3 Project Impacts and Mitigation Measures

This section discusses utility impacts associated with the construction and operation of the Project. Utility impacts associated with the Project are summarized in Table 3.13-6.

Table 3.13-6. Summary of Project Impacts

Utility Impacts	Mitigation Measures	Residual Significance
UT-1. Project generated wastewater would contribute to demand for wastewater collection facilities and remaining capacity of the City's Water Resource Recovery Facility (WRRF).	None required	Less than Significant
UT-2. The Project would require the expansion of utility infrastructure to serve new development, including water, sewer, gas and electricity into the site; the construction of which could cause environmental effects.	MM AQ-1a-c MM BIO-1a-b BIO-2a-k BIO-3a-h, BIO-6 MM CR-2a-c, CR-3a-b MM HAZ-1 MM HYD-1a-b HYD-4a-b MM NO-1a-c MM TRANS-1 MM UT-2	Significant but Mitigable
UT-3. Project-related increases in water use would incrementally increase demand for the City's potable water supply.	None required	Less than Significant
UT-4. The Project would generate additional solid waste for disposal at the Cold Canyon Landfill.	None required	Less than Significant

Impact UT-1 Project generated wastewater would contribute to demand for wastewater collection facilities and remaining capacity of the City's Water Resource Recovery Facility (WRRF) (Less than Significant).

Using wastewater generation factors provided by the City's LUCE, the Project is estimated to produce 0.10 MGD of increased wastewater flows, resulting in an incremental increase to wastewater flows Citywide (see Table 3.13-7).

Table 3.13-7. Wastewater Projections Resulting from the Project.

Land Use	Land Use Element Proposed Development	Wastewater Generation Factor[1]	Wastewater Flow
Single-Family	410 units	150 gallons/unit/day	61,500 gallons/day
Multi-Family	310 units	105 gallons/unit/day	32,550 gallons/day
Commercial	15,000 sf	60 gallons/1,000 sf/day	900 gallons/day
Total (Gallons)	--	--	94,950 gallons/day
Total (MGD)	**--**	**--**	**0.10 MGD**

[1] City of San Luis Obispo 2014a.

According to the LUCE, as of 2013, the City's WRRF treated approximately 2.74 MGD wastewater or 52.7 percent of its 5.2 MGD design capacity, during dry-weather conditions. Since the WRRF maintains 47.3 percent remaining service capacity, the Project's contribution of 0.10 MGD would not produce a significant increase in demand for dry-weather wastewater treatment.

Moreover, according to the LUCE, the Water and Wastewater Development Impact Fee Study (2013) estimated that future dry-weather flows to the WRRF would be 5.4 MGD, of which 0.471 MGD would be from Cal Poly and 4.93 MGD would be from the City. In order to accommodate future buildout, the City has published the 2015 WRRF Facilities Plan. The plan addresses upgrades of the WRRF in response to stricter discharge limits required by the Central Coast RWQCB, to increase capacity to serve the City's population at general plan buildout, and to replace existing aged facilities at the end of their service life. Construction of the WRRF upgrade is anticipated to begin in late 2016 or early 2017. Following the upgrade, the WRRF's capacity is expected to increase to 5.4 MGD, which would accommodate the Project's incremental wastewater contribution of 0.10 MGD (City of San Luis Obispo 2015b).

During wet-weather conditions, the Project would potentially exacerbate the existing deficiency of the WRRF to process and treat peak flows that can exceed 20 MGD under existing conditions. Peak wet-weather flows are a product of inflow and infiltration from aged private laterals that were constructed from inferior pipe material. Proposed upgrades to aged pipelines as outlined in the Wastewater Collection System Infrastructure Renewal Plan would address this issue (Water Systems Consulting, Inc. 2015). While peaks in wastewater flow may result in permit violations and release of effluent to San Luis Obispo Creek, the Project's contribution of 0.10 MGD to this existing issue is nominal. Additionally, the pending WRRF upgrades would increase capacity to handle both wet-

weather and dry-weather flow. Any pipe installed as part of the Project would be consistent with City standards for new pipeline material; the City has not seen inflow and infiltration issues in newer construction. As a result, the Project's impact to the WRRF during wet-weather conditions would be less than significant.

To help offset the effects of wastewater generation, new development is required to pay development impact fees, including sewer add-on fees in the Tank Farm Lift Station service area, to the City for the connection to a public sewer. As the Project would require the connection to the City collection system, the Applicant would be subject to development impact fees implemented by the City for utility services to offset any impacts to capacity at the City's WRRF. Therefore, payment of development impact fees as part of standard conditions for Project approval would ensure that the Applicant pays a fair share of costs associated with the wastewater treatment infrastructure needed to serve the Project and ensure adequate WRRF capacity to serve the development. Impacts related to wastewater treatment of the Project would therefore be ***less than significant***.

Impact UT-2 The Project would require the expansion of utility infrastructure to serve new development, including water, sewer, gas and electricity into the site; the construction of which could cause environmental effects (Significant but Mitigable).

As the Project site is not currently connected to City water supply pipelines, wastewater facilities, nor supplied by electricity and gas, the Project would require installation of new infrastructure and new connections to provide associated utility services to the Project site (refer to Figure 2-8 and Figure 2-9). Potential impacts of such construction would include both onsite and offsite effects associated with trenching and construction for utility installation, transport of pipes and other material to the site and associated increases in construction-related traffic and noise. Onsite trenching could impact biological or subsurface cultural resources, lead to increased erosion and possible sedimentation. Offsite trenching would largely be confined to area roadways and existing disturbed area; however, such construction would increase traffic and air quality/ greenhouse gas (GHG) emissions, cause delays or congestion along major roads, and also have the potential to encounter undiscovered subsurface cultural resources or hazardous materials contamination. Such impacts are briefly described below and further in each resource section.

Proposed Wastewater Infrastructure

Project development would include construction of a network of onsite and offsite sewer lines that would tie into the City's sewer collection system (refer to Section 2.6.5, *Utilities and Services*). Installation of a system of gravity lines within the Project site to transport flows to the proposed onsite pump station would require trenching and disturbance of agricultural and potentially wetland and riparian habitats, along with potential for erosion and sedimentation and air quality and GHG emissions associated with construction. To ensure no direct adverse effects would occur to the creek corridor resources, the Project would use horizontal directional drilling (HDD) to bore under Tank Farm Creek in two locations. This City-owned and operated pump station would be constructed in the southwestern portion of the Project site and would connect to a proposed force main system that would be used to transport wastewater flows against gravity flow northwest through the Project site. It would not only serve the Project but also areas farther east on Buckley Road, and would include a backup generator. The proximity of this pump station and generator to Tank Farm Creek would have the potential to impact water quality and biological resources within and near the creek during construction. The force main would then be extended offsite and run along Earthwood Lane, crossing an adjacent parcel to Suburban Road and continuing easterly in Suburban Road to a point where a gravity line can be constructed to extend northerly to tie into the existing main line in Tank Farm Road. This Tank Farm Road main line feeds directly into the existing Tank Farm Lift Station. Installation of more than 1.5 miles of offsite sewer lines to connect with existing mains would require substantial trenching that would generally be confined to existing road rights-of-ways and other previously disturbed areas. This offsite construction would include the potential to encounter contamination from the Unocal cleanup site, which was encountered during construction of the Tank Farm Lift Station and gravity sewer mains in Tank Farm Road, especially the gravity line on Suburban Road, and the gravity line connecting to the existing Tank Farm Lift Station (see Section 3.6, *Hazards and Hazardous Materials*, for further discussion). Installation of wastewater utilities would require onsite- and offsite trenching and construction; associated impacts and mitigation measures to reduce impacts are discussed in relevant resource sections.

Proposed Water Infrastructure

Project construction would include installation of a network of onsite and offsite water lines that would ultimately tie in the City's water distribution system. The Project's potable water infrastructure would be constructed and looped throughout each phase of

construction and then connected to existing main lines on South Higuera Street and Suburban Road. Figure 2-8 depicts the proposed locations of the potable water main lines. Construction of these lines would involve trenching and installation of utility-scale pipelines, causing impacts to noise and traffic especially on Vachell Lane and Venture Drive, which are near sensitive land uses (residences). However, mitigation measures in Section 3.9, *Noise*, and Section 3.12, *Transportation and Traffic*, would lessen these impacts. Construction would occur within the Project site itself as part of overall site development and along existing roadway utility corridors in light industrial areas; impacts of such construction are discussed in individual resource sections. One of these proposed water mains would cross the Tank Farm Creek corridor near the center of the Project site. To ensure no direct adverse effects would occur to the creek corridor resources, the Project would use HDD to bore under the creek. As a result, disturbance to the creek corridor would be minimal, although potential for frac-outs could cause secondary impacts (see Section 3.4, *Biological Resources* and Section 3.7, *Hydrology and Water Quality*, for further discussion).

Additionally, as the City continues to expand its recycled water system (City of San Luis Obispo 2004), new facilities to serve the Project would be extended from the existing recycled water line in Earthwood Lane north of the site. Offsite recycled water mains in Suburban Road would also need to be constructed by the developer to connect to the existing main in South Higuera Street. The recycled water line would enter the Project site from the north and traverse easterly and southerly passing the Town Center and neighborhood park before traversing east along Buckley road and stubbing out at the Project boundary (Figure 2-8). Installation of this water line would require onsite and offsite trenching and construction; associated impacts and mitigation measures to reduce impacts are discussed in relevant resource sections.

Gas and Electrical Utility Lines

Construction of gas and electrical utilities would mainly be limited to excavation and trenching within the Project site to install subterranean pipelines, gas lines, and electrical conduits. Construction of gas and electrical utilities would occur in conformance with the Uniform Plumbing Code and City standards and would be subject to review and approval of proposed utility plans by the City Utilities Department as a standard regulatory requirement.

Impacts to the environment associated with onsite and offsite utility line installation would be ***significant but mitigable***. Impacts from construction of the Project, including utility

improvements, are described in other sections of this EIR (e.g. Section 3.3, *Air Quality and Greenhouse Gas Emissions*, Section 3.4, *Biological Resources*, Section 3.5, *Cultural Resources*, Section 3.6, *Hazards and Hazardous Materials,* Section 3.7, *Hydrology and Water Quality*, Section 3.9, *Noise*, and 3.12, *Transportation and Traffic*).

Mitigation Measure

MM AQ-1a-c shall apply.

MM BIO-1a-b, MM BIO-2a-k, MM BIO-3a-h, and MM BIO-6 shall apply.

MM CR-2a-c and MM CR-3a-b shall apply.

MM HAZ-1 shall apply.

MM HYD-1a-b and MM HYD-4a-b shall apply.

MM NO-1a-c shall apply.

MM TRANS -1 shall apply.

MM UT-2 *The size, location, and alignment of all on- and offsite water, wastewater, and energy infrastructure offsite shall be subject to review and approval by the City's Public Works and Utilities Departments. The Applicant shall be responsible for constructing all required onsite and offsite utility improvements and well as for repaving of damaged roadways.*

Plan Requirements and Timing. The Applicant is required to implement the above standard mitigation measures prior to Development Plan or permit approval. City staff shall ensure the above measures are incorporated into the Development Plan and building plans prior acceptance of the final Development Plan and recordation of the final VTM.

Monitoring. City staff shall ensure measures are on plans. City staff can work with the Applicants to ensure that these strategies are implemented.

Residual Impacts

With implementation of mitigation measure MM UT-2, as well as construction-related mitigation measures for air quality, biological resources, cultural resources, hazards and hazardous materials, hydrology and water quality, noise, and transportation and traffic, residual impacts would be less than significant.

Impact UT-3 Project-related increases in water use would incrementally increase demand for the City's potable water supply (Less than Significant).

To determine the impacts of projected future water use associated with the Project on the City's water supply, analysis includes both the estimated water demand from the WSA (Appendix M) and water demand estimates based on the City's existing residential water use factors. The WSA estimated total water demand from the Project to be 131 AFY while the City's more conservative water use factors estimate Project water demand to be 187.85 AFY (see Tables 3.13-8 and 3.13-9).

Table 3.13-8. Estimated Water Demand from Project WSA

Areas	Irrigation Demand Potable	Irrigation Demand Non-Potable	Indoor Domestic Demand	Total (gallons/year)
R-1	1,631,774		3,155,243	4,787,017
R-2	2,674,323		8,435,634	11,109,957
R-3		530,809	4,578,195.00	5,109,004
R-4		457,790	3,093,375	3,551,165
Commercial		144,412		144,412
Community Garden Beds		247,387		247,387
Riparian Open Space		3,518,296		3,518,296
Drought Tolerant Open Space		4,333,923		4,333,923
Turf (Park Area)		8,285,718		8,285,718
Bioretention Areas		864,905		864,905
Drought Tolerant Parkways		654,387		654,387
Total (gallons/year)	**4,306,097**	**19,037,627**	**19,262,446**	**42,606,170**
Total (AFY)	**13**	**59**	**59**	**131**

Source: Cannon 2015; see Appendix M.

Table 3.13-9. Estimated Project Water Demand based on City Water Use Factors

Areas	Quantity	Use Factor[1]	Demand (AFY)
R-1	105 units	0.3 AF/unit/day	31.5
R-2	305 units	0.2 AF/unit/day	64.05
R-3/R-4	310 units	0.18 AF/unit/day	55.8
Neighborhood Commercial	15,000 sf	0.3 AF/1,000 sf/year	4.5
Parkland	16 acres	2 AF/year	32
TOTAL			**187.85**

[1] Use factors based on historical water usage rates for similar land uses in the City.
AFY = acre-feet/year sf = square feet

Although the Project would include many water conserving and reuse features, more conservative estimates using the City's water demand factors is also provided. Using these factors, the Project's water demand is estimated to total 187.85 AFY (Table 3.13-9). These factors provide a conservative estimate of the Project's projected water usage, particularly during non-drought periods where water consumption can increase.

The total annual availability for City water supplies is estimated at 12,109 AFY, given the availability of recycled water (City of San Luis Obispo 2016a). Under current conditions, there is 6,007 AFY of reserve water supply available for new development. The Project's water demand would necessitate between 2.2 percent and 3.1 percent of this available supply. Under future buildout conditions with an estimated population of 57,200 established by the LUCE, water demand is calculated to be approximately 7,493 AFY in year 2057, including the usage of an estimated 400 AFY of recycled water (City of San Luis Obispo 2016b)[1]. Based on these estimates, the City would have approximately 4,680 AFY of reserve water supply available at full buildout capacity. Therefore, based on Project-related water demand estimates, the Project would require between 2.3 percent and 3.4 percent of the remaining amount of water anticipated to be available at buildout. Accordingly, existing and future water supplies are sufficient to serve the Project's demand.

[1] It is estimated that the population of the City at buildout capacity would be 57,200. The City's accounting method for projecting future water demand is proposed to change as part of the amendments to the General Plan, WWME. The City is proposing to replace the use of the 10-year running average per capita water demand, which is currently 114.4 gpcd, with 117 gpcd. This represents a more conservative figure that would eliminate artificially low water usage during drought years and aligns with the City's SB X7-7 requirements for projecting future water demand. Water demand calculated using the average water consumption rate of 117 gpcd (0.13 AFY per person).

Up to 59 AFY of Project water supply is projected to consist of recycled water. With planned expansion of the WRRF and associated projected recycled water availability of 4,159 AFY, the Project's estimated recycled water use would constitute a very small fraction of recycled water availability. The Project site also has an existing well that is located on the northwest corner of the site. The well is currently being tested for water quality, as well as production capabilities. If production rates are high enough, this well could potentially be used as a source for non-potable water to irrigate the Project's proposed park and open space areas (Cannon 2015).

Consistent with Ahwahnee Water Principles and the City's General Plan, COS Policy 10.2.2, the Project would include irrigation of parks, open space and landscaping with recycled water. Project irrigation design would make use of available tools to ensure water efficiency, including utilizing dedicated landscape water meters, soil moisture sensors, central irrigation controllers and master valves combined with flow sensors as well as weather based irrigation controllers that are tied to California Irrigation Management Information System (CIMIS) weather data for the larger landscape areas. This type of controller communicates with a nearby CIMIS weather station and adjusts irrigation application based on real-time weather conditions. Other smaller landscape areas or Points of Connection (POCs) may utilize basic weather-based 'smart' irrigation controllers that adjust water application based on historic data preprogrammed into the controller, as opposed to actual real-time weather data. Irrigation zones will be determined by means of defining hydrozones, whereby all irrigation circuits will be spatially defined by virtue of grouping plants with the same water needs and similar climatic and soil conditions (and/or other factors that impact watering needs) (Cannon 2015).

The Project would create an additional long-term demand for City water supplies. As the existing and future water supply would be sufficient to serve the Project's estimated demands, impacts to the City's water supply would be considered adverse but less than significant. Furthermore, the Project includes measures to ensure landscaping water efficiency, consistent with the City's General Plan policies. Development of the Project site would also require payment of water impact fees to the City. Therefore, impacts would be ***less than significant***.

Impact UT-4 The Project would generate additional solid waste for disposal at the Cold Canyon Landfill (Less than Significant).

Solid waste generated by the Project from future residents, employees, and visitors would be hauled by San Luis Garbage to the Cold Canyon Creek Landfill for management and disposal, including recycling and green waste diversion. Expansion of the landfill has been approved, increasing capacity from 1,620 to 2,050 tons per day. The Project would contribute an estimated 2.85 tons per day of solid waste (Table 3.13-10). Based on these daily solid waste projections, the Project would contribute to 0.1 percent of the potential daily waste capacity of Cold Canyon Landfill. Long-term waste disposal impacts are also minimized by including facilities for the collection and storage of recyclables in the new development. The waste produced by the Project would not substantially affect the landfill's capacity or ability to comply with federal, state, or local regulations. Therefore, impacts regarding the generation of solid waste by the Project would be ***less than significant***.

Table 3.13-10. Estimated Solid Waste Production

Land Use	Proposed Uses	Quantity (# of Units)	Waste Generation Factor	Waste Generation (lbs/day)
Residential	R-1 (Single Family)	105	9.8 lb/day/unit	1,029
	R-2 (Single Family)	305	9.8 lb/day/unit	2,989
	R-3 (Multi-Family)	185	5.31 lb/day/unit	982.35
	R-4 (Multi-Family)	125	5.31 lb/day/unit	663.75
Neighborhood Commercial	Retail, local services, or outdoor dining	15,000 sf	2.5 lb/1000 sq ft/day	37.5
Estimated Total Waste Generation (lbs per day)			**5,701.6**	
Estimated Total Waste Generation (lbs per year)			**2,081,084**	
Estimated Total Waste Generation (tons per day)			**2.85**	
Estimated Total Waste Generation (tons per year)			**1,040.5**	

Source: CalRecycle 2013a; 2013b; 2013c).

3.13.4.4 Cumulative Impacts

Implementation of the Project would result in the incremental increase in demand for water supply, wastewater treatment, solid waste management, and energy utilities (e.g. electricity, gas). With the exception of wastewater treatment, water, solid waste, and energy facilities have the capacity to provide service to the Project site as well as to future development under the LUCE's buildout of the City. Implementation of this Project and other proposed or current projects listed in Table 3.0-1 would increase the cumulative

demand on utilities; however, these projects would be required to comply with standards for adequate utilities set forth in the City's General Plan, would be subject to City planning and review processes, and would be required to pay development impact fees to offset any impacts from utility infrastructure needs and service capacities. As such, and as indicated by the LUCE Update EIR, cumulatively the Project would not result in any significant or adverse effects on the supply of water, solid waste, or energy utilities. Therefore, the cumulative impact of this Project and pending cumulative projects (listed in Table 3.0-1) within the vicinity on water supply, solid waste management, and the energy utilities would be ***less than significant***.

Likewise, the WRRF's future capacity to process and treat up to 5.4 MGD of wastewater would be sufficient for flows generated by the Project and the City at LUCE buildout, including the cumulative projects identified in Table 3.0-1, under dry-weather conditions. Under wet-weather conditions, cumulative development could exacerbate the existing deficiency of the WRRF to process and treat peak flows that can exceed 20 MGD under existing conditions. Since peaks in wastewater flow may result in permit violations and release of effluent to San Luis Obispo Creek, the contribution of the Project's wastewater plus effluent generated from future pending projects could be cumulatively considerable. However, as described above, any new pipes installed by cumulative projects would be consistent with City standards and therefore would reduce peak wet-weather flows due to inflow and infiltration. The pending WRRF upgrades would also increase capacity to handle both wet-weather and dry-weather flow, which would reduce the impact of cumulative development on the WRRF's capacity to sufficiently treat the City's wastewater to meet RWQCB standard and avoid periodic spills into San Luis Obispo Creek, and, therefore, cumulative impacts would be ***less than significant***.

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