4.14 UTILITIES AND SERVICE SYSTEMS

4.14.1 INTRODUCTION

This section describes existing utilities that serve the project site and its vicinity and analyzes the potential for the Scott Ranch project (proposed project) to affect water supply and the water distribution system; wastewater collection, conveyance, and treatment systems; solid waste services; natural gas; and electricity. It also presents potential impacts to utilities and services systems from the construction and operation of the Helen Putnam Regional Park Trail (regional park trail), which is considered a related project because it would provide a connection from the trails proposed under the Scott Ranch project to existing trails in the Park. (see **Section 4.14.4.4** below).

4.14.2 ENVIRONMENTAL SETTING

4.14.2.1 Water Supply and Distribution

The Petaluma Department of Public Works and Utilities is the water purveyor for the City of Petaluma. The City purchases wholesale water from the Sonoma County Water Agency (SCWA/Water Agency). The SCWA supplies water to eight primary water contractors, including the cities of Petaluma, Cotati, Rohnert Park, Santa Rosa, Sonoma, the Town of Windsor, the Valley of the Moon Water District, and the North Marin Water District. Other SCWA customers include the County of Sonoma, State of California, Santa Rosa Junior College, California-American Water Company, the Forestville Water District, the Kenwood Water Company, the Lawndale Mutual Water Company, the Penngrove Water Company District, and the Marin Municipal Water District (MMWD) (SCWA 2016). The Restructured Agreement for Water Supply (Restructured Agreement) was signed in 2006 by the Water Agency and eight water contractors, including the City of Petaluma. The Restructured Agreement provides for the finance, construction, and operation of existing and new diversion facilities, transmission lines, storage tanks, booster pumps, conventional wells, and appurtenant facilities. The City of Petaluma does not hold any water rights for the SCWA water supply. Rather the Restructured Agreement provides that the Water Agency is not obligated to provide the City more than 21.8 million gallons per day (mgd) of water and 13,400 acre-feet per year (afy) (City of Petaluma 2016).

SCWA Urban Water Management Plan

The SCWA 2015 UWMP was adopted in June 2016. The Russian River provides most of the SCWA's water supply, though groundwater supply is also obtained from three SCWA wells located along the Russian River-Cotati Intertie Pipeline in the Santa Rosa Plain. According to the 2015 UWMP, based on the projected demand for water through 2035 provided by its eight primary customers and MMWD and estimated for

customers, the Water Agency will need to develop new sources of water supply to serve the projected demand. The Water Agency notes that the Plan is based upon reasonable assumptions about the Water Agency's sources of water supply, including water quality impacts on supply, climate change, 2008 National Marine Fisheries Service Russian River Biological Opinion, and the Potter Valley Project. The agency also notes that there are a number of actions and projects the Water Agency could undertake to mitigate any adverse water supply impacts resulting from future changes in those assumptions (SCWA 2016).

Water is distributed to the various communities and water supply contractors served by the SCWA through a system of aqueducts that extend throughout its service area. The SCWA water supply flows to the City via the Petaluma Aqueduct, which is a 33-inch diameter pipeline which provides a maximum of 38 million gallons per day (mgd) at 10 feet per second (City of Petaluma 2016). The SCWA transmissions system extends from the SCWA's Russian River diversion facilities located near Forestville to the Santa Rosa, Petaluma, and Sonoma valleys. The SCWA owns the northern portion of the North Marin Aqueduct that extends from the terminus of the Petaluma Aqueduct to the Kastania Booster Station, adjacent to the border of Marin County and Sonoma County (SCWA 2016).

City of Petaluma 2015 Urban Water Management Plan

The City of Petaluma 2015 Urban Water Management Plan's (City of Petaluma 2016) presents the City's water supply and planning programs per the UWMP requirements of the California Water Code. It presents a water supply program that relies on water from SCWA, recycled water (potable offset), and conservation. The plan includes the baseline demand analysis, water use target analysis, and describes the programs to achieve the target demand reductions in the UWMP. The Petaluma 2015 UWMP analyzes future supply and demand projections from 2020 to 2040 under a range of conditions. According to the 2015 UWMP, the SCWA could provide up to 13,400 afy of water during a normal year and under multiple dry-year scenarios, which would be an adequate supply to accommodate the demand from 2020 to 2040. SCWA supply is not expected to be reduced during normal and multiple dry-year scenarios. However, under the single-dry year scenario the levels in Lake Sonoma are projected to drop below 100,000 afy. The SCWA supply is subject to reductions based on Lake Sonoma volume, which has a total volume of 381,000 afy and a supply pool of up to 212,000 afy. When the total volume is less than 100,000 afy, SCWA diversion is subject to a 30 percent reduction. Therefore, during the single-dry year, the SCWA would need to reduce its diversions from the Russian River by 30 percent. This reduction in diversions directly impacts the City of Petaluma's supply of water. In order to satisfy the City's demand with the reduced supply, the City will need to enact its water contingency plan which would increase the production of local water supplies and water conservation efforts. Enactment of the City's water contingency plan will most likely be required

depending on the amount of reduction in consumption required and the amount of water that can be supplied by the City's groundwater sources (City of Petaluma 2016).

The City of Petaluma prepared a Water Shortage Contingency Plan (WSCP) in 2016 that provides a rationing plan to determine reductions in water consumption when responding to drought and emergency conditions that interrupt water supplies. The plan defines four stages of water supply shortage emergencies ranging from Stage 1 – Minimal (up to 15 percent supply shortage) to Stage 4 – Critical (35 percent supply shortage or greater). Stages 2 through 4 require mandatory measures to decrease water demand and increase public knowledge of the water shortage (City of Petaluma 2016). The plan determines a consumption reduction of up to and over 50 percent of the normal consumption depending on causes, severity, and anticipated duration of the water supply shortage. Requirements and actions are identified in each stage to achieve the necessary demand reduction targets (City of Petaluma 2016). Water shortage enforcements and fines can be applied to customers who are in violation of the WSCP stage mandates, the limitations and prohibitions listed in Table 8-2 of the City's UWMP, the City's water conservation regulations, or to customers who are not meeting their assigned Customer Demand Reduction Plans. The City will issue a warning followed by increasing levels of fines for repeat offenses. Actual water savings achieved from implementing the stages of the WSCP would be measured and determined by relying on water meters that record water consumption (City of Petaluma 2016).

Groundwater

The Petaluma Valley Basin (Basin Number 2.1), located in the Petaluma River Valley starting at Penngrove on the north and following the valley south to San Pablo Bay, is about 46,100 acres. The groundwater subbasin has low permeability and limited groundwater storage as a result. Additionally, the subbasin has water quality issues from naturally occurring arsenic, iron, manganese, nitrate, and coliform. The City maintains 12 wells (6 are active) that tap into this subbasin (City of Petaluma 2016). The City uses groundwater, as necessary, for emergency backup supply, peaking needs, and other short-term scenarios. From 2011 to 2015, groundwater use remained consistent, with an increase in usage in 2015. In 2015, the City supplied approximately 5 percent of its annual demand using groundwater. This increase was the product of rehabilitated well sites and studies to determine actual production capabilities in the event of emergency use. Groundwater usage was high in 2015, due to the impacts of wholesale water rates increase from the SCWA. Therefore, the City opted to supply more groundwater in an attempt to reduce the costs burden on its ratepayers. From 2015 to 2017, local groundwater production accounted for approximately 5 percent of supply. There was no groundwater production for water supply in 2018 and 2019. . The City continues to maintain and sample the wells per state requirements and to keep the wells in working condition should they be required in an emergency (City of Petaluma 2016).

Water Storage and Distribution

The SCWA holds four State Water Resources Control Board (SWRCB) permits (12947A, 12949, 12950, and 16596). The permits authorize the SCWA to store water in Lake Mendocino (122,500 af) and Lake Sonoma (245,000 af), and to divert and re-divert 180 cubic feet per second (cfs) (116.3 MGD) of water from the Russian River and Dry Creek, up to 75,000 afy (City of Petaluma 2016).

Petaluma's water distribution system is divided into five topographically defined pressure zones. Zone 1 covers almost the entire City, except for the hilly neighborhoods located west of downtown, and it ranges in elevation from 10 feet to 60 feet above mean sea level (amsl). Zone 2 wraps around downtown on the south and west, extending up to elevation 160 feet amsl. Zone 3 includes all areas west of Highway 101 that are located between elevation 160 and elevation 260 feet amsl, while water services at a higher elevation require pressurization systems. Zone 4 includes a portion of the area northeast of Ely Road, between Corona Road to the west, Frates Road to the east, and Adobe Road to the north. Zone 5, encompassed by Zone 1, is located in the southeast region of the City. Zones 1, 2, and 4 are supplied directly by turnouts along the Petaluma Aqueduct. The higher elevation areas, which comprise Zones 3 and 5, are supplied by booster stations that draw water from Zone 2 (City of Petaluma 2008).

Project Site

There is an existing 10-inch water main in Windsor Drive along the project frontage and a 10-inch water main in D Street that terminates at Windsor Drive. The Davidon (28-Lot) Residential Project component would be served by a network of 8-inch water mains proposed to be constructed throughout the residential lots and connect to the existing 10-inch water main in Windsor Drive. Water infrastructure for the remainder of the site would include a connection to a stub out located near the service entrance to the barn center along D Street.

4.14.2.2 Wastewater

Wastewater Treatment Facilities

Wastewater produced within the City and the nearby community of Penngrove is treated at the Ellis Creek Water Recycling Facility (WRF) which has been operational since 2009. The WRF is located in the southeastern portion of the City, between Lakeville Highway and the Petaluma River. In 2019, the average daily dry and weather wastewater flow (ADWF) at the WRF was approximately 4.2 million gallons per day (mgd) and the average daily wet weather wastewater flow (AWWF) was 9.1 mgd (Thompson, 2019). Currently, the WRF is at approximately 70 percent of the hydraulic capacity and 95 percent of the organic loading capacity (Thompson, 2019). The WRF has the capacity to treat wastewater to a "secondary" level

that makes it suitable for the irrigation of pasture land, food crops in which the edible portion does not come in contact with the water, and areas of restricted public access. The WRF also treats wastewater to "tertiary" standards that allows its unrestricted use in virtually all recycled water applications. These applications include irrigation of water-contact food crops, public and private landscape irrigation, decorative fountains, industrial processes, toilet flushing, and building fire sprinkler systems (City of Petaluma 2016).

Under the conditions of the WRF's Regional Water Quality Control Board (RWQCB) operating permit, the secondary treated wastewater effluent can be discharged into the Petaluma River adjacent to the WRF from October 21st through April 30th. Between October 20th and May 1st of each year the effluent is stored in aerated oxidation ponds adjacent to the facility during the summer dry season, and then discharged into the Petaluma River (City of Petaluma 2016). Some of this stored effluent is lost through evaporation, but the majority is recycled to irrigate local pasture land, vineyards, and golf courses, enabling the City to meet mandated reductions in its seasonal discharges to the Petaluma River.

The WRF has sufficient excess capacity to accommodate the short-term surges that occur over the course of a day, as well as the peak wet weather flows (PWWF) caused by rainwater entering the system. Rainwater infiltration and inflow (I & I) is a major problem for wastewater operators, particularly in communities (like Petaluma) with aging collection systems that also have a large number of direct storm drain connections to the sanitary sewer. The new treatment plant is designed to handle these high flows, with no overflows of partially treated wastewater that would violate the terms of its RWQCB permit. The modular design of the Ellis Creek WRF will also allow the City to efficiently expand capacity in the future if wastewater treatment demands exceed current projections (City of Petaluma 2016).

Existing Sewer Fees and Connection Charges

In order to fund its wastewater collection and treatment services, the City currently charges a flat monthly service fee for single- and multi-family dwellings, plus a usage fee (City of Petaluma 2019).

Project Site

The proposed project would be served by the city sanitary sewer system. Wastewater generated by the proposed project's residences would be collected through an on-site collection system and discharged into the existing City operated 8-inch sewer main in Windsor Drive near the entrance to the Victoria Subdivision. Wastewater infrastructure improvements would include extending the public sanitary sewer mains along Windsor Drive to serve the proposed residences at the project site. Sewer lines for the Putnam Park Extension Project component would run to a stub out located near the service vehicle entrance to the barn center along D Street.

4.14.2.3 Storm Water

Regional Hydrology

As described in **Section 4.8, Hydrology and Water Quality**, the project site is situated within the Kelly Creek watershed, which is a tributary of Thompson Creek which in turn drains into the lower Petaluma River. The Petaluma River begins in headwater streams on the slopes of Sonoma Mountain and flows in a southeasterly direction to San Pablo Bay. Upstream of San Antonio Creek at the Marin/Sonoma County line, the Petaluma River valley covers an area of approximately 87 square miles, with a maximum width of just under 11 miles between Sonoma Mountain and Laguna Lake. Thompson Creek intersects the river a short distance upstream from the beginning of the broad marshlands that parallel the river between Highway 101 and San Francisco Bay. As a result, most of the developed areas subject to occasional river flooding by the Petaluma River are located upstream of the point at which runoff from the project site enters the river system.

Average annual rainfall in the project vicinity is just under 25 inches. Nearly 95 percent of this precipitation falls during the winter rainy season, October through April, with the heaviest rainfall typically occurring in December, January, and February. During a 30-minute duration, 10-year recurrence interval storm, peak rainfall intensity is approximately 1.0 inches per hour, and increases to 1.31 inches per hour during a 30-minute, 100-year storm (BKF Engineers, 2018).

Project Site Stormwater Drainage

The project site is located in the 360-acre Kelly Creek drainage basin. Kelly Creek bisects the project site and flows under D Street through an existing box culvert. As described in **Section 4.7, Hydrology and Water Quality**, the majority of the site drains to Kelly Creek with a small portion of the project site north of Windsor Drive draining directly to the D Street storm drain system and discharges to Kelly Creek downstream of the D Street storm drain. Another small portion at the northwest of the project site drains to Windsor Drive and flows west to enter the existing Victoria subdivision storm drain that ultimately discharges to Kelly Creek at Sunnyslope Avenue.

The proposed project would include storm drains in the new streets that serve the proposed residences. The storm drains would convey the runoff, generated by the new impervious surfaces of the Davidon (28-Lot) Residential Project component, into a primary bioretention facility that would be located south of Windsor Drive. This bioretention facility would treat stormwater runoff from the new roads, driveways and housing units and portions of Windsor Drive west of the facility location. This bioretention facility would also receive runoff from the small parking lot that would be located south of Windsor Drive. A second detention/bio-infiltration facility would be located at the southwest corner of Windsor Drive and D

Street and would provide treatment of runoff from the eastern portion of Windsor Drive that is currently untreated. An additional stormwater treatment facility south of Kelly Creek may also be required to treat runoff from the proposed D Street parking lot. All of the site storm drain subsystems would eventually discharge their flows into the section of Kelly Creek on the project site. Additional information regarding detention and storm drainage is detailed in **Section 4.7, Hydrology and Water Quality.**

4.14.2.4 Solid Waste

Solid waste is managed by the Sonoma County Waste Management Agency (SCWMA) and the City of Petaluma Department of Public Works (DPW). The SCWMA, formed in 1992, is the joint powers authority of the nine incorporated cities and the County of Sonoma. The regional waste diversion programs offered by the SCWMA include wood waste, yard debris, household hazardous waste, education, and planning. The diversion goals for the SCWMA are set by Assembly Bill (AB) 939 the Integrated Waste Management Act. The SCWMA reports diversion rates annually to California Department of Resources Recycling and Recovery (CalRecycle) as required by AB 939. The SCWMA has a regional commitment of achieving zero waste by 2030, diverting 90 percent of all material from landfills (SCWMA 2019).

The City has a contract with the private hauler Recology to handle solid waste, recycling, and compost pickup and disposal.

Solid waste generated in the City of Petaluma is hauled by Recology and taken to the Redwood Landfill and Recycling Center (RLRC). The RLRC, a Class III Landfill, is owned and operated by Waste Management and located at 8950 Redwood Highway, Novato, California, approximately two miles north of the San Marin exit off US Highway 101. The RLRC is permitted to receive up to 1,390 tons per day of disposal waste as well as 400 tons per day of recycling material. The landfill's remaining disposal capacity is about 5.9 million cubic yards and its estimated closure date is 2036 (McCutcheon 2020).

Based on the most recent annual report of the SCWMA, waste disposal rate in 2018 was approximately 4.1 pounds per resident per day (ppd) which is about 58 percent as compared to the target of 7.1 ppd (Lukacs 2020). In February 2020, the City of Petaluma diverted approximately 50 percent of its solid waste (Recology 2020).

4.14.2.5 Electricity

Pacific Gas and Electric (PG&E) provides electrical power to businesses and residents in Petaluma. PG&E owns and operates electricity infrastructure in the city and throughout Northern California that includes power lines, powerhouses, and substations. PG&E operates approximately 159,000 circuit miles of transmission and distribution lines. To meet customer load, PG&E purchases wholesale electric energy and

capacity from generators and suppliers, including cogeneration power plants and small power producers that include hydroelectric power plants, biomass, solar, and wind projects. Sonoma Clean Power (SCP) is a public electricity provider, operated in part by the City of Petaluma, that sources clean energy from renewable resources – geothermal, water, wind, solar, and biomass – for Sonoma and Mendocino Counties. The SCP can replace PG&E's electric generation service for residents and businesses in these counties and continues to use PG&E's wiring infrastructure to deliver cleaner energy to customers. SCP provides residences with either the CleanStart plan, a mix of 50 percent renewable energy (wind, solar, geothermal, etc.) and 46% carbon-free large hydroelectric power, or the EverGreen plan, a mix of 100 percent clean, locally produced energy (Sonoma Clean Power, 2020).

Electricity generated within the State of California in 2017 was from natural gas (43 percent), renewable resources (29 percent), large hydroelectric (18 percent), nuclear (9 percent), and coal (<1 percent) (CEC 2019a). The rest of the electricity used in the state was generated within the United States either in the Southwest or Pacific Northwest. The State of California power mix, based on in-state generation and out-of-state purchases in 2017 was comprised of natural gas (34 percent), renewable resources (29 percent), large hydroelectric (15 percent), coal (4 percent), nuclear (9 percent), and additional unspecific sources of power (9 percent) (CEC 2019a). In 2017, the total system power for California was 292,039 gigawatt hours (GWh), which is up about 0.5 percent from 2016's total system electric generation of 290,567 GWh (CEC 2019a). Electrical lines installed at the project site would all be underground. **Section 4.5, Energy**, provides an analysis of the proposed project energy consumption and impact.

4.14.2.6 Natural Gas

Natural gas is provided and distributed to residents and businesses in the City of Petaluma by PG&E. PG&E purchases gas supplies at daily, monthly and longer-term basis from producers and marketers in Canada, the Rockies, and the U.S. Southwest.

In 2012, natural gas used within California was extracted in the State of California (9 percent), Canada (16 percent), the Rocky Mountain region of the United States (40 percent), and in the southwest United States (35 percent) (CPUC 2019). In 2012, natural gas was used in California to produce electricity (45.6 percent), in residential uses (21 percent), in industrial uses (25 percent), and in commercial uses (8.6 percent). The total natural gas usage in 2012 was 23,130 million therms (CEC 2019b). Proposed natural gas infrastructure on the project site would connect to existing natural gas line located within the eastern portion of D Street, just north of the proposed round-a-bout at the intersection of Windsor Drive and D Street.

4.14.2.7 Telecommunications

Regional telecommunications providers within the project area include: AT&T, Comcast, HughesNet, Viasat, and Verizon. There are currently no telecommunications facilities located on the site and the nearest antenna structure registered by the Federal Communication Commission is located approximately 1,300 feet northwest of the project site (Federal Communications Commission 2020).

4.14.3 REGULATORY CONSIDERATIONS

4.14.3.1 Federal Regulations

There are no federal regulations related to utilities that are applicable to a land development project such as the proposed Scott Ranch project. Regulations pertaining to the National Pollutant Discharge Elimination System (NPDES) under the Clean Water Act that apply to control and treatment of storm water from urban development are discussed in **Section 4.8, Hydrology and Water Quality**.

4.14.3.2 State Laws and Regulations

Urban Water Management Planning Act

California State Assembly Bill 797 (California Water Code Section 10610, et seq.), adopted in 1983, requires every urban water supplier providing water for municipal purposes to more than 3,000 customers or more than 3,000 acre-feet of water on an annual basis to prepare an UWMP. The intent of the UWMP is to assist water supply agencies in water resource planning over at least a 20-year planning period given their existing and anticipated future demands. UWMPs must be updated every five years in years ending in 0 and 5.

The City updated and adopted its latest UWMP in May 2015. The City of Petaluma 2015 UWMP includes projected water supplies required to meet future demands through 2040 and an analysis of the future water demand and supply through 2040. The SCWA adopted its 2015 UWMP in June 2016.

Senate Bills 610 and 221

In 2001, the California Legislature passed Senate Bill 610 (Water Code Section 10910 et seq.) and Senate Bill 221 (Water Code Section 66473.7) to improve the link between information on water supply availability and certain land use decisions made by cities and counties. SB 610 and SB 221 were companion measures, which sought to promote more collaborative planning between local water suppliers and cities and counties.

SB 610 requires the preparation of a Water Supply Assessment (WSA) for certain large developments, including residential projects with more than 500 dwelling units. SB 221 prohibits approval of subdivisions consisting of more than 500 dwelling units unless there is verification of sufficient water supplies for the project from the applicable water supplier(s).

Water Conservation Act of 2009 (SBX7-7)

The Water Conservation Act of 2009 (also known as Senate Bill X7-7) established a statewide water conservation target of 20 percent reduction in water use by 2020 compared to the State's 2005 baseline use. The Act requires that retail water suppliers define in their 2010 urban water management plans the gallons per capita per day (gpcd) targets for 2020, with an interim 2015 target. The legislation also requires the California Department of Water Resources, in consultation with other state agencies, to develop a single standardized water use reporting form, which would be used by both urban and agricultural water agencies.

Senate Bill 606 and Assembly Bill 1668

SB 606 and AB 1668 establish guidelines for efficient water use and a framework for the implementation and oversight of the new standards, which must be in place by 2022. The two bills strengthen the state's water resiliency in the face of future droughts. Provisions include establishing water use objectives and long-term standards for efficient water use that apply to urban retail water suppliers; comprised of indoor residential water use, outdoor residential water use, commercial, industrial and institutional (CII) irrigation with dedicated meters, water loss, and other unique local uses. The bills also provide incentives for water suppliers to recycle water. They also require both urban and agricultural water suppliers to set annual water budgets and prepare for drought.

Senate Bill 555

SB 555 added to Section 10608.34 to California's Water Code requiring each urban retail water supplier, on or before Oct. 1, 2017, and on or before Oct. 1 of each year thereafter, to submit a completed and validated water loss audit report for the previous calendar year or previous fiscal year. SB 555 requires that water suppliers use a specific analysis tool. Under the new code, urban water suppliers must conduct standardized audits of water loss for their systems "in accordance with the method adopted by the American Water Works Association (AWWA) in the third edition of Water Audits and Loss Control Programs, Manual M36 and in the Free Water Audit Software, version 5.0."

California Integrated Waste Management Act

As many of the landfills in the state are approaching capacity and finding a location for new landfills becomes increasingly difficult, the need for source reduction, recycling, and composting has become readily apparent. In response to this increasing solid waste disposal problem, in September 1989 the State Assembly passed AB 939, known as the California Integrated Waste Management Act. The act required every city and county in the state to prepare a Source Reduction and Recycling Element (SRRE) with its Solid Waste Management Plan that identifies how each jurisdiction will meet the mandatory state waste diversion goals of 25 percent by the year 1995 and 50 percent by the year 2000. Senate Bill 2202 mandated that jurisdictions continue 50 percent diversion on and after January 1, 2000 through source reduction, recycling, and composting. State agencies must adopt integrated waste management plans, implement programs to reduce waste disposal, and have their waste diversion performance annually reviewed by the California Department of Resources Recycling and Recovery (CalRecycle). and submit an annual report to the California Integrated Waste Management Board summarizing its progress in reducing solid waste.

Senate Bill 1016 (Per Capita Disposal Measurement System)

The Senate Bill 1016 requires measuring a jurisdiction's efforts in meeting the intent of AB 939 through per capita disposal rates. Senate Bill 1016 mandates entities to report the 50 percent diversion requirement under AB 939 in terms of per-capita disposal expressed as pounds per person per day.

4.14.3.3 Local Plans and Policies

City of Petaluma General Plan 2025

The City of Petaluma General Plan 2025 contains goals and policies relating to solid waste, water, and conservation. General Plan policies relevant to the proposed project are as follows:

Chapter 4: The Natural Environment

Solid Waste

Policy 4-P-21: Reduce solid waste and increase reduction, reuse and/or recycling, in compliance with the Countywide Integrated Waste Management Plan (CoIWMP).

Chapter 8: Water Resources

Policy 8-P-1: Optimize the use of imported water from the SCWA to provide adequate water for present and future uses.

Policy 8-P-2: Continue to work to maintain water supply agreements with SCWA to ensure adequate potable water.

Policy 8-P-4: The City shall routinely assess its ability to meet demand for potable water.

A. The City shall continue to monitor the demand for water for projected growth against actual use, and ensure that adequate water supply is in place prior to, or in conjunction with, project entitlements.

B. The City planning staff will discuss water supply with the developer for each new development early in the planning process and inform Water Resources staff of upcoming demands as provided by the applicant.

C. The City shall maintain a tiered development record to monitor approved and pending project developments to allow a reasonable forecast of projected water demand.

Policy-8-P-5: Develop alternative sources of water to supplement imported supply.

Policy-8-P-6: The City shall utilize the Water Demand and Supply Analysis Report, June 2006 and any amendments thereto, for monitoring, assessing and improving the City's municipal water supply.

Policy-8-P-9: Provide tertiary recycled water for irrigation of parks, playfields, schools, golf courses and other landscape areas to reduce potable water demand.

Policy-8-P-10: The City may require the use of recycled water through the City development review process.

A. New development may be required to install a separate recycled water system as deemed necessary and appropriate by the City to offset potable demand.

Policy-8-P-18: Reduce potable water demand through conservation measures.

Policy-8-P-20: Manage groundwater as a valuable and limited shared resource by protecting potential groundwater recharge areas and stream sides from urban encroachment within the Petaluma watershed.

A. Control construction of impervious surfaces in groundwater recharge areas. Potential recharge area protection measures at sites in groundwater recharge areas include, but are not limited to:

- Restrict coverage by impervious materials;

- Limit building or parking footprints;
- Require construction of percolation ponds on site;
- Require surface drainage swales.

Policy-8-P-22: Invest in the maintenance, repair and replacement of the water utility infrastructure.

City of Petaluma Ordinance 2562

The City of Petaluma Ordinance 2562, which came in effect February 4, 1026, repealed and replaced §§ 15.17.020 and 15.17.050 of the City of Petaluma Municipal Code and repeals Ch. 15.18, water conservation regulations. The Ordinance updates the Petaluma Municipal Code to comply with state water efficient landscape requirements and to remove redundancy with the City's Water Shortage Contingency Plan.

Sonoma Marin Saving Partnership

The Sonoma-Marin Saving Water Partnership represents 12 water utilities in Sonoma and Marin counties that have joined together to provide regional solutions for water use efficiency. The utilities include the cities of Santa Rosa, Rohnert Park, Petaluma, Sonoma, Cotati and Healdsburg; North Marin, Valley of the Moon and Marin Municipal Water Districts; Town of Windsor, and California American Water - Larkfeld and Sonoma Water (Partners). Each of the Partners have water conservation programs that can assist customers in reducing their water use. The Partnership was formed to identify and recommend implementation of water use efficiency projects, and maximize the cost effectiveness of water-use efficiency programs in the region.

4.14.4 IMPACTS AND MITIGATION MEASURES

4.14.4.1 Significance Criteria

The impact of the proposed project on utilities and service systems would be considered significant if it would exceed the following standards of significance, in accordance with Appendix G of the *State CEQA Guidelines*:

- require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects;
- have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years;

- result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- 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; or
- fail to comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

4.14.4.2 Methodology

Project impacts are evaluated according to the above standards of significance by utilizing information on existing utility and service systems infrastructure provided by the City of Petaluma General Plan 2025, the City of Petaluma 2015 UWMP, the SCWA 2015 UWMP, and the RLRC. The project's effect on the wastewater conveyance and wastewater treatment plant was evaluated by using the information regarding the Ellis Creek WRF.

Potential impacts to the RLRC were evaluated by calculating the amount of solid waste that would be generated by the proposed project, comparing the volumes to the existing remaining capacity of the landfill, and determining whether there would be enough capacity to serve the project. This RDEIR evaluates the amount of solid waste that would be generated by the proposed project under existing conditions.

4.14.4.3 Project Impacts and Mitigation Measures

Impact UTL-1: Development of the proposed project would not result in the relocation or construction of new or expanded water supply entitlements and would not require expansion of the water delivery system. (*Less than Significant*)

An analysis of the estimated water demand of the proposed project was conducted to determine if it would exceed water supply planned for the site under the City's 2015 UWMP. As shown in **Table 4.14-1, Estimated Project Water Demand,** the proposed 28 single-family homes would require a water supply of approximately 4 afy. Associated residences landscaping would require a water supply of 3.9 afy. For the Putnam Park Extension Project component, native plantings would require irrigation for an establishment period of three to five years, which would have a water demand of approximately 40,000 gallons per year. Irrigation would be required for plantings around the playground, parking lots, and barn center, which would have a permanent water demand of approximately 30,000 gallons per year. Total water demand for the proposed project would be approximately 8.1 afy at full buildout, as shown in **Table 4.14-1**

Table 4.14-1
Estimated Project Water Demand

Land Use	Generation Factors[1]	Water Demand (gpd)	Water Demand (afy)
Davidon (28-lot) Residential Project Component	130 gphd[2]	3,640	4.0
Landscaping	1.9 acre-feet per year for 1 acre[4]	3,475[5]	3.9
Putnam Park Extension Project Component (Permanent Irrigation)	30 kgal/year	82	0.1
Putnam Park Extension Project Component (Temporary Irrigation)[3]	40 kgal/year	110	0.1
Total Demand		**7,307**	**8.1**

Source: Impact Sciences, 2019

[1] *Factors used from Analysis of Water Use in New Single-Family Homes prepared by Aquacraft (Aquacraft 2011).*

[2] *Generation factor for "Standard New Home Efficiency"*

[3] *Water demand for temporary establishment irrigation would be approximately 40,000 gallons per year needed for native plantings for an establishment period of three to five years*

[4] *Assumptions to calculate Estimated Total Water Use (ETWU) are water need of 25 percent for each of the following type of landscape: 1)very low water use; 2) lower water use; 3) moderate water use; and 4) high water use.*

[5] *Assumed landscaped area of the 28 residential lots is 88,200 square feet.*

Gallons per day (GPD)
Gallons per household per day (gphd)
Acre-feet per year (AFY)

Water demand for the proposed project would not exceed the water supply planned for the site, and the project's water demand is accounted for in the City's 2015 UWMP.

As discussed above, the City of Petaluma 2015 UWMP concluded that under normal and multiple-dry year scenarios, sufficient water supplies would be available to serve the city through 2040, including the proposed project. However, during the single-dry year, the SCWA would need to reduce its diversions from the Russian River by 30 percent. This reduction in diversion would directly impact the City of Petaluma's supply of water. According to the 2015 UWMP, to address the reduced supply, the City will need to increase the production of local water supplies and water conservation efforts. Enactment of the City's water contingency plan will most likely be required, depending on the amount of reduction in consumption required and the amount of water that can be supplied by the City's groundwater sources. Similar to other residents in the City, the residents of the Davidon (28-Lot) Residential Project component would be subject to water conservation efforts during single-dry years, as needed. In addition, the existing water wells on the project site could be used for temporary and permanent irrigation demand of the Putnam Park Extension Project component plantings within the Maximum Applied Water Allowance

(MAWA). Therefore, the proposed project would not result in the need for expanded water supply entitlements. The impact related to water supply would be less than significant.

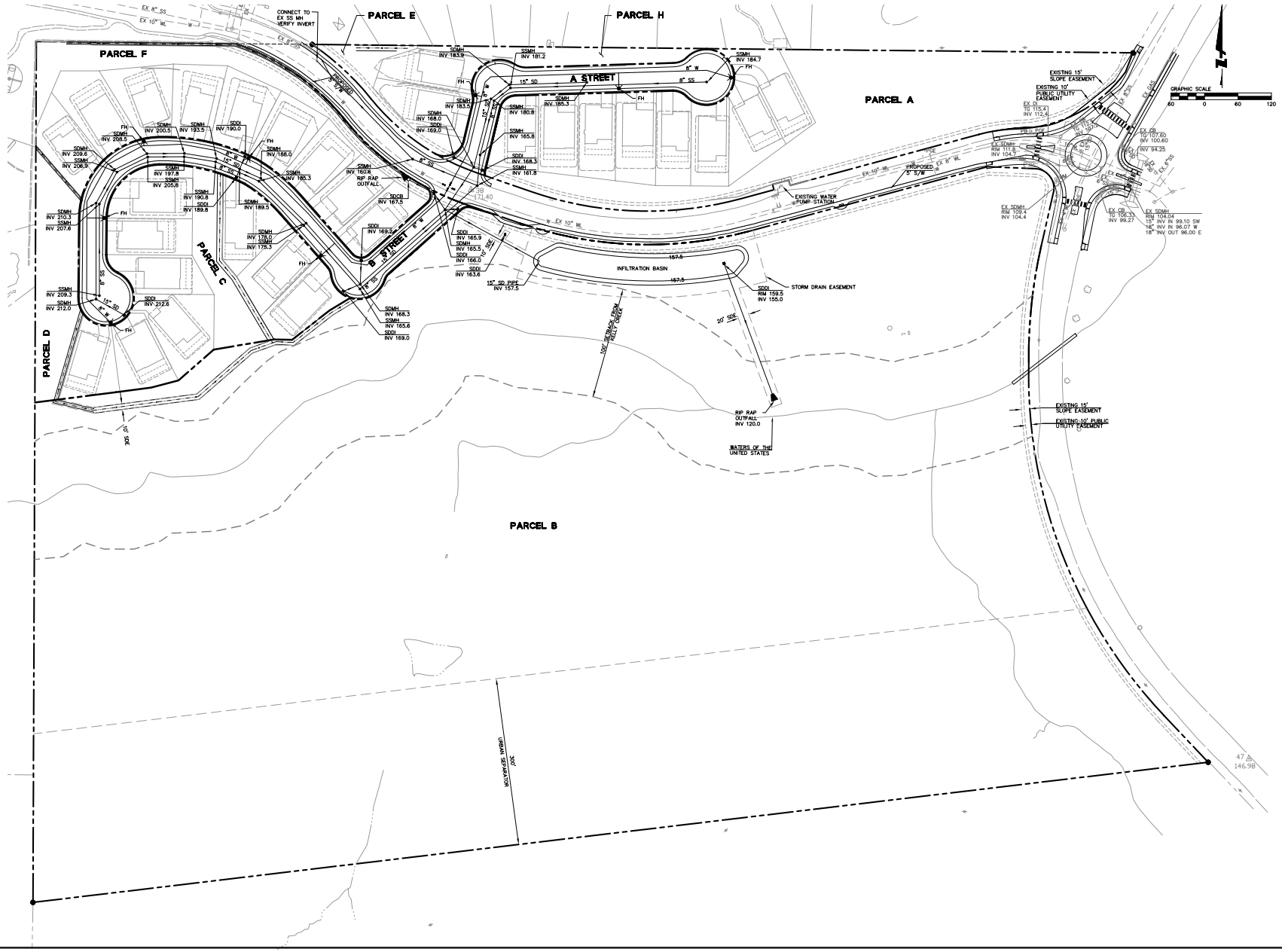
Potable water service would be provided to the site by the existing and proposed water infrastructure system as shown in **Figure 4.14-1, Utility Plan**. The on-site water infrastructure system improvements would consist of 8-inch water lines proposed to be constructed within the project site to serve the residences. Water infrastructure of the Putnam Park Extension Project component would include a connection to a stub out located near the service vehicle entrance to the barn center along D Street. The proposed project would not require expansion of the SCWA's water delivery system. Therefore, impacts would be less than significant.

Mitigation Measures: No mitigation measures are required.

Impact UTL-2: **Development of the proposed project would not require the relocation or construction of new or expanded wastewater treatment facilities. (*Less than Significant*)**

An analysis of the proposed project was conducted to estimate wastewater flows and impacts related to wastewater treatment capacity. The analysis below addresses wastewater generated by the Davidon (28-Lot) Residential Project component. The two green flush restrooms that would be installed near the playground area, as part of the Putnam Park Extension Project component, would not be connected to the sewer system. Wastewater from the green flush restrooms would be stored in a sealed sewage vault below ground that would be periodically pumped by a pump truck.

Wastewater generation rates were calculated assuming a 90 percent return of potable water into the wastewater system. **Table 4.14-2**, **Estimated Project Average Dry Weather Wastewater Generation**, summarizes the estimated proposed project wastewater generation calculations. Average dry weather wastewater flows generated by the proposed project would total approximately 3,276 gallons per day (gpd).



SOURCE: BKF Engineering, 2019

FIGURE **4.14-1**

Utility Plan

IMPACT SCIENCES

Table 4.14-2
Estimated Project Average Dry Weather Wastewater Generation

Land Use	Generation Factors[1, 2]	Wastewater (gpd)	Wastewater (gpm)
28 Single Family Homes	117 gpd	3,276	2.3

Source: Impact Sciences, 2019
[1] *Aquacraft 2011*
[2] *Assumes a 90 percent return of potable water into the wastewater system.*

Currently, the WRF treats an average of 4.7 mgd and has a capacity of 6.7 mgd available to serve future growth. The proposed project would add approximately 3,276 gallons per day or 0.003 mgd, increasing the average volume of wastewater conveyed to the WRF by 0.1 percent. There would be adequate capacity to serve the project and an expansion of the WRF would not be required. The proposed project would have a less-than-significant impact related to wastewater treatment capacity.

Mitigation Measures: No mitigation measures are required.

Impact UTL-3: **Development of the proposed project would require the construction of new or expanded wastewater conveyance systems. The construction of new or expanded wastewater conveyance systems would result in significant environmental effects. (*Potentially Significant*; *Less than Significant with Mitigation*)**

Wastewater generated within the project site would be collected through an on-site collection system and discharged into the existing wastewater mains in D Street or Windsor Drive depending on whichever is closer for conveyance to the WRF (see **Figure 3.0-7**). However, under current conditions, the D Street sewer between Grossland Way and the manhole west of 10th Street does not have capacity to accommodate the flows from the proposed project. The City has determined that the sewer main would need to be upsized to accommodate the project's wastewater flows. To ensure that this improvement is built by the project proponent, **Mitigation Measures UTL-3a and UTIL-3b** are set forth below to reduce this impact to a less-than-significant level.

With respect to environmental impacts associated with the upsizing of the sewer main, construction activity would take place within the D Street right-of-way, in an area that is already disturbed and unlikely to contain any sensitive resources. Nonetheless, the construction of the sewer main project could result in air pollutant emissions, noise and vibration, and inadvertent impacts to previously unknown cultural

resources that might be present. Mitigation measures are set forth in this RDEIR to avoid or minimize air quality impacts, cultural resource impacts, and noise and vibration impacts; these measures would be applicable to the sewer main upgrade project.

Mitigation Measures:

UTL-3a Prior to issuance of building permits, the project shall be required to upsize the D Street sewer between Grossland Way to the manhole west of 10th Street, subject to the review and approval by the City Public Works and Utilities Department.

UTL-3b **Mitigation Measure AIR-2, Mitigation Measures CUL-2a** through **2c, Mitigation Measure CUL-3,** and **Mitigation Measure NOISE-1 and NOISE-2a** shall be implemented in conjunction with the sewer main upgrade project.

Significance after Mitigation: Implementation of **Mitigation Measures UTL-3a and UTL-3b** would reduce the proposed project's impact related to wastewater infrastructure to a less-than-significant level.

Impact UTL-4: **Development of the proposed project would require the construction of new storm water drainage facilities on site. The construction of new storm water drainage facilities could result in significant environmental effects. (*Potentially Significant; Less than Significant with Mitigation*)**

The project site is located in the 360-acre Kelly Creek drainage basin. As described in **Section 4.7, Hydrology and Water Quality**, the majority of the site drains to Kelly Creek with a small portion of the project site north of Windsor Drive drains directly to the D Street storm drain system which discharges to Kelly Creek downstream of D Street storm drain. Another small portion at the northwest of the project site drains to Windsor Drive and flows west to enter the existing Victoria subdivision storm drain that ultimately discharges to Kelly Creek at Sunnyslope Avenue.

The proposed project would construct up to three stormwater outfalls along Kelly Creek (with the third outfall along the D Street tributary in the case of an installation of a bio-treatment facility associated with the main parking lot, if paved). As presented in **Section 4.7, Hydrology and Water Quality**, discharge into Kelly Creek during a 100- and 10-year event would be similar to predevelopment conditions with the installation of the proposed detention facility south of Windsor Drive. The analysis identified **Mitigation Measure HYD-1c** to control runoff from a 2-year storm event, by developing stormwater quality treatment measures (i.e., swales) once final project designs are completed. In addition, the analysis identified

Mitigation Measure HYD-4a through 4c to ensure that final detention design shows appropriate controls have been included to ensure that the post-project 10- and 100-year peak flows will not exceed pre-project peaks; that maintenance of all detention facilities will be provided as necessary to continuously provide the required volume storage in a 10-year storm and in a 100-year storm; and any release of runoff temporarily detained on-site does not contribute to an increase in peak flood periods on the Petaluma River.

The environmental effects from the construction of on-site storm water drainage facilities are evaluated throughout this RDEIR, and to the extent that there would be significant impacts on biological resources, cultural resources, air quality and noise from their construction, those impacts would be reduced to less than significant levels with the mitigation measures set forth in this RDEIR. As discussed in **Section 4.7, Hydrology and Water Quality**, no off-site storm water drainage improvements would be required. The impact related to storm water facilities would be less than significant.

Significance after Mitigation: Implementation of **Mitigation Measures HYD-1c and HYD-4a** through **4c** would reduce the proposed project's impact related to wastewater infrastructure to a less-than-significant level.

Impact UTL-5: **The proposed project would comply with all applicable federal, State, and local statutes and regulations related to solid waste and would not 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. (*Less than Significant*)**

State law requires a 50 percent diversion of solid waste from landfills. As noted above, the City of Petaluma has been meeting the 50 percent waste diversion goal. In February 2020, the City of Petaluma diverted approximately 50 percent of its solid waste (Recology 2020). The City is committed to continuing to reduce waste by implementing recycling, composting, and waste minimization programs. The General Plan EIR indicated that the City of Petaluma would achieve a minimum of 70 percent diversion rate by 2015 (City of Petaluma 2006). In addition, the SCWMA has a regional commitment of achieving zero waste by 2030, diverting 90 percent of all material from landfills (SCWMA 2019). Similar to other City's residents, the residents of the proposed project would participate in the programs set up by the City and would divert solid waste as required by the City. Therefore, the proposed project would not conflict with federal, state, or local statutes and regulations and would have a less-than-significant impact.

As shown in **Table 4.14-3**, **Estimated Project Solid Waste Generation**, the occupancy and operation of the proposed project would generate approximately 0.17 tons of solid waste per day (tons/day). If the City

diversion rate of 50 percent is conservatively applied, the proposed project would generate a maximum of 0.08 tons/day.

Table 4.14-3
Estimated Project Solid Waste Generation

Land Use	Generation Factor[1]	Solid Waste Generation (tons/day)
28 Single Family Homes	12.23 lb/hh/day	0.17

Note:
lb = pounds
hh = household
sf = square foot
[1] Generation factors from CalRecycle 2006
http://www.calrecycle.ca.gov/wastechar/wastegenrates/Residential.htm

The City of Petaluma, including the project site, disposes solid waste at the RLRC. The RLRC has a permit to accept a maximum of 1,390 tons of solid waste per day and a remaining disposal capacity as of March 30, 2019, of about 5.9 million cubic yards (McCutcheon 2020). The proposed project would generate approximately 0.17 tons/day of waste which constitutes approximately 0.02 percent of the daily capacity permitted at the RLRC. The solid waste produced on the site is a small amount of solid waste compared to the daily capacity permitted. Furthermore, the landfill has permitted capacity through 2036. Therefore, the proposed project would be served by a landfill with sufficient permitted capacity to accommodate project solid waste disposal needs. The impact related to landfill capacity would be less than significant.

Mitigation Measures: No mitigation measures are required.

Impact UTL-6 **Development of the proposed project would not result in the relocation or construction of new or expanded electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects.** ***(Less than Significant)***

Electric Power and Natural Gas

As demonstrated in **Section 4.5, Energy**, the project would result in a demand of approximately 723,371 thousand British Thermal Units per year (kBtu/year) of natural gas. According to United States Energy Information Administration, in 2017 the State of California consumed approximately 2,188.77 trillion Btu.

Therefore, the proposed project's natural gas demand would represent approximately 0.0003% of the state's total consumption.

In addition, the project would demand up to 242,463-kilowatt hour per year (kWh/year), or 0.24 GWh/year, of electricity. According to the California Energy Commission (CEC), California produced a total of 285,488 GWh of electricity in 2018. As a result, the project would represent less than 0.000001% of the total electricity produced within the state.

Furthermore, the proposed project is consistent with planning and growth projections for the City of Petaluma. The electrical loads and natural gas demand associated with the proposed project are within the parameters of projected load growth in the City, and PG&E would be able to meet the demand in this area. Sonoma Clean Power (SCP), which serves the project area, already utilizes PG&E wiring and infrastructure to deliver energy from renewable sources. As the project site is within the service area for SCP, energy for the future residents would be through either SCP's CleanStart service or Evergreen service. PG&E would still deliver the electricity through their existing power lines and infrastructure. . Only minor modifications to the on-site distribution system would be required to connect the proposed project to the existing off-site electrical system. Given the small fraction that the project's demand would constitute with respect to the total statewide demand, the proposed project would not require the construction of new power generation facilities. Therefore, the project would not result in the relocation or construction of new or expanded electric power or natural gas facilities. The impact would be less than significant.

Telecommunications

Telecommunication services to the project site would be provided by a regional provider. Development of the project site would create an increased demand for cable television and telephone services. Operation, maintenance, and capital improvement costs would be funded through developer fees and future customer billing. In addition, the telecommunications companies would be given the opportunity to review and comment on any proposed development requiring new service. Telecommunication providers regularly construct cell towers to provide coverage for the continuously growing demand. The addition of the Davidon (28-Lot) Residential Project component and Putnam Park Extension Project component would be consistent with typical growth patterns and developments. Therefore, the proposed project's impact related to the expansion of telecommunication facilities would less than significant.

Mitigation Measures: No mitigation measures are required.

4.14.4.4 Regional Park Trail Impacts and Mitigation Measures

Environmental Setting

Currently, there are no utility or service systems serving the regional park trail site.

Impacts and Mitigation Measures

RPT Impact UTL-1: **Implementation of the proposed regional park trail project would not cause substantial adverse impacts requiring the construction or relocation of new or expanded water supply system; result in the construction or relocation of new wastewater treatment facilities or conveyance systems; or require relocation or construction of new or expanded stormwater drainage facilities. The proposed regional park trail project would comply with all regulations related to solid waste and would not 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. (*Less than Significant*)**

Water Supply and Delivery System

The proposed regional park trail project would not result in the need for new or expanded water supply entitlements or expansion of the water delivery system as no potable water would be needed for the operation of this trail. Given the limited acreage of ground disturbance (about 0.5 acre), a limited amount of water would be needed during trail construction for dust control. No impacts to water supply would occur.

Wastewater Conveyance and Treatment

The proposed regional park trail project would not result in the need for new or expanded wastewater facilities or conveyance systems. The proposed regional park trail project would not construct any public restrooms. Users of this trail would use the restrooms associated with the proposed Putnam Park Extension Project component, which are analyzed as part of the proposed Scott Ranch project.

Stormwater

As the proposed regional park trail project would be composed of compacted earth with gravel used only where needed to provide stability, this trail would not increase the amount of impervious surfaces. Stormwater drainage would not be affected and drainage facilities would not be required on site. Less-than-significant impacts related to stormwater would occur.

Solid Waste

No solid waste would be generated from development of the regional park trail project. Therefore, no impact would occur.

Mitigation Measures: No mitigation measures are required.

4.14.4.5 Cumulative Impacts and Mitigation Measures

The geographic area for the evaluation of cumulative impacts on utilities is the City of Petaluma because with the exception of electricity, natural gas, and telecommunications, all other utilities to the Scott Ranch project site would be provided by the City of Petaluma, and to the extent that there are cumulative impacts, they would occur within the city. The regional park trail project would not result in a demand for utilities and therefore would not contribute to any cumulative impacts.

Cumulative Impact UTL-1: **The proposed project and the regional park trail project, in conjunction with other past, present and reasonably foreseeable future development, would not result in a significant cumulative impact on utilities. (*Less than Significant*)**

The following analysis evaluates the significance of potential cumulative impacts of the proposed project on utilities in conjunction with the projects included in **Table 4.0-1**.

Water Supply

Other developments listed in **Table 4.0-1** could incrementally increase the demand for water supply. The City of Petaluma 2015 UWMP shows that there is adequate water supply through 2040 under average year and multiple dry year scenarios. Under the single-dry year scenario, the SCWA would reduce its diversion from the Russian River by 30 percent, which would affect the City of Petaluma's water supply. To satisfy the City's demand through 2040 with the reduced supply from SCWA, the City will need to increase the production of local water supplies, increase water conservation efforts, and enact the City's Water Shortage Contingency Plan. The proposed project would contribute to the cumulative water demand. However, the project is within projected growth of the City and the demand associated with the proposed project is a part of the projected demand analyzed in the 2015 UWMP. Furthermore, the City of Petaluma General Plan Water Resources Element projects that water supply (from all sources such as SCWA water, recycled water, water conservation, and groundwater) under buildout of the General Plan would be sufficient for future demand. Given the project site zoning and General Plan designation, the site could be developed with 27

to 110 single-family homes.[1] The project proposes 28 residential lots. Therefore, the project would be within the assumptions of the General Plan buildout and within projected cumulative demand under the General Plan. The regional park trail would have no impact on water supply. Therefore, the proposed project and regional park trail project's contribution to significant cumulative impacts relating to water supply would not be cumulatively considerable, and cumulative impacts would be less than significant.

Wastewater Conveyance and Treatment

Buildout of the General Plan will incrementally increase the demand on the capacity of the wastewater conveyance and treatment at the WRF. The average dry weather flows from the project would remain within the projected demand for treatment capacity at the WRF and would constitute 0.1 percent of the available treatment capacity. In addition, the proposed project would implement **Mitigation Measure UTL-3**, which requires upsizing the sewer between D Street and Grossland Way to the manhole west of 10th Street. The proposed regional park trail project would not result in the need for new or expanded wastewater facilities or conveyance systems and would not contribute to cumulative impacts associated with wastewater conveyance and treatment. Therefore, the proposed project and the regional park trail project contribution to significant cumulative impacts relating to wastewater conveyance and treatment would not be cumulatively considerable, and cumulative impacts would be less than significant.

Solid Waste

In February 2020, the City of Petaluma diverted approximately 50 percent of its solid waste (Recology 2020). Residents of the Davidon (28-Lot) Residential Project component would participate in the programs set up by the City and would divert solid waste as required by the City. Therefore, the proposed project would not conflict with federal, state, or local statutes and regulations. No solid waste would be generated from development of the regional park trail project. The cumulative projects listed in **Table 4.0-1** would be required to participate in the City's solid waste programs. Therefore, the proposed project, in combination with other cumulative projects, would have a less-than-significant cumulative impact related to exceeding local standards. In addition, the proposed project would generate approximately 0.17 tons/day of waste, which constitutes approximately 0.02 percent of the daily capacity permitted at the RLRC, which would not be a cumulatively considerable impact on the landfill capacity. Therefore, the proposed project and the regional park trail project would result in a less-than-significant impact related to solid waste.

Mitigation Measures: No mitigation measures are required.

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1 The net acreage of the site is 45.15 acres (excludes public or private rights-of-way, public open space and floodways, but does not exclude the Urban Separator per Policy 1-P-19). As such, the number of units allowed to be developed on the project site ranges between 27 and110 dwelling units.

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