4.16 UTILITIES AND SERVICE SYSTEMS

This section of the Environmental Impact Report (EIR) addresses the proposed project's potential impacts on certain utilities and services including water, wastewater, stormwater, and solid waste. The analysis in this section has been prepared in accordance with §15064.5 of the State CEQA Guidelines, which considers the potential impacts on water, wastewater, stormwater, and solid waste disposal resource. This section describes the demand and availability of these resources within the project study area, and the applicable regulations that govern those resources. The following analysis of the potential environmental impacts related to utilities and service systems is derived from the following sources and agencies. Modeling assumptions and output results for water and wastewater are included in Appendix K of this EIR.

- Propel Vallejo 2040 General Plan.
- Propel Vallejo General Plan 2040 and Sonoma Boulevard Specific Plan Draft EIR.
- Fairview at Northgate – Potable Water Demand Projections.
- Cooke Property Sewer Evaluation.
- Sanitary Sewer Capacity Calculations.
- Correspondence with service providers and agencies.

4.16.1 ENVIRONMENTAL SETTING

The proposed project is located within a suburban and urban environment in the City of Vallejo (City). The proposed project is bound on the north by Turner Parkway, to the east by Foothill Drive with a residential area, to the south by Sundance Apartments and Avery Greene Honda, and to the west by Admiral Callaghan Lane and I-80. Currently the proposed Project area encompasses approximately 51.3 acres of undeveloped vacant land.

Public utilities and service systems are generally provided by City Agencies including the City Water Department, The City of Vallejo Sanitation and Flood Control District, and the City Recycling and Solid Waste Division. Private business, such as Pacific Gas & Electric Company (PG&E), AT&T, Dish, and Comcast, provide services for natural gas and electricity and telecommunications services. Each service department and associated utility are discussed individually below.

Water

The City derives its water supply from five water rights and from four sources and treats the water at three treatment plants. The four sources include the Solano Project Water (Lake Berryessa), State Water Project (SWP)/Vallejo Permit Water [California (Sacramento) Bay Delta], Lakes Frey and Madigan, and Lake Curry (not currently accessible for water system supply). Vallejo's five water rights and the associated water entitlement are summarized below, and *Table 4.16-1: Purchased/Imported Water*

Supplies shows the volume of water from the three major sources. Total annual right or safe yield is 14,011 million gallons per year (MG/yr) or 42,998-acre-feet per year (af/yr).

- **Solano Project.** Solano Project Water is delivered from Lake Berryessa via the Putah South Canal to either Cordelia where it is pumped into Vallejo or the Travis WTP, or via Solano Irrigation District's distribution system to an intertie in Green Valley. The majority of Vallejo's Solano Project water entitlement is delivered to Fleming Hill WTP from the United States Bureau of Reclamation (USBR) terminal reservoir via the Cordelia reservoir. Entitlements from the Solano Project is 4,757 MG/yr or 14,598 af/yr.

- **State Water Project**. SWP water is diverted from the Sacramento-San Joaquin Delta and conveyed through the North Bay Aqueduct (NBA) and to the Cordelia Forebay, through the Cities of Cordelia and Jameson and to the Fleming Hill Water Treatment Plant (WTP). A portion of SWP water is diverted to supply Travis Air Force Base. The City executed a Water Contract for Water Supply from North Bay Aqueduct with Solano County Water Agency (SCWA). In the agreement, the City is allocated annual allotments of SWP water, commonly referred to as "Table A allotment." The City's Table A allotment was accelerated in 2009 to its ultimate amount of 1,825 million gallons per year (MG/yr) or 5,600 af/y starting in 2010. The City's current water contract with SCWA runs through 2035 with provisions for extensions. All member units to the SWP contract share in the same curtailment percentage as declared by the State of California for any given water year. The annual right may be exceeded in a given year due to available carryover from previous years.

- **Vallejo Permit Water**. Vallejo holds an Appropriative Water Rights License (No. 997848) with the State Water Resources Control Board (SWRCB), issued August 1966, pre-dating the construction of the SWP. This water supply is commonly referred to by the City as "Permit Water." Permit Water is pumped from Barker Slough and delivered through the NBA and is separate from the City's SWP Table A allotment. SCWA is the managing wholesaler for purchase of Permit Water. The license allows for a maximum diversion of 31.52 cfs or about 7,429 MG/yr. Conveyance of Vallejo Permit Water through the NBA is limited by this contract to a maximum of 5,633 MG/yr. Since the limitation is not based on a physical capacity constraint of the NBA, an additional 1,790 MG could be available upon execution of an amendment to the existing agreement between DWR and SCWA.

- **Lakes Frey and Madigan.** Lakes Frey and Madigan are located in northern Solano County. The City owns both lakes and the surrounding land. Water flows from the Lakes via a City gravity pipe system to the Green Valley WTP. Safe yield from Lake Madigan and Frey is 196 MG/yr. The City has chosen to reduce this amount by one third to 130 MG/yr due to the lack of alternative water sources for the Lakes system. Water from Lakes Frey and Madigan are supply sources for the Lakes customers only and not included to City supply.

- **Lake Curry.** Lake Curry is the largest lake in the Vallejo Lakes System and is located in southern Napa County. The City owns the lake and surrounding land. Lake Curry has a storage capacity of 3,487 MG, and has a safe yield of 1,222 MG/yr. However, Lake Curry is not currently being used or planned to be used in the near future as a drinking water source, although lake water is being used for voluntary in-stream flow into Suisun Creek.

Table 4.16-1: Purchased/Imported Water Supplies

Water Supply Source	Volume (MG)	
	2015 Supply	Total Annual Right or Safe Yield
State Water Project	2,092	1,825
Vallejo Permit Water	1,261	7,429
Solano Water Project	2,667	4,757
Total	**6,020**	**14,011**
Source: UWMP, 2015.		

The City Urban Water Management Plan (UWMP), provided details on the 2015 Citywide demand for potable and raw water accounting for single-family, multi-family, commercial, agriculture, other uses, as well as transfers/sales/exchanges, and water losses throughout the system. The UWMP also projected demand for potable and raw water for these uses through the year 2040. *Table 4.16-2: City of Vallejo Water Demand and Projected Water Demand*, shows these uses and associated demands.

Table 4.16-2: City of Vallejo Water Demand and Projected Water Demand

Use Type	Yearly Water Use (MG)					
	2015	2020	2025	2030	2035	2040
Single-Family	2,166	2,591	2,515	2,428	2,365	2,281
Multi-Family	574	610	602	593	590	590
Commercial	727	835	806	770	738	707
Agricultural Irrigation	410	584	571	547	518	485
Other	126	123	126	128	130	134
Sales/Transfers/Exchanges to other Agencies	883	2,599	2,783	2,738	2,783	2,783
Losses	963	950	711	496	483	466
Total (MG)	**5,849**	**8,291**	**8,114**	**7,746**	**7,608**	**7,447**
Source: 2015 City of Vallejo Urban Water Management Plan.						

The City Urban Water Management Plan (UWMP) provides the projected water supply from 2020 to 2040. The supply is derived from purchased or imported water and surface water from the State water project, Vallejo permit water, the Solano project, or Lake Frey and Lake Madigan. From 2020 to 2040 the project supply is consistent year over year. *Table 4.16-3: City of Vallejo Project Water Supply 2020-2040 (MG)*, provides these volumes.

Table 4.16-3: City of Vallejo Project Water Supply 2020-2040 (MG)

Water Supply	State Water Project	Years	
		2020-2040	
		Reasonably Available Volume	Total Right or Safe Yield
Purchased or Imported Water	Permit Water	1,466	1,825
Purchased or Imported Water	Solano Project	5,633	5,633
	Total:	**7,099**	**7,508**

Source: UWMP, 2015.
Abbreviation: MG – Million Gallons.

Wastewater

Wastewater services for the City are provided by Vallejo Flood and Wastewater District (VFWD). The service area of the VFWD includes the City limits and the unincorporated lands within the City Sphere of Influence (SOI). VFWD is an independent special district that was formed in 1952 to collect and treat wastewater and provide stormwater and flood control services to the Vallejo community. In order to meet the demands on the wastewater treatment plant and storm drain system as the City grows, the VFWD imposes sewer and storm drain user fees. The District Code includes General Provisions under Title 1, provisions for the Sanitary Sewer System under Title 4, and provisions for Sewer Laterals under Title 5. Sanitary Sewer Connection Fees are found under Chapter 4.04; Sanitary Sewer User Fees are in Chapter 4.08; and Non-Domestic Sewer Use Regulations are in Chapter 4.12.

The VFWD provides service for more than 120,000 residents in its service area. Wastewater is treated at the Ryder Street treatment plant before it is discharged after treatment to San Francisco Bay. The District owns 436 miles of sewer main and 226 miles of stormwater main and channel, operates 36 wastewater pump stations together with nine stormwater pump stations, operates a secondary treatment wastewater treatment plant and manages biosolids disposal through District-owned land on Tubbs Island in Sonoma County. On an average day, the VFWD treats approximately 10 million gallons per day (mgd) of wastewater conducted through the sewer network from residential, commercial, and other uses that generates sewage requiring treatment.

The Vallejo Waste Water Treatment Plan (WWTP) has a dry weather capacity of 15.5 mgd and a wet weather capacity of 60 mgd. As of 2015 VFWD's dry weather flow was approximately 10 mgd and has been decreasing due to low flow fixtures and a reduction of inflow and infiltration into the collection system. Treatment consists of conventional secondary treatment with trickling filters, short-term aeration, chlorination, and dechlorination before treated effluent is discharged to the Carquinez Strait (City of Vallejo, 2015, 2019).

Stormwater Drainage

Stormwater drainage facilities with the City are provided by the VFWD. The VFWD provides flood control protection services for Vallejo and operates and maintains over 250 miles of storm drainage piping, more than 10,000 catch basins, and nine stormwater pump stations within the city. The VFWD also protects land and residents from flooding damage through its storm drain system. Several of the storm drain systems and basins drain into Lake Dalwigk, which serves as a valuable marsh habitat for birds, amphibians, and other wildlife. Stormwater on the project site generally drains to the northwest to the existing culvert system under Turner Parkway and it is then conducted downstream to the outflow to the San Francisco Bay. Stormwater from the southerly portion of the project site and adjacent areas flows into the existing drainage system that parallels the southern project boundary. Stormwater from here is conducted through a culvert under Admiral Callaghan Lane and I-80 and eventual outfall to the San Francisco Bay.

Solid Waste

Solid Waste services in the City are provided by Recology, and service within the City is mandatory. Recology also offers recycling service for multi-family units, debris box service, and garbage and recycling collection for commercial businesses. Recology provides residential curbside pickup that includes household hazardous waste, yard waste, recycling, waste, and used oil and filters. Commercial business and multi-tenant dwelling services also are provided. These services include pickup of cardboard, recycling, cooking oil and food, and paper pickups. Lastly, Recology also provides construction and demolition services (Recology, 2019), which would handle waste construction materials such as concrete, wood, and other materials.

In 2017, Vallejo's per capita solid waste disposal rate for residents was 2.25 pounds per day (ppd);[4] which is 3.75 ppd better than the state average of 6ppd (Calrecycle, 2016). CalRecycle reports that in 2017 a total of 99,004 tons of solid waste from Vallejo was disposed at 17 different landfills (Calrecycle, 2017). Nearly 99 percent (98.9 percent, 97,991 tons) of Vallejo's solid waste in 2017 went to two of those facilities: Potrero Hills Landfill (94,753 tons) and Recology Hay Landfill (3,238 tons) (Calrecycle, 2017).

Recology Hay Landfill

The Recology Hay Landfill is located in Vacaville, California. It has a permitted throughput capacity of 2,400 tons per day. Its remaining permitted capacity is 30,433,000 cubic yards. It has an estimated "cease operation date" of January 1, 2077 (Calrecycle, 2019a).

Potrero Hills Landfill

The Potrero Hills Landfill is located in Suisun City, California. It has a permitted throughput capacity of 4,330 tons per day. Its remaining permitted capacity is 13,872,000 cubic yards. It has an estimated "cease operation date" of February 14, 2048 (Calrecycle, 2019b).

Electricity and Natural Gas

Electricity and natural gas is provided by Pacific Gas & Electric Company (PG&E). PG&E maintains utility lines within and adjacent to the project site. There are existing overhead power lines on the westerly side of Admiral Callaghan Lane. Electrical utilities also are undergrounded along the southern right-of-way of Turner Parkway. Underground natural gas lines pipelines also are located within the project site and nearby areas. The existing gas line on the project site is to be relocated. The pipelines, as well as smaller distribution lines, provide service to the adjacent and surrounding uses.

Telecommunications

Cable and Internet Services within the City are provided by AT&T, Direct TV, Dish, and Comcast. All four service providers offer service within the City of Vallejo and more specifically to properties adjacent to the project site. Additionally, the City has an extensive 40 Gigabit fiber optic network across the City – known as VallejoNET - and has partnered with Inyo Networks, a competitive local exchange carrier (CLEC), who manages, operates and sales retail broadband internet service to business across the City.

4.16.2 REGULATORY SETTING

FEDERAL

Federal Safe Drinking Water Act

The Safe Drinking Water Act, the principal federal law intended to ensure safe drinking water to the public, was enacted in 1974 and has been amended several times since it came into law. The Act authorizes the U.S. Environmental Protection Agency (EPA) to set national standards for drinking water, called the National Primary Drinking Water Regulations, to protect against both naturally occurring and man-made contaminants. These standards set enforceable maximum contaminant levels in drinking water and require all water providers in the United States to treat water to remove contaminants, except for private wells serving fewer than 25 people. In California, the State Water Resources Control Board conducts most enforcement activities. If a water system does not meet standards, it is the water supplier's responsibility to notify its customers.

STATE REGULATIONS

California Porter-Cologne Water Quality Control Act

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

California Urban Water Management Planning Act

Through the Urban Water Management Planning Act of 1983, the California Water Code requires all urban water suppliers within California to prepare and adopt an Urban Water Management Plan (UWMP) and update it every five years. This requirement applies to all suppliers providing water to more than 3,000 customers or supplying more than 3,000 acre-feet1 of water annually. The Act is intended to support conservation and efficient use of urban water supplies. The Act requires that total project water use be compared to water supply sources over the next 20 years in five-year increments, that planning occur for single and multiple dry water years, and that plans include a water recycling analysis that incorporates a description of the wastewater collection and treatment system within the agency's service area along with current and potential recycled water uses.

Sustainable Groundwater Management Act (2014)

The Sustainable Groundwater Management Act of 2014 (SGMA) consists of three legislative bills, Senate Bill (SB) 1168 (Pavley), AB 1739 (Dickinson), and SB 1319 (Pavley). The legislation provides a framework for long-term sustainable groundwater management across California. Under the roadmap laid out by the legislation, local and regional authorities in medium and high priority groundwater basins will form Groundwater Sustainability Agencies that oversee the preparation and implementation of a local Groundwater Sustainability Plan. Local stakeholders have until 2017 to organize themselves in Groundwater Sustainability Agencies. Groundwater Sustainability Plans will have to be in place and implementation will begin sometime between 2020 and 2022. Groundwater Sustainability Agencies will have until 2040 to achieve groundwater sustainability.

California Senate Bills 610 and 221

SB 610 and SB 221 amended State law to (1) ensure better coordination between local water supply and land use decisions and (2) confirm that there is an adequate water supply for new development. Both statutes require City and County decision-makers to receive detailed information regarding water availability prior to approval of large development projects. SB 610 requires the preparation of a Water Supply Assessment (WSA) for certain types of projects subject to the California Environmental Quality Act (CEQA). Projects that would be required to prepare a WSA include, but are not limited to, residential development of more than 500 dwelling units and shopping center or business establishments employing more than 1,000 persons or having more than 500,000 square feet of floor area.

Water Conservation in Landscaping Act of 2006 (AB 1881)

The Water Conservation in Landscaping Act of 2006 (AB 1881) required the State Department of Water Resources to update the State Model Water Efficient Landscape Ordinance (WELO) by 2009. The State's model ordinance was issued on October 8, 2009. Under AB 1881, Cities and Counties are required to adopt a State updated model landscape water conservation ordinance by January 31, 2010, or to adopt a different ordinance that is at least as effective in conserving water as the updated Model Ordinance (MO). In accordance with AB 1881, Vallejo adopted its Landscape Ordinance in Chapter 16.71 of the Municipal Code, Water Efficient Landscape Requirements.

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

To improve water savings in the landscaping sector, the California Department of Water Resources (DWR), updated the Model Ordinance in 2015 (in accordance with Executive Order B-29-15). The Model Ordinance promotes efficient landscapes in new developments and retrofitted landscapes. The Executive Order calls for revising the Model Ordinance to increase water efficiency standards for new and retrofitted landscapes through more efficient irrigation systems, greywater usage, and on-site stormwater capture, and by limiting the portion of landscapes that can be covered in turf. New development projects that include landscape areas of 500 square feet or more are subject to the Ordinance. This applies to residential, commercial, industrial, and institutional projects that require a permit, plan check, or design review.

Local agencies had until December 1, 2015 to adopt the Ordinance or adopt their own ordinance, which must meet or exceed effectiveness. The Vallejo City Council adopted an ordinance on February 9, 2016, amending Municipal Code 16.71, Water Efficient Landscape Ordinance, to incorporate updates consistent with the State Model Water Efficient Landscape Ordinance.

State Water Resources Control Board

On May 2, 2006 the SWRCB adopted a General Waste Discharge Requirement (Order No. 2006-0003) for all publicly owned sanitary sewer collection systems in California with more than one mile of sewer pipe. The order provides a consistent statewide approach to reducing sanitary sewer overflows (SSOs) by requiring public sewer system operators to take all feasible steps to control the volume of waste discharged here or elsewhere into the system, to prevent sanitary sewer waste from entering the storm sewer system, and to develop a Sanitary Sewer Master Plan. The General Waste Discharge Requirement also requires that storm sewer overflows be reported to the SWRCB using an online reporting system.

The SWRCB has delegated authority to nine RWQCBs to enforce these requirements within their region. The San Francisco Bay RWQCB issues and enforces NPDES permits in Vallejo. NPDES permits allow the RWQCB to regulate where and how the waste is disposed, including the discharge volume and effluent limits of the waste and the monitoring and reporting responsibilities of the discharger. The RWQCB is also charged with conducting inspections of permitted discharges and monitoring permit compliance.

California Integrated Waste Management Act

California's Integrated Waste Management Act of 1989, AB 939 (Sher), subsequently amended by SB 1016 (Wiggins), set a requirement for cities and counties throughout the State to divert 50 percent of all solid waste from landfills by January 1, 2000 though source reduction, recycling, and composting. To help achieve this, the Act required that each city and county prepare and submit a Source Reduction and Recycling Element. AB 939 also established the goal for all California counties to provide at least 15 years of on-going landfill capacity.

In 2007, SB 1016 amended AB 939 to establish a per capita disposal measurement system. The per capita disposal measurement system is based on two factors: a jurisdiction's reported total disposal of solid

waste divided by a jurisdiction's population. The California Integrated Waste Management Board was replaced by the California Department of Resources Recycling and Recovery (CalRecycle) in 2010. CalRecycle sets a target per capita disposal rate for each jurisdiction. Each jurisdiction must submit an annual report to CalRecycle with an update of its progress in implementing diversion programs and its current per capita disposal rate. In 2014, the statewide residential per capita disposal rate was 4.5 pounds per resident per day, and the statewide employee per capita disposal rate was 10.6 pounds per employee per day.

Mandatory Commercial Recycling – AB 341

In 2011, AB 341 was passed that sets a State policy goal of not less than 75 percent of solid waste that is generated to be source reduced, recycled, or composted by the year 2020. CalRecycle was required to submit a report to the legislature by January 1, 2014 outlining the strategy that will be used to achieve this policy goal.

California Solid Waste Reuse and Recycling Access Act of 1991

The California Solid Waste Reuse and Recycling Access Act require areas in development projects to be set aside for collecting and loading recyclable materials. The Act required CalRecycle (formerly the California Integrated Waste Management Board) to develop a model ordinance for adoption by any local agency relating to adequate areas for collection and loading of recyclable materials as part of development projects. Local agencies are required to adopt the model, or an ordinance of their own, providing for adequate areas in development projects for the collection and loading of recyclable materials.

Mandatory Commercial Organics Recycling – AB 1826

In October of 2014 Governor Brown signed AB 1826 requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. This law also requires that on and after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units. Organic waste means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste. Greenhouse gas (GHG) emissions result from the decomposition of organic wastes in landfills. Mandatory recycling of organic waste is aimed at helping achieve California's aggressive recycling and GHG emission goals. The implementation schedule began in January 2016 and as of January 1, 2019, businesses that generate 4 cubic yards or more of commercial solid waste per week shall arrange for organic waste recycling services. In addition, future regulations include the following:

- Fall 2020: After receipt of the 2019 annual reports submitted on August 1, 2020, CalRecycle shall conduct its formal review of all jurisdictions.
- Summer/Fall 2021: If CalRecycle determines that the statewide disposal of organic waste in 2020 has not been reduced by 50 percent of the level of disposal during 2014, the organic recycling requirements on businesses will expand to cover businesses that generate two cubic yards or

more of commercial solid waste per week. Additionally, certain exemptions, previously discussed, may no longer be available if this target is not met.

LOCAL REGULATIONS

City of Vallejo Urban Water Management Plan (UWMP)

The City provides water delivery to over 3,000 services, therefore requiring the preparation and adoption of a UWMP. Therefore, in compliance with the Urban Water Management Planning Act, the City of Vallejo Public Works Department, Water Division – the water service retailer for Vallejo - adopted its 2015 UWMP in November 2016. The UWMP evaluates if the City's ability to meet future water demands of its customers and analyzes projected water supply and demand to address normal, single-dry, and multiple-dry year conditions. The UWMP was prepared as part of regional-wide planning efforts through the Solano County Water Agency (SCWA) and coordination with neighboring communities the Cities of Benicia, Dixon, Fairfield, Rio Vista, Suisun City, Vacaville and Vallejo; the Solano Irrigation and Maine Prairie Water Districts; and Reclamation District 208.

Propel Vallejo 2040 General Plan

The VGP provides guidance on development and patterns of future growth and also includes goals, policies, and actions that would help to reduce demands on utilities provide guidance for meeting the demands of future growth within the City. The following goals, policies, and actions regarding utilities and notably, water conservation from the General Plan would help ensure that the proposed project would be within existing utilities infrastructure service capacity and help minimize the need to construct expanded or new facilities:

Policy NBE-1.14:	Water Conservation. Promote water conservation through a range of proactive City efforts.
Action NBE-1.14A:	Continue the Community-wide Water Conservation Program, including free residential water use surveys and audits, and water-use efficiency education in local schools.
Action NBE-1.13B:	Continue to provide water customers with information on conservation techniques, services, devices, and rebates (including greywater use), including online and through in-person community outreach.
Action NBE-1.14C:	Update the Green Building Standards Code to require the use of low flow plumbing fixtures, low volume irrigation systems, and drought-tolerant plant palettes.
Action CP-1.15A	Require new development to incorporate site design, source control, and treatment measures to keep pollutants out of stormwater during construction and operational phases, consistent with City of Vallejo Municipal Ordinance.

Action CP-1.15B	Encourage new development to incorporate low impact development (LID) strategies, such as rain gardens, filter strips, swales, and other natural drainage strategies, to the greatest extent feasible, in order to reduce stormwater runoff levels, improve infiltration to replenish groundwater sources, reduce localized flooding, and reduce pollutants close to their source.
Action CP-1.15C	Consult with appropriate regional, State, and federal agencies to monitor water quality and address local sources of groundwater and soil contamination, including possible underground storage tanks, septic tanks, and industrial uses, as necessary, to achieve State and federal water quality standards.
Action CP-1.15D	Require new development to connect to the Vallejo Sanitation and Flood Control District sewer system for treatment of wastewater rather than septic systems, which are not allowed.
Action NBE-1.4A	Collaborate with GVRD, Vallejo Sanitation & Flood Control District (VSFCD), and other partners to evaluate creek conditions and restoration opportunities, and to develop policies covering setbacks from creeks, damage prevention, stewardship, nuisance abatement, public access, and other community and environmental concerns.
Action NBE-1.4C	Work with VSFCD and GVRD, as appropriate, to maintain Lake Chabot, Lake Dalwigk, and other detention basins for stormwater management and for public recreational use.

City of Vallejo Municipal Code

The City of Vallejo Municipal Code is a primary tool that shapes the form and character of physical development in Vallejo. The Municipal Code includes various directives pertaining to water supply and conservation issues. Most such directives are found in Title 11 – Water – which includes Subtitle I – Municipal Water System, and Subtitle II – Miscellaneous Water Regulations. In addition, the Municipal Code includes regulations pertaining to Solid Waste. Title 7, Public Health, Safety and Welfare and Title 12, and Buildings and Construction, include regulations relevant to solid waste resources. Selected chapters in the Municipal Code pertaining to utilities and services systems are listed below:

- Chapter 7.44 - Accumulation and Transportation. This Chapter describes the responsibilities of every owner, proprietor, manager, or other person having charge or control of any commercial/industrial premises or residential premises within the city with respect to solid waste.
- Chapter 7.48 - Collection. This Chapter describes responsibilities of the franchisee for collecting all solid waste, recyclables and green waste placed in compliance with this chapter from each residential, and/or, commercial/industrial business premises in accordance with a schedule which has been approved by the Public Works Director.

- Chapter 7.53 - Construction and Demolition Debris Recycling Ordinance. The purpose of Chapter 7.53 is to prescribe requirements designed to meet and further the goals of the California Integrated Waste Management Act of 1989, commonly referred to as AB 939 Chapter 7.06, Refuse and Garbage Collection Service Areas.
- Chapter 11.08 - Municipal Water System General Rules. The rules and regulations herein contained are adopted to govern the general operation of the Vallejo municipal water system to provide an efficient and economical water supply.
- Chapter 11.54 - Wasteful Water Use Prohibition Ordinance. This regulation mandates that it is unlawful for any customer to intentionally wastewater and prohibits 1) runoff from properties for more than fifteen minutes, 2) use of potable water to wash sidewalks, driveways, parking lots, cars, boats, or trailers without a hose with a shutoff nozzle, and 3) use of potable water for dust control where nonpotable or recycled water is available.
- Chapter 12.41 - Stormwater Management and Discharge Control. This regulation is intended to protect and enhance the water quality within Vallejo's watercourses, water bodies, and wetlands and carry out the conditions specified in the MRP that requires appropriate source control measures, site design measures, and stormwater treatment measures for new development and redevelopment projects within the city.
- Chapter 12.50 - Green Building Code. Chapter 12.50 adopts and incorporates by reference the California Green Building Code as amended and appearing in the 2013 California Building Standards Code, and all its appendices, California Code of Regulations Title 24, Part 11, except such portions as are deleted, modified or amended; as the city green building code.
- Chapter 16.71 - Water Efficient Landscaping Requirements–. This regulation meets the requirements of the State's WELO and requires submittal of a landscape documentation package for new or rehabilitated landscapes ranging in size from 1,500 to 5,000 square feet (depending on the project). The landscape documentation package must include a water-efficient landscape worksheet, soil management report, landscape design plan, irrigation design plan, and a grading design plan with the goal of minimizing water irrigation rates and maximizing water irrigation efficiency.
- Chapter 16.74 – Energy and Water Conservation Regulations. Section 16.74.030 - Water conservation guidelines, specifies all vegetation and landscaping required by the zoning regulations shall employ drought-resistant species.
- Action CP-1.15D - Require new development to connect to the Vallejo Sanitation and Flood Control District sewer system for treatment of wastewater rather than septic systems, which are not allowed.

Vallejo's Water Shortage Response Plan

The Water Shortage Contingency Plan for Vallejo was adopted on February 28, 2006 by Council Resolution No. 06-62 N.C.20.

The City employs a five-stage water-shortage response plan that is triggered at prescribed levels. Water shortage stages are monitored, reported and acted upon according to the plan set out in the reduction measuring mechanism for each stage. The five stages and corresponding percent reduction in water consumption are: Stage I – prudent water use; Stage II – up to 10 percent reduction; Stage III – up to 20 percent reduction; Stage IV – up to 35 percent reduction; and Stage V – 50 percent or more reduction. Each stage consists of specific prohibitions, regulations, fines, penalties and rate structure to encourage the appropriate level of water conservation.

In dry years, the City reduces its demand internally, by implementing system-wide efficiencies within the City's distribution system. This results in 1 percent, 2 percent, and 3 percent demand reductions in single dry year, second dry year, and third dry year sequences, respectively. The City achieves these demand reductions by reducing its operational use of water, such as by limiting or eliminating water line flushing, etc. These demand reductions occur before drought-response measures are implemented and required of the City's water customers.

4.16.3 STANDARDS OF SIGNIFICANCE

In accordance with State CEQA Guidelines, the effects of a project are evaluated to determine whether they would result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts that are identified. The criteria used to determine the significance of impacts may vary depending on the nature of the project. According to Appendix G of the State CEQA Guidelines, the proposed project would have a significant impact related to utilities and service systems, if it would:

a) Require or result in the relocation or construction of new or expanded water, or wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities or expansion of existing facilities, the construction or relocation of which could cause significant environmental effects?

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

d) 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?

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

4.16.4 PROJECT IMPACTS AND MITIGATION

IMPACT UT-1	***WOULD THE PROPOSED PROJECT, REQUIRE OR RESULT IN THE RELOCATION OR CONSTRUCTION OF NEW OR EXPANDED WATER, OR WASTEWATER TREATMENT OR STORM WATER DRAINAGE, ELECTRIC POWER, NATURAL GAS, OR TELECOMMUNICATIONS FACILITIES OR EXPANSION OF EXISTING FACILITIES, THE CONSTRUCTION OR RELOCATION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL EFFECTS?*** ***(LESS THAN SIGNIFICANT IMPACT)***

The proposed project site is surrounding by existing urban development on all sides as well as two roadways that provide access to major residential and commercial sites. To the north is Turner Parkway and the Gateway Plaza Commercial Center, to the east Hunter Ranch subdivision, to the south are the Quail Ridge Condominiums and other commercial uses, and to the west is Admiral Callaghan Lane. Public utility lines including, water, sewer, storm water drainage, electric, natural gas, and telecommunication lines have been extended through the area to serve the surrounding land uses.

The City Water Department and VFWD have reviewed the project plans and determined that the existing offsite water and sewer mains have adequate capacity to serve the project and that no offsite improvements, including those to increase the service capacity of existing facilities are required. The proposed project would require extension of service lines into the project site to provide services to the proposed new residences and proposed commercial development. All service line extensions within the proposed project boundaries are considered a part of the proposed project and would occur within areas that would be disturbed as part of project implementation. Within the western portion of the project site there is an existing PG&E utility easement and gas pipeline and an existing sewer line. These utilities are currently located on the project site under the proposed Costco building pad. The proposed project would realign the PG&E gas pipeline to the western edge of the property. The new alignment would be underground along the southern and western property boundary and would not be located under any proposed structures. The existing sewer line would be relocated to receive flows from the residential, Costco, and other commercial uses and would be located within the proposed commercial area. The relocated sewer line would be outside all building footprints. Additionally, all realignment would occur within the overall development footprint and is within the scope of the proposed project. The portion of the sewer line no longer in use would be abandoned in place. As such, the impacts associated with disturbance, construction, and operations of these lines and facilities in these areas are considered within the applicable chapters of this EIR. Figure 3-24 in Chapter 3, Project Description, shows proposed sewer alignments. No impacts to resources beyond those already disclosed in the respective chapters would occur.

As discussed above, existing service lines already serve surrounding uses and are typically located in current City right-of-way such as streets, sidewalks, medians. As part of the proposed project, improvements are planned to both Admiral Callaghan Lane and Turner Parkway. During ground-

disturbing and excavation activities to prepare these locations for the proposed roadway improvements, the underground improvements for utility service lines and facilities needed to provide services to the project site would be made. This would minimize or eliminate the need for off-site improvements outside the existing footprint of the proposed project and impacts in this regard would be less than significant.

Stormwater water will first be captured within the proposed bio-retention basin on the northerly side of the proposed project site. The stormwater drainage infrastructures have been designed to capture and retain stormwater flows and release overtime. As part of this design, the open space area also will function as a detention basin during large storm cycles. The outfall 52-inch culvert would restrict flows and only release water as the capacity of the downstream system allows. This will ensure that increased offsite stormwater flows do not occur and would not require the expansion of enlargement of existing offsite stormwater systems.

IMPACT UT-2 ***WOULD THE PROPOSED PROJECT, HAVE SUFFICIENT WATER SUPPLIES AVAILABLE TO SERVE THE PROJECT AND REASONABLY FORESEEABLE FUTURE DEVELOPMENT DURING NORMAL, DRY AND MULTIPLE DRY YEARS? (LESS THAN SIGNIFICANT IMPACT)***

The City's current water supply exceeds current yearly water demand within the City. The projected water demand through year 2040 also is less than the projected supply through that year. According to the City UWMP, the projected reasonably available water volume between years 2020 to 2040 is projected to be 11,952 million gallons per year (mg/y) over the twenty-year horizon. The reasonably available volume assumes a 99% allocation from the source and is based on a normal water year allocation. The total right or safe yield is expected to be slightly greater at approximately 12,346 mg/y through 2040. For the purpose of this analysis; however, the reasonably available water volume is used.

In 2015 total City demand for water is approximately 5,849 mg/y. Yearly water demand is anticipated to reach 7,447 mg/y in 2040, which is an increase of approximately 27%. As discussed above in 2040, the City's total reasonable supply is approximately 11,952 mg/y, which is 4,505 mg/y greater than projected City demand in 2040.

Regarding dry and multiple dry years, the City projects that water supplies would be adequate for Citywide demand except for in the third consecutive dry year. *Table 4.16-4: Single Dry Year Supply and Demand Comparison* and *Table 4.16-5: Multiple Dry Years Supply and Demand Comparison*, shows the projected water supplies in comparison to demands from years 2020 through 2040.

Table 4.16-4: Single Dry Year Supply and Demand Comparison

	2020	2025	2030	2035	2040
Supply totals	10,840	10,840	10,840	10,840	10,840
Demand Totals	8,400	8,168	7,782	7,638	7,469
Difference	2,439	2,671	3,057	3,202	3,371
Source: UWMP, 2015.					

Table 4.16-5: Multiple Dry Years Supply and Demand Comparison

		2020	2025	2030	2035	2040
First Year	Supply totals	10,466	10,466	10,466	10,466	10,466
	Demand totals	8,280	8,056	7,678	7,536	7,371
	Difference	2,166	2,390	2,769	2,910	3,076
Second Year	Supply totals	10,446	10,446	10,446	10,446	10,446
	Demand totals	8,117	7,903	7,536	7,398	7,237
	Difference	2,329	2,543	2,911	3,048	3,209
Third Year	Supply totals	7,395	7,395	7,395	7,395	7,395
	Demand totals	8,173	7,955	7,584	7,445	7,283
	Difference	(778)	(560)	(189)	(50)	113
Source: UWMP, 2015.						

As shown in the tables above, in most cases, the City has sufficient water supplies available to meet dry water year conditions. In 2040 the available water supply is anticipated to be adequate. The City's 2015 UWMP concludes:

> *However, in the third year of a multiple-dry year scenario, the City expects a shortfall of between 50 and 778 MG between 2020 and 2035 due to expected curtailment of Permit Water[1]. Under all other dry water year conditions, the City's projected water supply is approximately 10,000 MG/yr throughout the UWMP planning horizon. The City is fortunate to have a conservative total water supply volume such that City customers will have a reduced likelihood of being subject to severe rationing and mandatory water conservation due to water supply curtailments during the studied drought conditions.*
>
> *In summary, the City's combined projected water supplies are anticipated to be sufficient to meet projected future demands during normal, single-dry and multiple-dry water year conditions.[2]*

Water demand generated by the proposed project were based on methodologies provided in the 2015 UWMP but were customized refinements and assumptions to account for the proposed Costco store. This was done to more accurately predict projected project demand to assist in both current and future planning needs. For irrigation it was assumed that 15 percent of the commercial land and park area would be irrigated using the Model Water Efficient Landscaping Ordinance (MWELO) AB 1881 as well as Title 24 water efficiency requirements. *Table 4.16-6: Proposed Project Water Demand with Costco*, shows the project water demand from the proposed project. The table is based on the number units including the number of total dwelling units, the number of water meters proposed for the local commercial spaces, the proposed Costco warehouse, and the area covered by the other uses (irrigation and open space).

[1] Vallejo Permit Water refers to the Appropriative Water Rights License (No. 997848) with the State Water Resources Control Board (SWRCB.
[2] City of Vallejo Urban Water Management Plan, Page 7-7.

Different units are used because different inputs are needed for the annual demand factor. The projected water demand for each use and total project water demand is then calculated.

Table 4.16-6: Proposed Project Water Demand with Costco

Proposed Land Use	Quantity, Units[a]	Adjusted Annual Demand Factor	Projected Water Demand AF/y[c]
Single Family Residential	178 DU	84 hundred cubic feet (CCF)/dwelling unit (DU)[b]	34.3
Commercial[d]	4 water meters	449 CCF/water meter[b	4.1
Costco	1 Warehouse	4,027,820 gal/warehouse	12.4
Commercial Irrigation[e]	3.3 Acres	1.55 acre-ft/acre	5.1
Park Irrigation[f]	1.3 acres	3.44 acre-ft/acre	4.5
Open Space	0 water meters	--	--
		Losses[g]	7
		Total	**67**

(a) Land use data based on Overall Site Plan, dated September 2018.
(b) From City's 2015 UWMP Appendix B. Baseline Demands are adjusted for plumbing code and appliance standards; implementation of demand management measures, real cost of water, and water loss management.
(c) AFY = Acre-feet per year.
(d) Provided by Costco on January 14, 2019.
(e) Assumes irrigation of 15 percent of commercial area will be irrigated and used MAWA non-residential values from Attachment A.
(f) Used MAWA special landscape values from Attachment A.
(g) Losses assumed to be 10 percent of supply based on Table 26 in 2015 UWMP Appendix B.
(h) Includes unaccounted-for water at 10 percent of supply.

The UWMP notes that population growth for the City was anticipated to be approximately 121,032 by the year 2020. According to the City the 2010 Census recorded the City population was 117,798. In 2018, the California Department of Finance (CDOF), the population was approximately 119,544, an increase of approximately 1,746 people or approximately 194 people per year. This results in a nine year growth increase of approximately 1.5% (CDOF, 2018). Considering the average yearly growth rate stays consistent over the next six years, this would result in an estimated increase in 2020 City population of 1,164 people by 2025, for a total population of 120,708, which would be approximately 3,514 people less than anticipated under the UWMP, which anticipated a 2025 population of 124,222. Additionally, the proposed project is accounted for in the General Plan and consistent with the planned land use designations. The proposed project water demand would account for approximately 0.6% of the single and two-dry year total water supply and in each of these scenarios, which results in a remaining surplus of over 2,000 AF/y. While in a third consecutive dry year scenario, the proposed residents and commercial uses of the project would result in additional demand.

The City UWMP identifies water conservation, or demand management, as management methods available to reduce water use, thereby reducing water supply needs for the City. are water conservation measures based on the California Urban Water Conservation Council's (CUWCC) best management practices for water conservation.

The measures include:

- Waste Water Prohibition
- Metering
- Conservation Pricing
- Public Education and Outreach
- Residential Plumbing Retrofit Program
- Large Landscape Conservation Programs and Incentives
- High-Efficiency Clothes Washer Rebates
- Public Information Programs
- School Education Programs
- Conservation Programs for Commercial, Industrial and Institutional (CII) Customers
- Wholesale Agency Programs
- Residential Ultra-Low-Flush Toilet Programs
- System Water Audits, Leak Detection and Repair[3]
- Water Conservation Program Coordination and Staffing Support

It should be noted that the 2015 UWMP used the projected development and population growth under the former General Plan, not the Propel Vallejo 2040 General Plan. The water supply analysis in the Propel Vallejo 2040 General Plan EIR concluded that buildout of the General Plan would not result in a significant impact on water supply as a result of known available water supplies, the City's water shortage contingency planning, and implementation of General Plan goals and policies. The proposed project is consistent with the land use designations identified in the Propel Vallejo 2040 General Plan for the project site. Per the Propel Vallejo 2040 General Plan EIR, the City's water shortage contingency plan includes a five-stage response plan which is triggered at prescribed levels. Water shortage stages are monitored, reported, and acted upon according to the plan set out in the reduction-measuring mechanism for each stage. Each stage consists of specific prohibitions, regulations, fines, penalties and rate structure to encourage the appropriate level of water conservation. The City's analysis of available supply and demand has indicated that the City is not anticipated to have to implement any conservation above Stage II. Following the guidelines set forth in the City's UWMP, in instances where water demand has exceeded 90 percent of available supply, Stage II water shortage requirements are necessary.

In dry years, the City reduces its demand internally, by implementing system-wide efficiencies within the City's distribution system. This results in 1 percent, 2 percent, and 3 percent demand reductions in single

[3] Effectiveness is measured by monitoring the change in the percent of unaccounted water for the entire water system. Between the years 2005 and 2010, unaccounted water was reduced from 22 percent to 14 percent of gross water use. This is equivalent to a reduction of 732 MG per year. Water loss between 2010 and 2015 remained nearly constant, slightly increasing from 14 percent to 16 percent of total water use and remaining around 950 MG to 960 MG. Source: City of Vallejo UWMP, 2015 (page 9-13)

dry year, second dry year, and third dry year sequences, respectively. The City achieves these demand reductions by reducing its operational use of water, such as by limiting or eliminating water line flushing, etc. These demand reductions occur before drought-response measures are implemented and required of the City's water customers.

Reduction of water demand, as necessary, has been shown to be readily achievable in Vallejo. Vallejo currently is required to conserve 16 percent compared to 2013 in accordance with the SWRCB's emergency regulations to achieve 25 percent water savings statewide. Vallejo's reports to the SWRCB show that the cumulative amount saved from June 2015 through February 2016 (as compared to 2013) is 18.7 percent, which betters the conservation standard set by the SWRCB by 2.7 percent.

The following goals, policies, and actions included in the General Plan were identified as those measures that would help ensure that new development and redevelopment projects would not have an adverse impact on water supply:

- Goal NBE-1: *Beautiful City*. Preserve and enhance the natural, historic, and scenic resources that make Vallejo special.
- Policy NBE-1.14: *Water Conservation*. Promote water conservation through a range of proactive City efforts.
- Action NBE-1.14A: Continue the Community-wide Water Conservation Program, including free residential water use surveys and audits, and water-use efficiency education in local schools.
- Action NBE-1.14B: Continue to provide water customers with information on conservation techniques, services, devices, and rebates (including greywater use), including online and through in-person community outreach.
- Action NBE-1.14C: Update the Green Building Standards Code to require the use of low flow plumbing fixtures, low volume irrigation systems, and drought-tolerant plant palettes.
- Goal EET-4: *Sustainable Economic Development*. Pursue economic development that enhances equitable local wealth growth, improves quality of life, and respects the natural environment.
- Action EET-4.2A: Continue to incorporate sustainable design elements such as solar panels and water-efficient landscaping into the construction of City-owned and operated facilities.
- Goal CP-1: *Healthy Community*. Promote the health of All Vallejoans
- Policy CP-1.13: *Clean Water*. Provide a safe, adequate water supply citywide.
- Action CP-1.13A: Periodically assess the need to repair or replace aging water supply infrastructure and incorporate upgrades and improvements into the Capital Improvement Plan Program as needed.
- Action CP-1.13D: Continue to provide information on water conservation best practices to residents and businesses in Vallejo.

As discussed in Chapter 4.6, Greenhouse Gas, mitigation measures to reduce energy use are required as part of the proposed project. Mitigation Measure GHG-11 includes water efficiency measures that aim to reduce energy use through reduce water consumption. The water efficiency measures identified for the project include:

- To the extent feasible, project developers shall landscape to preserve natural vegetation and maintain watershed integrity. This measure shall be verified prior to building permit issuance.
- The project shall use native species and drought-tolerant species for a minimum of 50 percent of the ornamental plant palette in non-turf areas for all retail, common, and public areas, and residential front-yard landscaping to minimize water demand.
- Use recycled water for landscape irrigation where available. This measure shall be verified prior to building permit issuance.

It is expected that through continued water conservation efforts, even if recent population increases triple to the previously anticipated levels, the effects of the potential shortfall would be reduced. Therefore, impacts in this regard are less than significant and mitigation requiring additional water conservation designs standards and regulations would not be required.

IMPACT UT-3	***WOULD THE PROPOSED PROJECT RESULT IN A DETERMINATION BY THE WASTEWATER TREATMENT PROVIDER WHICH SERVES OR MAY SERVE THE PROJECT THAT IT HAS ADEQUATE CAPACITY TO SERVE THE PROJECT'S PROJECTED DEMAND IN ADDITION TO THE PROVIDER'S EXISTING COMMITMENTS?***
	(LESS THAN SIGNIFICANT IMPACT)

The proposed project would be served by the VFWD. The proposed project would tie into existing sewer lines that conduct wastewater to the VFWD. The existing sewer lines are undergrounded and generally conduct wastewater to the northwest and then in a westerly direction to Marine World Parkway, then southerly to Mare Island Way and then southwesterly to the wastewater treatment plant near the intersection of Solano Avenue. Wastewater flows from the proposed project could be accommodated by the existing lines. With the exception of temporary construction activities needed to tie into the existing lines that would occur within the proposed project footprint, or within previously disturbed rights-of-way, no additional work or disturbance outside the scope of the proposed project would occur. A portion of the existing sewer line within the proposed project would be relocated. The new line would be constructed on the southerly and easterly sides of the proposed Costco, extend northerly through the parking lot and tied into the existing 18-inch diameter pipeline running through the property. All realignment efforts would be within the project footprint and within the scope of the proposed project. As such, the impacts associated with disturbance, construction, and operations of these lines and facilities in these areas are considered within the applicable chapters of this EIR. Impacts in this regard would be less than significant.

Wastewater from the proposed project would be conducted to the VFWD through existing sewer lines. The proposed project was modeled for wastewater discharge for average dry water flow (ADWF), peak sanitary flow (PSF), and peak wet weather flow (PWWF). Considering the sum discharge of wastewater from the proposed residential, commercial, and Costco, the hydraulic performance for the proposed project and indicates it is anticipated to increase the District's ADWF by 53,712 gpd, PSF by 146,005 gpd, and PWWF by 24,888 gpd and the proposed project would not result in new or increased sanitary sewer overflows within the District's modeled system. Additionally, based on these calculations the existing treatment plant would have adequate capacity to serve the proposed project. The VFWD has remaining capacity of approximately 5 mgd, of which the proposed project would require approximately 1.07%. The City and VFWD reviewed the sewer capacity study prepared for the project and concurred that the sewer infrastructure has adequate capacity for the project. The VFWD would not require expansion as a result of the proposed project, and therefore, impacts in this regard would be less than significant.

In accordance with the General Plan goals, policies, and actions listed above in the regulatory setting and because future development under the proposed project would not exceed the capacity of the wastewater treatment system, the future development under the proposed project would not result in a determination that the wastewater treatment facility does not have adequate capacity to serve the proposed project's demand. Therefore, the proposed project would have a less-than-significant impact on wastewater treatment capacity.

IMPACT UT-4	***WOULD THE PROPOSED PROJECT 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 IMPACT)***

The Recology Hay Landfill is located in Vacaville, California. It has a permitted throughput capacity of 2,400 tons per day with a remaining permitted capacity of 30,433,000 cubic yards. It has an estimated "cease operation date" of January 1, 2077 (Calrecycle, 2019a). According to Calrecyle data, in 2017, the landfill took in a total of approximately 712,789 tons, which calculates to approximately 1,953 tons per day. This volume is anticipated to be similar in 2019.

The Potrero Hills Landfill is located in Suisun City, California. It has a permitted throughput capacity of 4,330 tons per day. Its remaining permitted capacity is 13,872,000 cubic yards. It has an estimated "cease operation date" of February 14, 2048 (Calrecycle, 2019b). According to Calrecyle data, in 2017, the landfill took in a total of approximately 999,287 tons, which calculates to approximately 2,737 tons per day. This volume is anticipated to be similar in 2019.

Based on communication with Recology and the calculation provided in *Table 4.16-7: Solid Waste Generation and Disposal*, below, the existing disposal sites (Potrero Hills Landfill and Hay Landfill) there would be the adequate capacity to serve the proposed project. Taken in sum, the landfills have a remaining capacity of 2,040 tons/day, of which the proposed project would require approximately 2.29

tons/day, which is 0.1% of remaining capacity. The landfills would not require expansion as a result of the proposed project, and therefore, impacts in this regard would be less than significant.

Table 4.16-7: Solid Waste Generation and Disposal

Project Use	Units	Solid Waste Generation Rate	Solid waste Generated	Potrero Hills Daily Capacity	Hay Landfill Daily Capacity
Residential	178 units	12.23lb/household /day	2,176 lbs or 1.08 tons / day	4,330 tons/day capacity	2,400 tons/day capacity -
Commercial	179,688 square feet	13lb/1,000sf/day	2,335 lbs or 1.16 ton / day		
Open Space and Parks	5.7 acres	--	100 lbs or .05 ton/day*		
Total:			**2.29 tons/day**	**Remaining Daily Capacity**	
				1,593 tons/day	**447 tons/day**

Source: CalRecycle, 2019c.

*Calrecycle does not provide recreational area waste generation rates. The 100 lbs per day is based on worst case estimate.

IMPACT UT-5 ***WOULD THE PROPOSED PROJECT COMPLY WITH FEDERAL, STATE, AND LOCAL MANAGEMENT AND REDUCTION STATUTES AND REGULATIONS RELATED TO SOLID WASTE?***

(LESS THAN SIGNIFICANT IMPACT)

Project implementation would generate solid waste during construction and operation. Common construction waste may include metals, masonry, plastic pipe, rocks, dirt, cardboard, or green waste related to land development. As part of the City's project permitting and approval process and prior to approval of any construction activities that would occur as a part of the proposed project, all future builders on the project site would be required to complete and have approved the City of Vallejo Construction and Demolition (C&D) Waste Management Plan (WMP) and Disposal report. In addition, and to aid in the diversion/recycling process, during construction the project site would have separate waste containers/bins/dumpsters for mixed C&D waste and separate containers/bins/dumpsters for non-recyclable garbage. Upon completion of construction activities, the applicant would be required to supply the City with receipts for all disposal activity. The City would complete a final inspection and verify if the diversion rate met expectations; fines could be imposed.

To meet the required goals and standards regarding waste generation and disposal, the proposed project would comply with all applicable state and local requirements related to waste reduction both during construction and during operation of the project. During both construction and operation of the proposed project, all requirements of the 1989 California Integrated Waste Management Act (AB 939) which

requires attainment of specific waste diversion goals. The proposed project would conform to the California Solid Waste Reuse and Recycling Access Act of 1991, as amended, which requires expanded or new development projects to incorporate storage areas for recycling bins into the proposed project design. In addition, the proposed project would be required to and would conform to the requirements of AB 939, SB 1016, AB 341, and AB 1826. While waste materials from the City are conducted to 17 different landfills, it is anticipated that both construction and operational waste will primarily use the Protreo Hills and Hays Landfill. As discussed above, there would be the adequate capacity to serve increased demand of the proposed project. Therefore, as the proposed project would comply with federal, State, and local statutes and regulations including waste reduction measures, waste diversion, and inclusion of recycling programs, the proposed project would not conflict with any of these programs. Impacts would be less than significant in this regard.

4.16.5 CONCLUSION

The proposed project would not result in significant impacts to utilities and service systems. Existing service lines within the project site to be relocated and those within the adjacent off-site areas that would be extended into the proposed project site will occur in areas that are proposed to undergo ground disturbance. Therefore, impacts in these areas are already quantified within the EIR. Additionally, off-site tie in locations are anticipated to be within existing right-of-way and easements. These types of areas are typically highly disturbed or developed. Lastly, the utility providers have adequate capacity to serve the proposed project. Impacts in these regards are less than significant.

4.16.6 Cumulative Impacts

Water

Current water supply exceeds current yearly water demand within the City and projected water demand through year 2040 would be less than the projected supply. Yearly water demand is anticipated to reach 7,447 mg/y in 2040, which is an increase of approximately 27%. In 2040, the City's total reasonable water volume is anticipated to be approximately 11,952 mg/y, which would be 4,505 mg/y greater than projected City demand. This demand accounts for other projects that would use the same water supplies as the proposed project. While the population in the City of Vallejo is expected to continue to increase, the City is also working to incorporate water efficiency measures that will allow them to reduce per-capita water usage. Because there is adequate water supply and treatment capacity to serve projected demand under present per capita demand rates, the project would not require new water supply contracts to be secured. While the project would contribute to overall demand for treated water, the project would not require new or expanded water supply entitlements. Lastly, the proposed project would include all required water conservation measures as would be expected of all future projects prior to approval within the City. This would help ensure that cumulative impacts associated with water supply are less than significant.

Wastewater

Based on information in the Propel Vallejo 2040 General Plan EIR, the estimated net increased wastewater generation rate from the buildout of development planned for in the General Plan would be approximately 2.89 mgd. The General Plan EIR determined that the increase in wastewater generation would be well within the currently available excess dry weather design flow capacity of greater than 5.0 mgd and construction of expanded or new wastewater treatment facilities would not be required. The proposed project is anticipated to contribute approximately an average daily volume of 53,712 gpd of wastewater to the 2.89 mgd total. Therefore, impacts would be less than significant.

Solid Waste

The proposed project in conjunction with past, present and likely foreseeable future projects in the vicinity would likely utilize the Potrero Hills or Hay landfill. Both landfills have substantial capacity and are expected to serve projected demand through the lifecycle of the landfills. In addition, all other projects considered on a cumulative basis also would be required to undergo site-specific environmental and CEQA review. In addition, through the planning process, all other projects would be required to comply with waste reduction strategies both for construction and during operation of the project. It is anticipated that impacts would be less than significant and would be less than cumulatively considerable.

4.16.7 REFERENCES

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