

4.14 Utilities and Service Systems

4.14.1 Introduction

This section describes the existing provision of utilities and service systems to the Project area, including water supply, wastewater treatment and disposal, solid waste disposal, electricity and natural gas. Potential impacts related to the provision of utilities and service systems are identified, and measures to reduce or eliminate potentially significant impacts are identified.

4.14.2 Environmental Setting

Water Supply

Supply Entitlements

The Project site is within the Contra Costa Water District (CCWD) service area. CCWD's more than 140,000-acre service area encompasses the northern, central and eastern portions of the County. The cities served include Concord, Clayton, as well as portions of Martinez, Walnut Creek and Pleasant Hill. In addition to providing treated potable water directly to approximately 200,000 customers, the CCWD delivers water wholesale to seven local water agencies—including the cities of Antioch, Pittsburg and Martinez—that distribute the water to their customers. In total, the District supplies water to a population of about 523,000 people.

The majority of CCWD's water supply comes from the Sacramento-San Joaquin Delta via the Central Valley Project (CVP), under a contract with the U.S. Bureau of Reclamation (USBR). CCWD determined that in the near-term, the projected water supply is 213,700 acre-feet¹ per year ("AFY"). By 2025, CCWD would have a water supply of 237,700 acre-feet. (CCWD, 2016)

CCWD holds a water right that allows diversion of up to 95,980 AFY of excess Delta Flows to Los Vaqueros Reservoir for storage between November 1 of each year and June 30 of the succeeding year, with the total combined limit on CCWD CVP contract and Los Vaqueros water right diversions equal to 242,000 AFY. On average, CCWD has historically been able to divert 12,000 AFY of water to storage under the Los Vaqueros water right. The original Los Vaqueros (LV) Reservoir Project (100,000 AF total storage capacity) was built to improve CCWD's ability to deliver good water quality year-round. The recently expanded Los Vaqueros Reservoir (new total storage capacity of 160,000 AF) provides water supply reliability in years with low CVP contract allocation, in addition to providing the same water quality benefits of the original LV Project. During a single dry year, CCWD could use up to 20,000 AFY from the expanded reservoir to meet demand. In an extended three-year drought, the supplies from the expanded reservoir would provide an average of 13,000 AFY to meet demands. If the drought extended beyond three years, the average annual amount available would be reduced accordingly.

¹ An acre-foot of water is the amount of water needed to flood an acre of land to a depth of 1 foot. It is equivalent to 43,560 cubic feet, or approximately 325,851 gallons.

The CCWD also receives San Joaquin River water from Mallard Slough, with rights to 26,700 AFY. However, due to poor water quality, the average yield from this source has been about 6,500 AFY. A number of industries in the CCWD service area have rights to divert San Joaquin River water directly to their facilities, including Inland Container (28,000 AFY) and Tesoro (16,650 AFY). These supplies are also variable due to the poor water quality that often occurs in the river. Although groundwater resources are available in the Clayton area, this source does not provide a significant supplement to the County's surface water supplies. Private wells are also owned throughout the CCWD service area, providing an estimated 6,500 AFY to the individuals, businesses and municipal water utilities that own them.

Limited additional supplies are available to the District during shortages in the CVP. The CCWD has agreements to purchase surplus irrigation water from the East Contra Costa Irrigation District (ECCID), a portion of whose service area overlaps with the CCWD's service area. The CCWD can purchase up to 8,200 AFY of surface water and up to 4,000 AFY of groundwater (by exchanges) when the CVP is in a shortage situation, but this purchased water must be used only for municipal and industrial purposes within the ECCID's service area (CCWD, 2016).

Storage and Conveyance

CCWD's raw (untreated) water is stored locally in four reservoirs: Martinez Reservoir (230 AF of capacity), Contra Loma Reservoir (1,200AF), Mallard Reservoir (2,100 AF) and Los Vaqueros Reservoir (160,000 AF).

Treatment

CCWD operates three water treatment plants, as well as treated water storage reservoirs, pump stations, and pipelines that form the distribution system for the District's treated water service area. The CCWD's primary treatment facility is the Bollman WTP, located in Concord, and has a permitted capacity of 75 million gallons per day (mgd). Water is pumped from the plant to eight pressure zone distribution system through approximately 800 miles of pipeline ranging in diameter from 2 to 66 inches. The District's second treatment plant, the Randall-Bold Water Treatment Plant (RBWTP), is located in Oakley and is operated jointly with the Diablo Water District, which delivers treated water to the City of Oakley. The plant has a permitted capacity of 50 mgd.

The City of Brentwood WTP, constructed in 2008, is located adjacent to RBWTP has a capacity of approximately 40 mgd and provides treated water to the portion of Brentwood that is outside of the District's service area (CCWD, 2016).

Urban Water Management Plan

The 1983 California Urban Water Management Planning Act requires all public and private water agencies supplying water to more than 3,000 customers or supplying more than 3,000 AFY to prepare an Urban Water Management Plan (UWMP), to be updated every five years.² The

³ California Water Code, Division 6, Part 2.6, Sections 10610–10656.

UWMP must evaluate existing and future sources of water supply, quantify existing and projected demand and identify demand management and other conservation measures for residential, commercial, governmental and industrial water users, among other requirements. Water planning must be performed in five-year increments for at least a 20-year period, or as far into the future as available demographic and other data permit.

The CCWD adopted its 2015 UWMP in 2016 that presents information on the District’s supply and demand forecasts, conservation programs, water shortage contingency planning, and recycled water opportunities to the year 2040. The 2015 UWMP summarizes the near-term and 2040 water demands during “normal,” “single day,” and “multi-dry year 3) scenarios. The CCWD service area and a normalized near-term water demand of 150,000 acre-feet during near-term maximum dry year demands, and will have a 2040 normalized water demand of 190,000 acre-feet. The CCWD has maintained an effective water conservation program that has resulted in the district currently serving less water compared to 1990 levels and despite a 40 percent increase in population (CCWD, 2016).

The 2015 UWMP includes an updated water shortage contingency plan which provides options for managing the water supply and demand balance during water supply shortage conditions. These options have been developed based on the District’s previous experience with short-term demand management, most recently with the 2015 Drought Management Program, and in consideration of long-term conservation goals. The water shortage contingency plan sets four stages of demand reduction goals linked to the availability of supplies to the District. The total demand reduction goal for each stage ranges from less than 10 percent at Stage I to up to 50 percent at Stage IV.

The 2015 UWMP incorporates recycled water usage. Water recycling is a component of CCWD’s long-term sustainable water supply strategy and CCWD collaborates with local wastewater agencies proposing to provide recycled water for appropriate designated uses. Currently, approximately 10,000 AFY of recycled water is being put to beneficial use within the District’s service area, including wildlife habitat enhancement and wetlands. Future use is anticipated to grow to nearly 18,000 AFY through additional projects implemented under the current agreements, potential future industrial use, and development of the Concord Naval Weapons Station (CNWS).

According to the 2015 UWMP, CCWD projects sufficient overall water supply to meet demand through its planning horizon of 2040 (with the implementation of demand management measures during multi-dry years).

Water Supply Assessment

Senate Bill 610 amended State law, effective January 1, 2002, to improve the link between information on water supply availability and certain land use decisions made by cities and counties.³ The purpose and legislative intent of Senate Bill 610 was to further integrate land use

³ California Water Code, Division 6, Part 2.10, Sections 10910–10915.

and water supply planning and to ensure that long-term water supplies are available to support new land uses. SB 610 requires detailed information regarding water availability in the form of a water supply assessment (WSA) to be provided to the city and county decision-makers and included in the administrative record, prior to approval of specified large development projects. Under SB 610, water assessments must be furnished to local governments for inclusion in any environmental documentation for certain projects (including residential developments with more than 500 dwelling units) subject to the California Environmental Quality Act (CEQA). The CEQA Lead Agency for the Project is responsible for preparing the assessment, or initiating the request for preparation to the relevant water supplier. The WSA must evaluate whether the public water system's total projected water supplies during normal, single dry and multiple dry years during a 20-year projection will meet the anticipated water demand of the Project and all other existing and planned future users.

Because the Project entails the development of fewer than 500 dwelling units, a formal water supply assessment was not performed for the Project.

Wastewater Treatment and Disposal

The Project site does not currently fall within the jurisdiction of the proposed wastewater treatment provider, MVSD. Although the entirety of the Project site falls within the sphere of influence (SOI) of the MVSD, the Project sponsor and MVSD propose annexation of the entire Project site into the MVSD (MVSD, 2017).⁴

In 1963, the California Legislature established a commission in each county responsible for overseeing most forms of local government boundary change including incorporation, annexations and special district formations. The resulting Local Agency Formation Commission (LAFCO) is a regulatory agency charged by the State legislature with, among other things, approval or denial of proposals to annex land to special districts. The Contra Costa County LAFCO would therefore be required to approve or deny any proposed annexation of the Project site into a sanitary district. A discussion of this process is included below in Impact UTIL-9.

Discussions of the MVSD and CCCSD systems and capacities follow. The information regarding the CCCSD system is for information only.

Mt. View Sanitary District

The Mt. View Sanitary District (MVSD) provides wastewater collection, treatment, and disposal services for the northeasterly portion of the City of Martinez and adjacent unincorporated lands to the northeast. MVSD serves approximately 19,000 residents, treating an average daily flow of 1.25 million gallons of wastewater per day. The MVSD service area comprises approximately 4.7 square miles and is contiguous on all sides with the Central Contra Costa Sanitary District (CCCSD), with which it collaborates to provide services to the central portion of the County.

⁴ A sphere of influence is a plan for the probable physical boundaries and service area of a local agency.

MVSD operates a 2.1 mgd designed flow WWTP that averages 1.007 mgd, as measured in 2012, as part of the District's System Reliability Evaluation study. MVSD's collection system consists of 72.5 miles of main sewer lines and 4 pump stations. Effluent disposal is accomplished by disposal in the Peyton Slough and Moorhen Marsh area adjacent to MVSD's WWTP facilities (MVSD, 2020; Contra Costa LAFCO, 2014).

Central Contra Costa Sanitary District

The CCCSD provides wastewater collection, treatment and disposal services in central Contra Costa County – a service area of approximately 147 square miles. Cities and communities served by CCCSD include Danville, Lafayette, Moraga, Orinda, Pleasant Hill and Walnut Creek, portions of Martinez and San Ramon, and other unincorporated areas within the central portion of the County. CCCSD also receives and treats wastewater from the collection systems of the City of Concord and the City of Clayton.

CCCSD collects sewage and conveys it through approximately 1,500 miles of sewer main line and 19 pump stations for treatment at its WWTP, which is located approximately 0.75 mile southeast of the Project site. The plant has 33.8 mgd and up to 230 mgd during extreme storm events. CCCSD has implemented an aggressive sewer main maintenance and replacement program since 2007 and replaced many of its problem sewer main pipelines. CCCSD disposes of its secondary treated effluent into Suisun Bay and tertiary treated effluent is sold for irrigation use, including expanded programs in the Cities of Pleasant Hill, Concord and unincorporated Martinez. CCCSD also treats and sells recycled water (approximately 0.57 mgd) to retail customers (Contra Costa LACFO, 2014).

Stormwater

Increases in impervious surfaces increase the volume and runoff rates of stormwater, which can lead to increases in the amount of pollutants (i.e., metals, petroleum) in stormwater. See Section 4.8, *Hydrology and Water Quality*, in this chapter of the Draft EIR for additional information regarding water quality and quantity impacts related to stormwater.

Solid Waste

Contra Costa County's Solid Waste/Recycling Division oversees most solid waste and recycling franchise agreements for the County's unincorporated areas. However, MVSD holds an independent franchise agreement for services in the unincorporated areas within its jurisdiction. Both the County and the MVSD contract with Republic Services (formerly Allied Waste Industries, Inc.) to provide solid waste and recycling collection and disposal. Residential and commercial solid waste collected by Republic Services is taken to the Contra Costa Transfer and Recovery Station (in the vicinity of the Project site) and then disposed of at the Keller Canyon Landfill located in the unincorporated Pittsburg area within Contra Costa County.

The Keller Canyon Landfill, a wholly owned subsidiary of Republic Services, Inc., is a Class II facility that has been operating since 1992. A Class II landfill can accept a wider variety of non-

hazardous materials than an ordinary Class III landfill, and is built to more stringent siting and design standards. The existing Landfill property covers a total area of approximately 2,600 acres, of which 244 acres are permitted for waste disposal. Design capacity for the existing facility is approximately 75 million cubic yards (air space). The remaining available disposal capacity of the existing landfill is over 55 million cubic yards as of 2015, which is sufficient for several decades of continued operation.

The Keller Canyon Landfill is in the process of amending its land use permit (LUP) to increase maximum daily tonnage from the currently permitted maximum of 3,500 tons per day, to a proposed maximum of 4,900 tons per day (CalRecycle, 2017).

Contra Costa County's Construction and Demolition Debris Recovery Ordinance (Ordinance 2004-16) is intended to reduce the quantity of construction and demolition debris disposed in landfills as required by state law. The Ordinance requires owners of all construction or demolition projects that are 5,000 square feet in size or greater to demonstrate that at least 50 percent of the construction and demolition debris generated on the jobsite are reused, recycled, or otherwise diverted.

The County generates 807,550 tons of solid waste annually (CalRecycle, 2020a and 2020b).

Electricity and Natural Gas

Electrical power and natural gas are provided to the Vine Hill/Pacheco Boulevard Area by Pacific Gas and Electric Company (PG&E). PG&E obtains its energy supplies from power plants and natural gas fields in northern California and from energy purchased outside its service area from a variety of sources, including other utility companies. PG&E is the primary provider of gas and electrical power to Contra Costa County. Throughout most of the County, electrical power is delivered via overhead distribution and high voltage transmission lines and natural gas is distributed through underground piping. PG&E expands its services on an as-needed basis and requires the user to fund the extension of service.

The State of California regulates energy consumption under Title 24 of the California Code of Regulations. Title 24 Building Energy Efficiency Standards apply to energy consumed for heating, cooling, ventilation, water heating and lighting in new residential and nonresidential buildings. The standards are updated periodically to incorporate new energy efficiency technologies and methods.

4.14.4 Regulatory Setting

State Plans and Policies

Emergency Services Plan

Contra Costa County approved their most recent Emergency Operations Plan (EOP) on June 16, 2015. The EOP establishes the emergency organization, assigns tasks, specifies policies and general procedures, and provides for the coordination of planning efforts of the various

emergency staff and service elements to ensure the most effective response to emergencies. The EOP applies to all emergencies in unincorporated areas of Contra Costa County and which generates situations requiring planned, coordinated responses. The EOP also applies to emergencies that occur within incorporated areas, to the extent that those emergencies require multi-agency coordination at the operational area level.

Senate Bill 610 and Senate Bill 221

The purpose and legislative intent of Senate Bill 610 (SB 610) and Senate Bill 221 (SB 221) is to preclude certain large projects from being approved without specific evaluations being performed and documented by the local water provider that indicate that water is available to serve the Project. SB 610 primarily affects the Water Code, and SB 221 principally applies to the Subdivision Map Act. SB 610 requires the preparation of a WSA for large-scale development projects.⁵ The WSA evaluates the water supply available for new development based on anticipated demand. For the broad range of projects that are subject to this law, the statutory WSA must be requested by the lead agency from the local water provider at the time the lead agency determines that an Environmental Impact Report (EIR) is required for the Project under CEQA. The water agency must then provide the assessment within 90 days (but may request a time extension under certain circumstances). The WSA must include specific information including an identification of existing water supply entitlements and contracts. The governing board of the water agency must approve the assessment at a public hearing.

SB 221 requires the local water provider to provide “written verification” of “sufficient water supplies” to serve the Project. Sufficiency under SB 221 differs from SB 610 in that it is determined by considering the availability of water over the past 20 years; the applicability of any urban water shortage contingency analysis prepared per Water Code Section 10632; the reduction in water supply allocated to a specific use by an adopted ordinance; and the amount of water that can be reasonably relied upon from other water supply projects, such as conjunctive use, reclaimed water, water conservation, and water transfer. In most cases, the WSA prepared under SB 610 would meet the requirement for proof of water supply under SB 221.

State Bill 365 (SB 365; Chapter 980, Statutes of 1993)

Existing provisions of the California Water Code declare that the use of potable water for certain non-potable uses “is a waste or an unreasonable use of water.” SB 365 amends and expands the Water Code to strengthen the provision that the use of potable water for the irrigation of residential landscaping, floor-trap priming, cooling towers, or air-conditioning devices, is wasteful and unsound if reclaimed water suitable for these purposes is available. SB 365 also

⁵ All projects that are subject to approval by a county or a city that meet any of the following criteria require a WSA: 1) a proposed residential development of more than 500 dwelling units; 2) a proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 ft² of floor space; 3) a proposed commercial office building employing more than 1,000 persons or having more than 250,000 ft² of floor space; 4) a proposed hotel or motel, or both, having more than 500 rooms; 5) a proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 SF of floor area; 6) a mixed-use project that includes one or more of the projects specified in this subdivision; or 7) a project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

gives the power to any public agency, including a State agency, city, county, district, or any other political subdivision of the State, to require the use of reclaimed water for these purposes if certain conditions are met. The conditions that must be met are:

- Reclaimed water meeting the requirements of existing law (Section 13550 of the Water Code) is available to the user;
- The use of reclaimed water does not cause any loss or diminution of any existing water right;
- Public health concerns regarding exposure to mist or spray must be addressed, if appropriate; and
- The water user must prepare an engineering report pursuant to Title 22 regulations governing the use of reclaimed water.

The requirements of the law are applicable to all new industrial facilities and subdivisions for which the Department of Health Services has approved the use of reclaimed water, and for which a building permit is issued on or after March 15, 1994; or, if a building permit is not required, new structures for which construction begins on or after this date.

California Model Water Efficient Landscape Ordinance

This regulation is designed to promote water efficiency standards for new developments and existing landscapes to ensure that California continues to have sufficient water to meet demand. Water savings can be achieved through efficient irrigation systems, greywater usage, onsite stormwater capture, and limiting the amount of landscape covered in turf.

Assembly Bill 939

Assembly Bill 939 (AB939), enacted in 1989 and known as the Integrated Waste Management Act, requires each city and/or county to prepare a Source Reduction and Recycling Element to demonstrate reduction in the amount of waste being disposed to landfills, with diversion goals of 50 percent by the year 2000. Diversion includes waste prevention, reuse, and recycling. Senate Bill 1016 (SB1016) revised the reporting requirements of AB 939 by implementing a per capita disposal rate based on a jurisdiction's population (or employment) and its disposal.

In 2018, unincorporated Contra Costa County had a per resident disposal rate target of 3.9 pounds per day and a per employee disposal rate target of 20.1 pounds per day. The County had an annual per capita residential disposal rate of 2.5 pounds per day and 11.2 annual per capital employee disposal rate in 2018, thereby meeting waste diversion goals for 2016 as the amount of disposal per person/employee is lower than the target (CalRecycle, 2017).

In 2011, AB 341 amended AB 939 to include a provision declaring that it is the policy goal of the State that not less than 75 percent of solid waste generated be source reduced, recycled, or composted by the year 2020, and annually thereafter.

California Green Building Standards Code

The 2016 State building standards code (CalGreen) requires that at least 65 percent of weight of non-hazardous job site debris generated by new construction be recycled, reused, or otherwise diverted from landfill disposal. CalGreen requires submission of plans and verifiable post-Project documentation to demonstrate compliance.

Local Plans and Policies

Contra Costa County General Plan

The *Contra Costa County General Plan* (General Plan) contains goals, policies and implementation measures pertaining to fire protection, public protection, schools, parks, water service, sewer service and solid waste within its Public Facilities/Services Element and Growth Management Element. The Public Facilities/Services Element addresses the vital infrastructure and public services that must be provided. The Growth Management Element establishes performance standards for the provision of essential public utilities/services.

General Plan policies, and where especially relevant to the proposed Project, General Plan goals, implementation measures and/or performance standards are listed below:

Water Use, Conservation and Demand

- *Policy 7-21:* At the project approval stage, the County shall require new development to demonstrate that adequate water quantity and quality can be provided. The County shall determine whether (1) capacity exists within the water system if a development project is built within a set period of time, or (2) capacity will be provided by a funded program or other mechanism. This finding will be based on information furnished or made available to the County from consultations with the appropriate water agency, the applicant, or other sources.
- *Policy 7-26:* The need for water system improvements shall be reduced by encouraging new development to incorporate water conservation measures to decrease peak water use.

Public Facilities/Services Element

- *Policy 7-1:* New development shall be required to pay its fair share of the cost of all existing public facilities it utilizes, based on the demand for these facilities which can be attributed to new development.
- *Policy 7-2:* New development, not existing residents, should be required to pay all costs of upgrading existing public facilities or constructing new facilities which are exclusively needed to serve new development.
- *Policy 7-4:* The financial impacts of new development or public facilities should generally be determined during the project review process and may be based on the analysis contemplated under the Growth Management Element or otherwise. As part of the project approval, specific findings shall be adopted which relate to the demand for new public facilities and how the demand affects the service standards included in the growth management program.
- *Policy 7-19:* Urban development shall be encouraged within the existing water Spheres of Influence adopted by the Local Agency Formation Commission; expansion into new areas

within the Urban Limit Line beyond the Spheres should be restricted to those areas where urban development can meet all growth management standards included in this General Plan.

Wastewater

- *Policy 7-29:* Sewer treatment facilities shall be required to operate in compliance with waste discharge requirements established by the Regional Water Quality Control Board. Development that would result in the violation of waste discharge requirements shall not be approved.
- *Policy 7-31:* Urban development shall be encouraged within the sewer Spheres of Influence adopted by the Local Agency Formation Commission. Expansion into new areas within the Urban Limit Line but beyond the Spheres of Influence should be restricted to those areas where urban development can meet growth management standards included in this General Plan.
- *Policy 7-33:* At the project approval stage, the County shall require new development to demonstrate that wastewater treatment capacity can be provided. The County shall determine whether (1) capacity exists within the wastewater treatment system if a development project is built within a set period of time, or (2) capacity will be provided by a funded program or other mechanism. This finding will be based on information furnished or made available to the County from consultations with the appropriate water agency, the applicant, or other sources.
- *Policy 7-37:* The need for sewer system improvements shall be reduced by requiring new development to incorporate water conservation measures which reduce flows into the sanitary sewer system.
- *Implementation Measure 7-t:* Conditionally approve all tentative subdivision maps and other preliminary development plans on verification of adequate wastewater treatment capacity for the project. Such condition shall be satisfied by verification based upon substantial information in the record that capacity within the system to serve the specific development project exists or comparable demonstration of adequate wastewater treatment capacity. Where no tentative map or preliminary plan is required prior to development, approve no map or development permit without this standard being satisfied.

Solid Waste

- *Policy 7-88:* Solid waste disposal capacity shall be considered in County and city land use planning and permitting activities, along with other utility requirements, such as water and sewer service.
- *Policy 7-91:* Solid waste resource recovery (including recycling, composting, and waste to energy) shall be encouraged so as to extend the life of sanitary landfills, reduce the environmental impact of solid waste disposal, and to make use of valuable resources, provided that specific resource recovery programs are economically and environmentally desirable.
- *Policy 7-92:* Waste diversion from landfills due to resource recovery activities shall be subject to goals included in the County Integrated Waste Management Plan. Public agencies and the private sector should strive to meet these aggressive goals.

4.14.5 Significance Criteria

Based on Appendix G of the CEQA *Guidelines*, the Project would have a significant effect on utilities and service systems if it would:

- a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- c) Require or result in the construction of new storm water drainage facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects;
- d) Not have sufficient water supplies available to serve the Project from existing entitlements and resources, or if new or expanded entitlements are needed;
- e) Result in a determination by the wastewater treatment provider that would serve the Project that it does not have adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments;
- f) Be served by a landfill with insufficient permitted capacity to accommodate the Project's solid waste disposal needs; or
- g) Conflict with federal, state and local statutes and regulations related to solid waste.

Analysis Methodology

The approach to this analysis involved corresponding where feasible with the applicable utility agencies that have existing or potential jurisdiction over the Project site to request current information about service capabilities and reviewing other operational information about these agencies. Generation rates used to calculate the Project's anticipated demand for public utilities were acquired from CCWD, MVSD, the California Department of Education, and CalRecycle. The County's approach to this analysis conservatively identifies certain mitigation measures that are also existing local or State regulatory requirements to which the Project is required to comply, regardless of environmental effects.

4.14.6 Impact Analysis

Water Demand

Impact UTIL-1: The Project would increase domestic and emergency water demand, but would not exceed water supplies available from existing entitlements and resources. (Criterion d) (*Less than Significant, No Mitigation Required*)

With 144 new residential units, the Project would increase demand for potable water. The Project would be served by the CCWD. Since the site is undeveloped, the current water demand is zero. For purposes of sizing water distribution infrastructure and estimating potential effects to the CCWD's water supplies, the estimated water demand rate is 148 gallons per capita per day

(GPCD), which is the 2020 target in CCWD's 2015 UWMP. This estimated demand rate is conservative compared to CCWD's 2015 actual demand rate of 114 GPCD. The Project's 356 new residents would result in a total water demand of 59 AFY. While this water demand would be an increase over no existing water usage, it would be offset by the anticipated water demand if the site were to be developed based on its current land use designation of Heavy Industrial..

As noted in the *Environmental Setting* of this section, the CCWD holds entitlements to approximately 213,700 AFY of water. As of 2015, CCWD's demand was 119,420 AFY. The Project, at approximately 59 AFY, would represent a 0.05 percent increase over 2015 demand levels. While water demand would increase as a result of the Project, based on the CCWD's available water rights and the current level of water demand, it is expected that existing water supplies would be sufficient to serve the Project, and no new or expanded entitlements would be needed. Also as noted above, the CCWD's water supply reliability goal is to meet 100 percent of demand in normal years and a minimum of 85 percent of demand during a drought. Any potential supply shortfalls experienced during dry year conditions will be met through a combination of a short-term conservation program or short-term water purchases. Consistent with the CCWD's Future Water Supply Study, a planned purchase of up to 1,700 AF of additional water supply by 2040 is necessary to meet the water supply reliability goal. Although the Project would add to demand in drought years, the increase of the Project's demand on CCWD's water supply is negligible, and would not be considerable. Therefore, impacts would be less than significant.

Mitigation: None required.

Water Facilities

Impact UTIL-2: The Project would require or result in construction of new or expanded water facilities, the construction of which would cause significant environmental effects. (Criteria b) (Potentially Significant prior to Mitigation)

The Project site is currently undeveloped, therefore, the Project would require new and upgraded water conveyance infrastructure on and offsite. The Project would be required to fund water main extensions to provide adequate domestic water supply, fire flows and system redundancy to the Project prior to obtaining water service. Depending on CCWD metering requirements and fire flow requirements set by the CCFPD, the Project applicant would be required to fund pipeline and fire hydrant installation and offsite pipeline improvements.

This Project has been determined by CCWD to be in an area that is deficient in fire flow (i.e., not having sufficient water flow to meet fire-fighting demands). Therefore, as shown in Figure 3-5 in Chapter 3 (Project Description) of this document, the Project would require the extension of CCWD's existing 12-inch water transmission main that currently terminates within the Conco property, just northwest of the BNSF railroad. CCWD has an existing 20-wide access easement rights that would be expanded to accommodate the waterline extension. The proposed waterline alignment and its construction would not encroach into jurisdictional waters. Convention

waterline installation method would be used including trench excavation, pipeline installation, pouring of concrete thrust blocks, backfilling and compacting, and pipeline testing prior to placement in service. CCWD would then accept the waterline as its facility to operate and maintain.

All potential construction-related environmental effects addressed for the proposed Project would encompass the effects specifically associated with installation of the new water pipeline to serve the proposed Project. The potential effects pertain to construction-related effects (short-term and ongoing) discussed in the following sections of this chapter of the Draft EIR: Section 4.2, *Air Quality*; Section 4.4, *Cultural and Tribal Resources*; Section 4.5, *Geology and Soils*; Section 4.6, *Greenhouse Gas Emissions and Energy*; Section 4.7, *Hazards and Hazardous Materials*; Section 4.8, *Hydrology and Water Quality*; Section 4.10, *Noise*; and Section 4.13, *Transportation*.

As discussed in each of the aforementioned topical sections, the potential impacts of constructing or expanding the new water infrastructure for the Project would be less than significant (with adherence to stormwater quality BMPs under the provisions of the Construction General Permit, discussed in Impact UTIL-3 below and in Section 4.8, *Hydrology and Water Quality*, in this chapter of the Draft EIR) or reduced to less than significant with the following mitigation measures, addressed collectively:

Mitigation Measure UTIL-2: The Project sponsor shall implement the following mitigation measures for construction-related effects from installation and expansion of the proposed new waterline:

- a) **Mitigation Measure AIR-1 (Best Management Practices for Controlling Particulate Emissions)**
- b) **Mitigation Measure BIO-2a (Worker Environmental Awareness Program Training)**
- c) **Mitigation Measure BIO-2b (General Conservation Measures during Construction)**
- d) **Mitigation Measure BIO-6a (Protection of Jurisdictional Wetlands and Other Waters)**
- e) **Mitigation Measure CUL-1a (Prehistoric or Historic-period Archaeological Resources)**
- f) **Mitigation Measure CUL-1b (Human Remains)**
- g) **Mitigation Measure GEO-2 (Design-level Geotechnical Compliance)**
- h) **Mitigation Measure GEO-3 (Fill Placement)**
- i) **Mitigation Measure GEO-4 (Terraced Slopes/Drainage)**
- j) **Mitigation Measure GEO-5 (Paleontological Resources Treatment)**
- k) **Mitigation Measure HAZ-1 (Release of Hazardous Materials)**
- l) **Mitigation Measure HAZ-2 (Pipeline Damage Risk)**
- m) **Mitigation Measure NOI-1a (Construction Noise Activities)**
- n) **Mitigation Measure NOI-1b (Noise Control Measures)**
- o) **Mitigation Measure TRF-1 (Construction Traffic)**
- p) **Mitigation Measure TRF-2 (Public Roadway Damage or Wear)**

Significance after Mitigation: Less than Significant.

Stormwater Facilities

Impact UTIL-3: The Project would require or result in construction of new or expanded stormwater drainage facilities, the construction of which could cause significant environmental effects. (Criterion c) (Potentially Significant prior to Mitigation)

The proposed Project would create new impervious surfaces at the currently undeveloped site, and stormwater treatment would be provided with the implementation of treatment measures, namely three new bio retention ponds. As discussed in Section 4.9, *Hydrology and Water Quality*, of this chapter of the Draft EIR, the Project would alter the topography and drainage pattern at the Project site, which would increase the amount of stormwater runoff at the Project site. As also discussed in Section 4.9, which is incorporated herein by reference, regulatory compliance, and completion and implementation of the required plans and measures, would ensure that the change would not result in exceeding the capacities of existing or planned storm drainage systems.

Construction activities within the Project site would be required to comply with NPDES General Construction Activities Permit requirements. The Project applicant would be required to prepare a SWPPP for General Construction Activities to reduce potential impacts to surface water quality during construction. The erosion control and stormwater quality BMPs that would be employed to minimize pollutants in stormwater runoff would be effective in preventing the discharge of pollutants to downstream waters. Project compliance with NPDES General Construction Activities Permit requirements are required by law and have proven effective in protecting water quality at construction sites. Routine inspection of all BMPs is required under the provisions of the Construction General Permit.

As discussed in Impact UTIL-2, all potential construction-related environmental effects would encompass the specific effects associated with installation of the new stormwater infrastructure or improvements to serve the proposed Project. The potential effects pertain to construction-related effects (short-term and ongoing) discussed in the following sections of this chapter of the Draft EIR: Section 4.2, *Air Quality*; Section 4.4, *Cultural and Tribal Resources*; Section 4.5, *Geology and Soils*; Section 4.6, *Greenhouse Gas Emissions and Energy*; Section 4.7, *Hazards and Hazardous Materials*; Section 4.8, *Hydrology and Water Quality*; Section 4.10, *Noise*; and Section 4.13, *Transportation*. In particular, while the new stormwater bioretention ponds have been designed to avoid direct placement of fill within wetlands and other waters, temporary and/or permanent fill of these features could occur or be necessary during construction, which would be a potentially significant temporary impact reduced to less than significant with mitigation.

As discussed in each of the aforementioned topical sections, the potential impacts of constructing or expanding the new stormwater infrastructure or improvements for the Project would be less than significant (with adherence to stormwater quality BMPs under the provisions of the Construction General Permit, discussed above and in Section 4.8, *Hydrology and Water Quality*,

in this chapter of the Draft EIR) or reduced to less than significant with several mitigation measures identified in this document.

Mitigation: Same as Mitigation Measure UTIL-2.

Significance after Mitigation: Less than Significant.

Wastewater

Impact UTIL-4: The Project would generate demand for wastewater utility service, and would result in the expansion of the existing wastewater collection system, the construction of which would not cause significant environmental effects. (Criteria a, b, and e) (*Potentially Significant prior to Mitigation*)

The Project site currently falls within two sanitary sewer districts: The CCCSD and the MVSD. MVSD has reviewed the preliminary subdivision and approved of the proposed subdivision as well as the request to annex the Project site to be wholly within the MVSD SOI, subject to the approval by the LAFCO. MVSD issued a “Will Serve” letter confirming its plan to provide wastewater utility service to the Project site (Leptein, 2010). Although the Project site currently sits within the CCCSD jurisdiction, CCCSD considered the proposed residential use to conflict with its current operations nearby and elected not to annex the property or provide wastewater utility service to the site (Batts, 2004; Kelly, 2008). Annexation to CCCSD is therefore not a component of the Project

As the Project site is undeveloped, the proposed development would increase wastewater flows. Wastewater generated by the Project would originate from the new development and would result in an increase in wastewater treatment demands. The project applicant prepared and submitted a preliminary Sewer Capacity Analysis that included a preliminary hydraulic analysis for the proposed Project, in addition to other existing and proposed developments served by the existing pipes that the proposed Project would replace, as described further below. The analysis calculated that wastewater treatment demands would increase by approximately 66,300 gallons per day (Aliquot, 2020). This output would represent an approximate 1.6 percent increase over the MVSD daily average flow of 1.25 mgd. MVSD has the capacity to treat 3.2 mgd (MVSD, 2020).

Therefore, given the District has sufficient existing capacity to serve the Project’s anticipated wastewater demands, the Project would not result in the construction of new or expanded wastewater treatment facilities. No changes to the wastewater treatment plan would be required to treat the increased flows from the Project. Consequently, no impacts related to the wastewater treatment requirements of the RWQCB would be expected.

In-tract wastewater will be conveyed via gravity sewer lines to the low point at northeast corner of the development. Sewer will be pumped via a private pump station and through a force main to the existing sewer in Palms Drive.

Regarding the assessment of sewer capacity on the Project site, portions of the existing sanitary sewer collection system may not be adequate to support the Project, and new connections to MVSD's existing infrastructure were determined to be required. Specifically, the Project would require a new connection to MVSD's existing sanitary sewer main in Palms Drive, and replace and/or upgrade this existing sewer main per MVSD standards in order to serve the Project.

The preliminary Sewer Capacity Analysis submitted for MVSD review included a preliminary hydraulic analysis and the proposed sewer system changes for review and approval by MVSD to confirm the capacity of the proposed replacement pipes in Palms Drive. MVSD has confirmed that the proposed sewer system changes are adequate. There are currently 6-inch vitrified clay sewer pipes (VCP) running down Palm Drive to the 15-inch trunk sewer in Arthur Road (see Figure 3-5 in Chapter 3, [Project Description]). All existing 6-inch VCP would be replaced with 8" PVC All pipes will be rebuilt to adequate slopes in compliance with MVSD design standards.

Therefore, the new infrastructure will adequately convey proposed developments of the proposed Project (as well as Palms 10 Subdivisions). The replaced system would be able to convey the proposed new flows. The applicant will submit a final hydraulic analysis to confirm the capacity calculations of the seven total up-sized replacement pipes and to address the nature of the proposed private pumping station and force main for the proposed development. Construction activity for the all sewer infrastructure would involve temporary construction activities, such as routine in-street trenching, the construction-period effects of which are addressed in several other analysis sections in this chapter, and as discussed in Impact UTIL-2, reduced to less than significant with several mitigation measures identified in this document, as enumerated in Mitigation Measure UTIL-2.

Mitigation: Same as Mitigation Measure UTIL-2.

Significance after Mitigation: Less than Significant.

Solid Waste

Impact UTIL-5: The Project would generate solid waste, but would not exceed the permitted capacity of the landfill serving the Project site, and would comply with federal, state and local statutes and regulations related to solid waste. (Criteria f and g) (*Less than Significant, No Mitigation Required*)

Construction Debris

Project construction would generate construction debris. In accordance with the 2016 CalGreen Code, as described above in the *Regulatory Setting*, a minimum of 65 percent of the construction and demolition debris generated by the Project would be reused, recycled, or otherwise diverted. Solid waste generated during construction would be transported off-site for sorting and recycling at the Contra Costa Transfer Station. Debris that could not be recycled would be sent to a CalRecycle-permitted sanitary landfill. Excess soil generated in grading for the Project would be

reused on-site as fill. Therefore, the Project would result in a less-than-significant impact related to generation of construction debris and no mitigation is required.

Operation Debris

As described in the Section 4.11, *Population and Housing*, in this chapter, it is estimated the Project would introduce approximately 356 new residents in the new 144 homes. The County's current rate of disposal for its unincorporated area is approximately 2.5 pounds per resident per day (CalRecycle, 2017). Based on this estimate, the Project could generate approximately 890 pounds per day (approximately 324,850 pounds or 146 tons per year) of solid waste that would need to be disposed of in a landfill.

Republic Services would provide solid waste collection and disposal services for the Project. Solid waste generated by the Project would be disposed of in the Keller Canyon Landfill located in Bay Point. With a total capacity remaining capacity of over 55 million cubic yards as of 2015 (73 percent remaining), which is sufficient for several decades of continued operation, the Keller Canyon Landfill would have the capacity to accommodate the additional solid waste that would be generated by the Project. In addition, the Keller Canyon Landfill is also in the process of amending its LUP, which would increase maximum daily tonnage and increase maximum daily truck trips at the landfill. Therefore, the proposed Project would be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs, and the Project's impact would be less than significant.

Mitigation: None required.

Cumulative Impacts

Impact C-UTIL-1: The Project, in conjunction with cumulative development, would not result in cumulative impacts on utilities and service systems to which the Project would have a cumulatively considerable contribution. (All Criteria) (*Less than Significant; No Mitigation Required*)

Geographic Context

Utilities

The geographic context considered for the cumulative effects of utilities includes the service areas of the various local utility providers, as described in the *Environmental Setting* above. The CCWD, has a 140,000-acre service area that encompasses the northern, central and eastern portions of the County, the cities of Concord and Clayton, as well as portions of Martinez, Walnut Creek and Pleasant Hill. MVSD provides wastewater collection, treatment, and disposal services for the approximately 4.7 square miles containing the northeasterly portion of the City of Martinez and adjacent unincorporated lands to the northeast. Combined, the Contra Costa

County's Solid Waste/Recycling Division provides solid waste services for the entire County, with MVSD serving the unincorporated areas within its jurisdiction.

Cumulative Analysis

The Project, in conjunction with cumulative development in the area (as specified in Section 4.0, *Introduction to the Environmental Analysis*, 4.0.6, Cumulative Analysis), would result in new residential development and population that would increase the demands for water supply and wastewater service, and would increase the generation of stormwater and solid waste.

As previously discussed in the *Environmental Setting* and in Impacts UTIL-1 through UTIL-5, the CCWD's water supply reliability goal is to meet 100 percent of demand in normal years and a minimum of 85 percent of demand during a drought, and has a conservation program and future water purchases to address any potential supply shortfalls during dry year conditions intended to meet the water supply reliability goal in 2040. For wastewater, the MVSD Master Plan Update indicates that its existing infrastructure is sufficient to support the Project and other infill development through the year 2040. With a total remaining capacity of over 55 million cubic yards as of 2015 (73 percent remaining), Keller Canyon Landfill has sufficient for several decades of continued operation considering future development. Therefore, the proposed Project, combined with cumulative projects in the area, would not exceed future service capacities indicate by the various utility providers.

Regarding utility infrastructure, while the Project vicinity is served by local public service providers and local utility providers, new development on undeveloped land like the proposed Project may require new infrastructure to connect to existing utility service facilities. As discussed for Impact UTIL-5 regarding increased demands for wastewater utility service, the Project applicant's preliminary Sewer Capacity Analysis and preliminary hydraulic analysis accounted for other off-site existing (15 units) and new adjacent residential developments (10 units) that would be served by existing pipes that the proposed Project would be upgraded and replaced to serve the proposed Project and other immediate development. The proposed Project would have potentially significant construction and operation related impacts associated with the necessary installation, improvement, or expansion of utility infrastructure (water, wastewater, and stormwater) to serve the vacant Project site, and those impacts are mitigated to less than significant with implementation of **Mitigation Measures UTIL-2 through UTIL-5**. Other cumulative developments that require new or expanded utility infrastructure would also require similar project-specific measures, all of which also align with standard regulatory requirements. Finally, the proposed Project and other cumulative projects would be required to comply with all standards and contribute their fair-share in impact fees, where applicable.

Overall, the proposed Project, combined with cumulative projects in the area, would not result in a significant impact regarding utilities and service systems; the impact would be less than significant.

Mitigation: None required.

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