

4.17 UTILITIES AND SERVICE SYSTEMS

This section describes utilities and service systems in the project vicinity and analyzes the potential for the project to impact water supply, wastewater, stormwater, and solid waste services and capacities. The analysis of this section is based on the following sources:

- CalRecycle’s Regionwide and Statewide Jurisdiction Diversion/Disposal Progress Report
- Central Contra Costa Sanitary District’s Collection System Master Plan Update
- East Bay Municipal Utility District’s Urban Water Management Plan
- East Bay Municipal Utility District’s Water Conservation Management Plan
- Personal communication with utility providers, and utility provider websites
- The Contra Costa County General Plan 2005-2020 (General Plan)
- United States Environmental Protection Agency, Advancing Sustainable Materials Management: Facts and Figures

These reports are available for review at Contra Costa County, Department of Conservation and Development, Community Development Division, 30 Muir Road, Martinez, California.

In response to the Notice of Preparation for this draft environmental impact report (EIR), the East Bay Municipal Utilities District (EBMUD) submitted a request that the project comply with the California Model Water Efficient Landscape Ordinance. This comment is discussed in this section.

4.17.1 EXISTING CONDITIONS

Solid Waste

The Central Contra Costa Solid Waste Authority (CCCSWA) provides solid waste and residential recycling services for unincorporated Alamo. CCCSWA holds a franchise agreement with Allied Waste (a division of Republic Services Inc.) for the collection, transfer, and disposal of residential and commercial garbage, recycling, and organics. CCCSWA also holds a franchise agreement with Mt. Diablo Recycling for the processing of residential and commercial recyclable materials.

Garbage and yard waste collected in Alamo is taken to the Contra Costa Transfer & Recovery Station, located at 951 Waterbird Way in Martinez. From there, solid waste is transported to the Keller Canyon Landfill, a 2,600-acre landfill located at 901 Bailey Rd, Bay Point, CA 94565. Keller Canyon Landfill’s maximum permitted

capacity is approximately 75 million cubic yards (mcy), and currently has a remaining capacity of 55 mcy (King, 2015). The landfill receives approximately 3,000 tons per day (tpd) out of a total 3,500 tpd daily capacity, and is expected to close in 2065. In 2015, County issued a Notice of Preparation of an environmental impact report to evaluate the impacts of increasing the maximum daily amount of tonnage the landfill may accept from 3,500 tpd to 4,900 tpd. The County has not prepared the EIR at this time and whether this application will be approved is uncertain. Based on current permitted daily tonnage amounts, it can be anticipated that closure of the landfill would occur no sooner than 2065. Recycling is taken to the Mount Diablo Recycling Center, a 90,000 square-foot facility at 1300 Loveridge Rd, Pittsburg, CA. This facility currently receives 300 tpd, and is permitted for a maximum of 500 tpd (Nejedly, 2015).

The California Integrated Waste Management Act of 1989 mandated that cities and counties divert 50 percent of all solid waste by 2000 through source reduction, recycling, and composting activities. In 2013, the diversion rate goal was increased to 75 percent by 2020. In 2015 unincorporated County had an annual disposal rate of 2.4 pounds per resident per day, well below the 3.9 pounds per resident per day threshold (Calrecycle, 2017).

Stormwater

Contra Costa County Public Works Department (CCCPW) maintains unincorporated county public drainage facilities. Two drainage systems convey runoff from the project site:

- The drainage system under Camille Avenue (Camille Avenue system) conveys stormwater through a 48-inch culvert from the project, then enlarged to a 60" culvert that crosses Danville Boulevard before emptying into San Ramon Creek. This system drains runoff from 184.5 acres, including the southern part of the project site and upland portions to Las Trampas Ridge. This system was designed in 1969 based on zoning that considered the entire drainage area up to Las Trampas Ridge as R-20.¹ Most of these upland portions of are now owned by East Bay Regional Park District (EBRPD) and zoned as open space. No future development is expected in this area.
- The drainage system under Hemme Avenue (Hemme Avenue system) conveys stormwater through a 30 inch culvert that empties into San Ramon Creek. This system collects runoff from approximately 19 acres of the northern portions of the project site. Runoff is drained to the Hemme Avenue system through an earthen ditch along the rear property lines north of Irongate Court. According

¹ R-20 zoning designates single-family residential districts where lot sizes must be at least 20,000 square feet.

to the preliminary Drainage Study (**Appendix H**) this ditch is inadequate and drainage to Hemme Avenue is poor.

Refer to **Section 4.10, Hydrology and Water Quality**, for more information on the drainage areas that convey runoff to and through the project site.

The project site is located within the County's Unformed Drainage Area 12. In Drainage Areas, new development projects must pay fees for the construction of drainage and flood control facilities that will mitigate the increased storm runoff resulting from the overall development of the area. Drainage Areas have a boundary that coincides with a subwatershed area, a Drainage Plan (showing assumed land use, where areas are to drain, and planned facilities), and a Fee Ordinance.

Water

Water to the project site is provided by the East Bay Municipal Utility District (EBMUD), which supplies water and provides wastewater treatment for significant parts of Alameda and Contra Costa counties. Approximately 1.4 million people are served by EBMUD's water system (East Bay Municipal Utilities District, 2015). Approximately 90 percent of EBMUD's water originates in the Mokelumne River watershed, with the rest originating as runoff from protected watershed lands in the East Bay Area. Mokelumne River water is transported approximately 91 miles via aqueduct from the Pardee Reservoir across the Sacramento-San Joaquin River Delta to local storage and treatment facilities. Water not immediately distributed is stored in five EBMUD reservoirs, with a total maximum capacity of 151,066 acre feet.² EBMUD has water rights that allow for delivery of up to a maximum of 325 million gallons per day (mgd) from the Mokelumne River, subject to the availability of Mokelumne River runoff and to the senior water rights of other users.

Water supply information and analysis are based on the EBMUD's 2015 Urban Water Management Plan (UWMP), a long-term planning document reporting on EBMUD's current and projected water usage, water supply programs, and conservation programs. This plan was formally adopted by the EBMUD Board of Directors in June 2016. The UWMP evaluates EBMUD's ability to effectively supply their customers with water in the coming decades. Water demand projections are based on the 2040 Demand Study, completed in 2009 and updated in 2014, which relies on land uses designated by adopted general plans within the EBMUD service area to predict average annual water demands to 2040. Since the project is consistent with the General Plan land use designations, the project is considered within the UWMP analysis.

The UWMP states that EBMUD can meet customer demands through the year 2040 during normal and single dry year conditions (EBMUD, 2015). However, EBMUD will

² 1 acre-foot is equivalent to approximately 326,700 gallons.

need to develop supplemental supplies to meet projected customer demands during multi-year droughts. EBMUD's strategy is to pursue a variety of supplemental supply projects simultaneously to minimize the risks associated with implementation of any one project, which also improves EBMUD's ability to adapt to future changing conditions such as climate change or regulatory changes. Identified strategies include purchasing water through transfers, developing a regional desalination project, expanding surface water storage, and undertaking groundwater banking/exchange efforts. Meanwhile, EBMUD's aggressive conservation and recycled water programs are expected to meet a portion of the projected growth in customer demands

Wastewater

Sanitary sewer service for the project site will be provided by Central Contra Costa Sanitary District (CCCSD), which provides sewage collection, wastewater treatment, and household hazardous waste disposal for roughly 462,000 residents and over 3,000 businesses in central Contra Costa County (Central Contra Costa County Sanitary District, 2010a). CCCSD operates 1,500 miles of collection piping, 19 pumping stations, and a Waste Water Treatment Plant (WWTP) in Martinez. The WWTP processes an average daily flow of 45 mgd, and has a treatment capacity of 54 mgd (Central Contra Costa Sanitary District, 2009). Treated water is ultimately discharged in Suisun Bay.

CCCSD's Collection System Master Plan (CSMP), updated in May 2010, evaluates the capacity needs of CCCSD's entire collection system. This prediction is based on a comprehensive review of regional land use predictions derived from adopted general plans and specific plans in CCCSD's jurisdiction. Since the project is consistent with the General Plan land use designations, the project is considered within the CSMP analysis. In regards to future land uses in Alamo, CCCSD notes "no significantly sized developments are planned." (Central Contra Costa County Sanitary District, 2010a).

4.17.2 REGULATORY SETTING

State

State Assembly Bills 610 and 221

The purpose and legislative intent of Senate Bill 610 (SB 610) and Senate Bill 221 (SB 221) was to preclude projects from being approved without specific evaluations being performed and documented by the local water provider proving that water is available to serve the project. These laws took effect on January 1, 2002.

SB 610 requires the preparation of a Water Supply Assessment (WSA) for large-scale development projects. Both SB 610 and SB 221 apply to a 500-unit residential

development or a project that would increase the number of the public water system's existing service connections by 10 percent. SB 221 requires the local water provider to provide "written verification" of "sufficient water supplies" to serve the project prior to approval of a subdivision map. This requires a higher degree of certainty than is required for approval of a WSA.

Policy Consistency Analysis

At 35-units, the project is below the 500-unit threshold and would increase the number water service connections served by the EBMUD by less than 1 percent. Therefore, the project does not require the preparation of a WSA and does not need separate analysis.

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. As of January 2010, all local agencies were required to adopt a water efficient landscape ordinance as effective as the Model Ordinance in regard to water conservation.

Policy Consistency Analysis

EBMUD's Water Service Regulations requires new development to adopt all applicable water-efficiency measures outlined in the California Model Water Efficient Landscape Ordinance. During landscape design and installation, the project proponent must ensure water conservation methods adhere to the Model regulation.

Assembly Bill 939

Assembly Bill 939 (AB 939), the California Integrated Waste Management Act of 1989, mandated the reduction of solid waste disposal in landfills. The bill mandated a minimum 50 percent diversion of material from landfills by 2000. In 2011, Assembly Bill 341 required that 75 percent of solid waste was diverted from landfills by 2020. Senate Bill 1016 implemented a simplified method of calculating diversion rates, using a 50 percent equivalent per capita disposal target.

Policy Consistency Analysis

In 2015, the unincorporated County had an annual disposal rate of 2.4 pounds per resident per day, well below the cap of 3.9 pounds per resident per day (Calrecycle, 2017). The project would be required to comply with the County's solid waste requirements, including the provisions of AB 939.

California Green Building Standards Code

The California Green Building Standards Code was enacted to improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices in the following categories:

- Planning and design
- Energy efficiency
- Water efficiency and conservation
- Material conservation and resource efficiency
- Environmental quality

Project Consistency Analysis

As required by law, the project would be subject to the operative provisions of the most recent California Green Building Code at the time that building permits are requested.

Local

Contra Costa County General Plan

The Growth Management Element of the General Plan identifies policies related to water and sanitary sewer. Policies related to stormwater drainage facilities are discussed in **Section 4.10, Hydrology and Water Quality**.

Growth Management Element

Water

The County, pursuant to its police power and as the proper governmental entity responsible for directly regulating land use density or intensity, property development, and the subdivision of property within the unincorporated areas of the County, shall require new development to demonstrate that adequate water quantity and quality can be provided. At the project approval stage, (subdivision map, land use permit, etc.), the County may consult with the appropriate water agency.

The County, based on information furnished or available from consultations with the appropriate water agency, the proponent, or other sources, should 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. Project approvals conditioned on (1) or (2) above, will lapse according to their terms if not satisfied by verification that capacity exists to serve the specific project (“will serve letters”), actual hook-ups or comparable evidence of adequate water quantity and quality availability.

Sanitary Sewer

The County, pursuant to its police power and as the proper governmental entity responsible for directly regulating land use density or intensity, property development and the subdivision of property within the unincorporated areas of the County, shall require new development to demonstrate that adequate sanitary sewer quantity and quality can be provided. At the project approval stage, (subdivision map, land use permit, etc.), the County may consult with the appropriate sewer agency.

The County, based on information furnished or available from consultations with the appropriate sewer agency, the proponent, or other sources, should determine whether (1) capacity exists within the sewer system if the development project is built within a set period of time, or (2) capacity will be provided by a funded program or other mechanism. Project approvals conditioned on (1) or (2) above, will lapse according to their terms if not satisfied by verification that capacity exists to serve the specific project (“will serve letters”), actual hook-ups or comparable evidence of adequate sewage collection and wastewater treatment capacity availability.

Public Facilities/Services Element

- 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.
- 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.
- 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.
- 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.
- 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 proponent, or other sources.
- 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.
- 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.
- 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.
- 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 is 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 in information furnished or made available to the County from consultations with the appropriate water agency, the applicant, or other sources.
- 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.
- 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.
- 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.

Policy Consistency Analysis

New development shall be required to pay its fair share of the cost of all existing public facilities it utilizes, consistent with General Plan policies 7-1, 7-2, and 7-4 of the General Plan.

Solid Waste: The Keller Canyon Landfill has existing solid waste capacity to serve the project as required by General Plan policy 7-88. As a standard condition of approval, the County would include a requirement that the project be required to divert waste from the landfill through the use of recycle programs for residents. This condition would be in compliance with General Plan policy 7-92.

Water Supply: The project is within a Local Agency Formation Commission (LAFCO) water Sphere of Influence, consistent with General Plan policy 7-19. EBMUD has indicated that it anticipates having sufficient water supply to serve the project site, consistent with General Plan policy 7-21. Drought tolerant landscaping would be planted on the project site, which would conserve water consistent with policy 7-26. The project would also be subject to the water conservation measures outlined in the most recent California Building Code at the time that building permits are requested.

Wastewater: The project is within a LAFCO sewer Sphere of Influence, consistent with policy 7-31. The project would generate residential wastewater which would not violate RWQCB waste discharge requirements, consistent with policy 7-29. CCCSD has indicated that it anticipates having sufficient sewer system capacity supply to serve the project site, consistent with policy 7-33. The project would also be subject to the water conservation measures outlined in the most recent California Building Code, thereby achieving consistency with policy 7-37 by reducing flows to the sanitary system.

4.17.3 IMPACTS AND MITIGATION MEASURES

Significance Criteria

Appendix G of the CEQA Guidelines identifies environmental issues a lead agency can consider when determining whether a project could have significant effects on the environment. The project would have a significant impact if it would:

- Exceed wastewater treatment requirements for the applicable Regional Water Quality Control Board.
- 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.
- 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.
- Not have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed.

- 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.
- Be served by a landfill without sufficient permitted capacity to accommodate the project's solid waste disposal needs.
- Not comply with federal, state, and local statutes and regulations related to solid waste.

Discussion of Less-Than-Significant Impacts

Would the project exceed wastewater treatment requirements for the applicable Regional Water Quality Control Board?

Wastewater generated by the project would originate from residential sources. No industrial wastewater would be generated. Consistent with the determinations in Chapter 4.10, incorporated herein by this reference, the project's impacts to water quality will be less than significant.

Would the project 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?

CCCSD and EBMUD have determined that project-specific infrastructure improvements would be necessary. As part of the project, water and sewer line would be installed within the new access road right-of-ways serving the project. These new lines would intertie with existing infrastructure serving the project vicinity along Camille Avenue and Ironwood Place.³ These onsite improvements would not result in any new physical environmental effects beyond those identified and evaluated in this EIR. Please see the discussions on pages 4.7-12 through 4.7-14, which are incorporated herein by this reference. A less-than-significant impact would occur.

Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

The project is expected to generate 105 residents.⁴ According to CalRecycle, 2.4 pounds of trash were generated in Unincorporated County per person per day in 2015 (Calrecycle, 2017). Using this generation rate, the project would create approximately 231 pounds per day (0.116 tpd) of solid waste per day. The Keller Canyon Landfill currently receives 3,000 tpd of solid waste (out of a permitted operating capacity of 3,500 tpd), and has a total remaining capacity of 55 mcy. The

³ Existing sewer and water lines running under Ironwood Place tie into the Camille Avenue infrastructure.

⁴ Assuming a housing multiplier of 3; see **Section 4.14, Population and Housing**, for more information.

amount of solid waste generated by the project would be approximately 0.02 percent of this landfill's remaining daily capacity, and which is neither individually significant or a considerable contribution to any cumulative impact.

This draft EIR assumes an additional 33 percent of solid waste would be diverted to recycling per day (United States Environmental Protection Agency, 2015). Recycling services will be provided by the Mount Diablo Recycling Center, which currently receives 300 tpd, and is permitted for a maximum of 500 tpd. The project will generate 0.04 tpd of recycling. This represents a less than 0.001 percent increase in Mount Diablo Recycling Center's current tpd.

Existing solid waste services would sufficiently accommodate the project's disposal needs, resulting in a less-than-significant impact to solid waste services.

Would the project comply with federal, state, and local statutes and regulations related to solid waste?

The project consists of residential land uses that would not generate unique types of solid waste that conflict with existing regulations applicable to solid waste disposal. The project would be required to comply with the County's solid waste requirements, including the provisions of AB 939. Furthermore, the project would have to comply with County Ordinance 2004-16, which 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.

In order to comply with the California Green Building Standards Code, the project proponent would be required to prepare and submit a Debris Recovery Plan to the County's Department of Conservation and Development prior to the issuance of a building or demolition permit. The plan would address major materials generated by a construction project of this size, including brush and other vegetative material, dimensional lumber, metal scraps, cardboard, packaging, and plastic wrap, and shall address opportunities to recycle such materials or divert them away from the Keller Canyon Landfill. Prior to final inspection, the project proponent shall submit a Debris Recovery Report that demonstrates that at least 50 percent of job site debris was diverted from disposal by providing receipts or gate-tags from facilities or service providers used for recycling, reuse and disposal of job site debris. In terms of operations, the project would comply with all applicable diversion requirements in state and local law, including without limitation AB 939. Given the above, this impact would be less than significant

Would the 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?

Based on the residential demand factors utilized by CCCSD, the project would generate approximately 7,000 gpd (0.007 mgd) of wastewater (Leavitt, 2015). All project generated wastewater would be treated at the WWTP, which has a treatment capacity 53.8 mgd with current dry weather flows that average 30.45 mgd. Projected wastewater flows associated with the project would result in a negligible (0.002 percent) increase in wastewater volume to this facility. No new treatment facilities would be required to accommodate this demand.

CCCSD has identified that the existing wastewater sewer lines serving the project vicinity have sufficient capacity to accommodate projected wastewater flow volumes. CCCSD has established a number of impacts fees that represent a flow-based capacity charge that fund capital improvement projects. These fees are used for the maintenance, rehabilitation, and operation of CCCSD's facilities. The project will be required to pay all applicable CCCSD fees, as determined necessary by CCCSD.

Would the project 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?

Refer to **Section 4.10, Hydrology and Water Quality** for a detailed description of stormwater drainage on the project site.

Runoff from the majority of the project site (59.7 acres) would drain into a 48-inch storm line beneath Camille Avenue. According to the Preliminary Drainage Study (**Appendix H**), the Camille Avenue system is adequate to carry post-project flows with the required freeboard at all drainage structures.

The remaining 0.83 acres of the project site would drain to the Hemme Avenue system. Previously, the infrastructure leading to this system was inadequate to channel runoff. By rerouting 96 percent of this runoff to the Camille Avenue system, all drainage structures along the Hemme Avenue system would be adequate to carry post-project flows. The project would therefore be compliant with County Ordinance, Title-9, Section 914-2.004. The proposed drainage system would also comply with NPDES, the County's C.3 requirements, and the hydromodification criteria developed by the San Francisco Bay Region Municipal Regional Stormwater NPDES Permit.

Stormwater infrastructure would not result in any new physical environmental effects beyond those identified in this draft EIR. No new or expanded stormwater facilities would be required, and the impact would be less than significant.

Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

The project would generate an increase in demand for water supply over existing uses on the project site. Based on water use in the area, EMBUD estimates that the average daily demand for a typical single family home is approximately 600 gpd (Wang, 2015). Assuming a housing multiplier of three residents per unit, the project's 35 homes would add a population of 105 to EBMUD's service area. Given this, the project would demand approximately 63,000 gpd, or 0.063 mgd. EBMUD's average system demand from 2006-2010 was approximately 197 mgd. Therefore, the project will increase demand by less than 0.1 percent, and project-related demand would account for 0.00125 percent of County-wide water demand.

The project would be consistent with the type and intensity of development allowed on this site by the County General Plan and the UWMP (McGowan, 2015). This action would promote slight population growth in the area, and is below the maximum allowable density for the project site. In addition, the project would permanently protect approximately 40 acres as open space. Thus, the project would result in no additional water demand nor require additional water supply capacity beyond what has already been projected and planned for as part of the UWMP). The project would have a less-than-significant impact to water supply.

In addition, EBMUD requires its customers to meet water conservation regulations before receiving service. For example, Section 31 of EBMUD's Water Service Regulations requires that water service shall not be furnished unless all the applicable water-efficiency measures described in the California Model Water Efficient Landscape Ordinance are installed. Customers must also meet water-efficiency standards for indoor and outdoor water appliances in adherence with the EBMUD Water Conservation Master Plan. These water conservation measures would be incorporated into project design and would further reduce the demand for water supply by the project.

4.17.4 Cumulative Impacts

Water Supply

The UWMP accounts for potential demand created by the project as well as the reasonably foreseeable and relevant projects within the EBMUD service boundary. EBMUD anticipates meeting the projected water demand for its service area through 2040 for normal water years, but notes that EBMUD's current water supply is insufficient to meet customer needs during multiple-year droughts. In the event of a single drought year, EBMUD would follow the actions outlined in EBMUD's "Urban Water Shortage Contingency Plan." In the event of multiple drought years, EBMUD will impose a Drought Management Program to minimize drought impacts on EBMUD customers while continuing to meet obligations to downstream water

users. Depending on the length and severity of the drought, UWMP may take the following actions:

- Initiate public information campaign to explain water supply issues
- Conduct outreach with specific water users to employ water conservation measures
- Increase efficiency of system water supplies by intensifying maintenance and repairs
- Establish voluntary or mandatory customer water reduction goals
- Implement rate and water restriction changes to promote conservation

Incorporation of the EBMUD's Drought Management Program will minimize water use, resulting in a less-than-significant cumulative impact. A complete discussion of this program is available in the UWMP, which is incorporated herein by reference. Ultimately, there are no significant cumulative impacts, nor would the project make a considerable contribution to any cumulative impact.

Wastewater

The CSMP identified several deficient corridors within CCCSD's service boundary where the current sewer system may meet or exceed max capacity during 5-year or 20-year wet weather events. In a worst-case scenario, with full 2040 buildout and a 20-year flow scenario, CCCSD predicts that 162,228 feet of pipe - roughly 10 percent of the entire system - will meet or exceed capacity (Central Contra Costa Sanitary District, 2010a).

The CSMP identifies capacity relief solutions by upsizing pipes and providing new facilities to convey peak flows during extreme weather events. CCCSD plans to spend approximately \$10.6 million in collection system improvements from 2010-2020 to address the most immediate capacity issues (Central Contra Costa Sanitary District, 2010a). Therefore, there are no significant cumulative impacts, nor would the project make a considerable contribution to any cumulative impact.

Stormwater

This analysis assesses impacts to stormwater utilities occurring within Unformed Drainage Area 12. The project, along with the three recent projects identified within the County, may cumulatively impact stormwater services within this drainage area. As previously discussed, new development projects must pay fees for the construction of drainage and flood control facilities that will mitigate any increased storm runoff resulting from the overall development of the area. Notwithstanding the above, as discussed in **Section 4.10, Hydrology and Water Quality**, the proposed drainage system has been designed to comply with NPDES and the County's C.3 requirements, ensuring that post-project runoff does not exceed pre-project runoff. Therefore, the project would not make a considerable contribution to any cumulative impact.

Solid Waste

The Keller Canyon Landfill is operating at 86 percent maximum daily capacity, and is not expected to close no sooner than 2065. The project, along with other recent and future foreseeable projects in Keller Canyon Landfill's service area, may generate enough solid waste to exceed this landfill's maximum daily capacity. However, the amount of solid waste generated by the project would be approximately 0.02 percent of this landfill's remaining daily capacity, which represents a negligible cumulative contribution.

4.17.5 REFERENCES

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