

3.16 Utilities and Service Systems

The purpose of this section is to analyze the potential impacts of the proposed project on utilities and service systems. The analysis focuses on whether the project's estimated water demand, wastewater generation, and solid waste generation would be accommodated by existing and future planned infrastructure (including stormwater drainage facilities), and proposes mitigation measures as needed. Portions of the following analysis are based on various resources including the Elsinore Valley Municipal Water District's Urban Water Management Plan (EVMWD) (UWMP) (EVMWD, 2016); the Onsite Wastewater Treatment System Technical Memorandum (PACE, 2014), and a Response to County Comments on Onsite Wastewater Treatment Systems Memorandum (Terrestrial, 2014a), located in Appendices D2 and D3 of this EIR; a Biological Resource Analysis (PCR, 2014), located in Appendix C1 of this EIR; and the WQMPs for both project site parcels (Hunsaker, 2014a; Hunsaker, 2014b) located in Appendices H1 and H2 of this EIR.

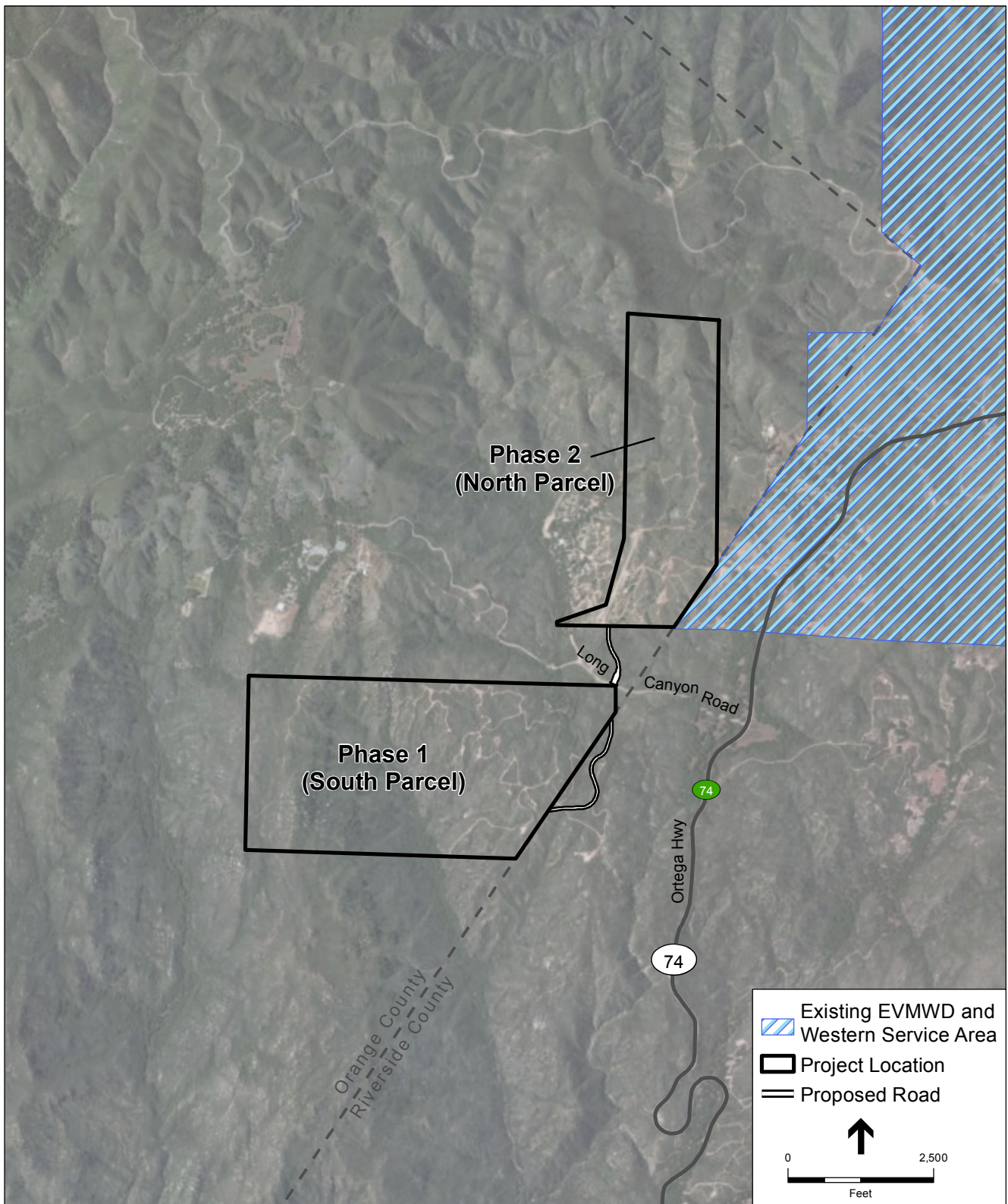
3.16.1 Environmental Setting

Existing Conditions

Water Supply

The proposed project includes the annexation of 133.4 acres of the project site (the area needing domestic water service) into the service area of EVMWD. Areas of the project site that would remain in natural open space or do not require irrigation would not be annexed into the water service area. EVMWD is located in western Riverside County, encompasses 96 square miles, and is a sub-agency of Western Municipal Water District (Western) who is a member agency of Metropolitan Water District (MWD) of Southern California (EVMWD, 2016a). EVMWD receives imported water from MWD through its member agency, Western. EVMWD is wholly within the boundaries of Western, which is wholly within the boundaries of MWD. Because of this arrangement, no territory can be annexed into EVMWD without also annexing into the boundaries of Western and MWD (EVMWD, 2016a). The proposed service area boundary change requires approval by Riverside County Local Agency Formation Commission (Riverside LAFCO). See **Figure 3.16-1** for the proximity of the project site to the existing Western and EVMWD service area boundary.

EVMWD provides over 42,692 potable service connections to a service area populated with approximately 140,000 people. Average potable water supplies total 61,600 acre-feet per year (AFY). EVMWD obtains its potable water supplies from imported water from Metropolitan (68 percent), local surface water from Canyon Lake (9 percent), and local groundwater (22 percent) (EVMWD, 2016a). As a member agency of Western, EVMWD purchases treated imported MWD water from Western through the Auld Valley Pipeline (AVP) and the Temescal Valley Pipeline (TVP). The AVP and the TVP are located on the southeastern and northwestern end of EVMWD's distribution system, respectively.



SOURCE: ESRI.

The Preserve at San Juan . 120826

Figure 3.16-1

Project Site Proximity to Existing Elsinore Valley Municipal Water District (EVMWD) and Western Municipal Water District (Western) Service Area Boundary

EVMWD owns Canyon Lake, otherwise known as Railroad Canyon Reservoir. The reservoir impounds local runoff from the San Jacinto River watershed and stores water behind Railroad Canyon Dam, which is treated by the Canyon Lake Water Treatment Plant (WTP). Due to siltation, the original storage capacity of 12,000 acre-feet (AF) has been reduced to 4,600 AF of water (EVMWD, 2016). EVMWD has access to groundwater from Elsinore Basin, Coldwater Basin, San Bernardino Bunker Hill Basin, Rialto-Colton and Riverside-North Basin. Almost all of the groundwater production that is used for potable use occurs in the Elsinore Basin (EVMWD, 2016).

EVMWD has a six-inch water main that extends from the Tomlin No. 1 Booster Station (located on the northwestern boundary of Lake Elsinore) and travels southwest, providing potable water to upgradient communities along Ortega Highway. This transmission main runs adjacent to the north portion of the project site along Ortega Highway, and then intersects the project site as it travels west along Long Canyon Road to its terminus at the Los Pinos No. 2 Reservoir, located west of the project site at an elevation of approximately 3,500 feet (see Figure 2-12 of this EIR for a layout of the existing and proposed water distribution system). The existing transmission main would supply water to the proposed project.

Water Demand

EVMWD prepared an UWMP in 2016 in compliance with the California Urban Water Management Plan Act (UWMP Act). The purpose of the plan is to document EVMWD’s projected water demands and its plans for delivering water supplies to EVMWD’s water service area through 2040 (EVMWD, 2016). In 2015, EVMWD potable water deliveries totaled 21,333 AF. **Table 3.16-1** shows the EVMWD water deliveries by water use sector in 2015 and those projected through 2040.

**TABLE 3.16-1
 ACTUAL AND PROJECTED POTABLE WATER DELIVERIES FOR 2015 THROUGH 2040**

Water Use Sectors	2015 (AF)	2020 (AF)	2030 (AF)	2040 (AF)
Single family	13,691	22,848	29,006	35,041
Multi-Family	789	1,316	1,671	2,019
Commercial	3,021	5,042	6,403	7,733
Institutional/governmental	1,095	1,827	2,320	2,802
Landscape	1	2	3	4
Wholesale	539	900	1,142	1,380
Other	2,197	2,464	2,646	2,822
Total	21,333	34,400	43,200	51,800

SOURCE: EVMWD, 2016.

Water demand in all development areas is expected to increase. EVMWD’s UWMP includes a discussion of project future water demands and potential water projects that can be implemented to meet this demand (EVMWD, 2016). As described in the EVMWD Water Master Plan, the water demand in 2040 (shown in **Table 3.16-1**) would result in an average annual demand of 75.0

million gallons daily (mgd), and a maximum day demand of 80.9 mgd. The Water Master Plan and UWMP describe that EVMWD will be able to meet the maximum day demand with future supplies of 88.89 mgd (EVMWD, 2016). Thus, EVMWD has developed water supply demand and projections through development of its 2016 Water Master Plan and 2016 UWMP, which details that water supplies will be able to meet the anticipated demand in 2040 (EVMWD, 2016).

Stormwater Facilities

Currently, no stormwater drainage infrastructure exists on the project site. Long Canyon Creek flows through the southwest corner of Phase 2 (north parcel) and through the northeast corner of Phase 1 (south parcel), eventually joining with the southwest-flowing San Juan Creek a mile downstream of Phase 1 (south parcel) southern boundary (PCR, 2014). Runoff from the western portion of the Phase 1 (south parcel) currently drains southerly via un-named tributary to San Juan Creek. Runoff from both phases drains southeasterly to Long Canyon Creek. Refer to Figure 3.9-2 for water bodies in the project vicinity.

Wastewater

EVMWD is the nearest service provider for wastewater collection and treatment to the project site; however, the project site is not located within the vicinity of existing wastewater infrastructure. As described below, the proposed project would install septic systems for each residential parcel, and would not obtain service for wastewater treatment and disposal from EVMWD. Within its service area, EVMWD collects and conveys wastewater generated by residences and businesses to one of three tertiary level treatment facilities.

Solid Waste

The project would be served by a commercial residential waste hauler that serves the project vicinity and would include curbside waste, recycling, yard waste pickup, bulk waste and hazardous material pickup, which are typical residential solid waste services.

The closest Riverside County landfill is the El Sobrante Landfill, located 10 miles north of the project site in the City of Corona. The landfill is permitted to accept up to 16,054 tons of waste per day through 2044 (Calrecycle, 2016). In August 2016, the average daily amount of solid waste disposed at the landfill was 8,534 tons (Calrecycle September Inspection Report); thus, having an average daily additional capacity of 7,520 tons per day (CalRecycle, 2016).

The closest Orange County landfill is the Prima Deshecha Sanitary Landfill, located 11 miles southwest of the project site, in the City of San Juan Capistrano. The landfill is permitted to accept 4,000 tons per day and is permitted to operate through 2067 (Calrecycle 2016). In September 2016, the maximum daily amount of solid waste disposed at the landfill was 2,075 tons (Calrecycle September Inspection Report); thus, having an average daily additional capacity of 1,925 tons per day (CalRecycle, 2016).

In addition, the Bowerman Sanitary landfill located 11002 Bee Canyon Access Road in Trabuco Canyon, which is approximately 40 miles from the project site, is permitted to accept 11,500 tons per day of solid waste through 2053. In September 2016, the maximum daily amount of solid waste disposed at the landfill was 7,680 tons (Calrecycle September Inspection Report); thus, the landfill has an average daily additional capacity of 3,820 tons per day.

Regulatory Setting

Clean Water Act

The Federal Water Pollution Control Act or Clean Water Act (CWA) serves to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. The CWA was created in 1972, and then amended in 1977, and again in 1987 when the NPDES program was created. NPDES requires a permit for discharge of pollutants from industrial sources and publicly owned treatment works into navigable waters. The discharge must meet applicable requirements, which are outlined in the CWA and which reflect the need to meet federal effluent limitations and state water quality standards.

Section 303 (d) of the CWA states that each state shall identify those waters within its boundaries for which the effluent limitations required by section 301(b)(1)(A) and section 301 (b)(1)(B) are not stringent enough to implement any water quality standard applicable to such waters. The state shall establish a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of such water (see Section 3.8, *Hydrology and Water Quality*, of this EIR).

California Administrative Code

The California Administrative Code (CAC) establishes efficiency standards for reducing water usage in new water fixtures. Title 24 CAC, Section 25352, addresses pipe insulation requirements, which reduce the amount of hot water used before reaching equipment and fixtures. Title 20 CAC (Public Utilities and Energy), Section 1604, provides efficiency standards for water fixtures including lavatory faucets, showerheads, and sink faucets.

California Integrated Waste Management Act of 1989

The California Integrated Waste Management Act of 1989 (AB 939) redefined solid waste management in terms of both objectives and planning responsibilities for local jurisdictions and the state. AB 939 was adopted to reduce the volume and toxicity of solid waste that is landfilled and incinerated by requiring local governments to prepare and implement plans to improve the management of waste resources. AB 939 required each of the cities and unincorporated portions of the counties to divert a minimum of 25 percent of the solid waste sent to landfills by 1995 and 50 percent by the year 2000. To attain goals for reductions in disposal, AB 939 established a planning hierarchy utilizing new integrated solid waste management practices. These practices include source reduction, recycling and composting, and environmentally safe landfill disposal and transformation. Other state statutes pertaining to solid waste include compliance with the California Solid Waste Reuse and Recycling Act of 1991 (AB 1327), which requires adequate areas for collecting and loading recyclable materials within a project site. As a new waste generator, the proposed project would be subject to the requirements of these solid waste provisions, as enforced by the County of Orange.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act requires that any person discharging waste or proposing to discharge waste within any region, other than to a community sewer system, which could affect the quality of the "waters of the state," file a report of waste discharge that includes a

characterization of the discharge including design and actual flows, a list of constituents and the discharge concentration of each constituent, a list of other appropriate waste discharge characteristics, a description and schematic drawing of all treatment processes, a description of any Best Management Practices used, and a description of disposal methods, and a site map.

State Water Resources Control Board – Water Quality Control Policy for Siting, Design, Operation and Maintenance of Onsite Wastewater Treatment Systems

Onsite wastewater treatment systems are useful and necessary structures that allow habitation at locations that are removed from centralized wastewater treatment systems. On June 19, 2012, the State Water Resources Control Board adopted Resolution No. 2012-0032—the Water Quality Control Policy for Siting, Design, Operation, and Maintenance of On-site Wastewater Treatment Systems which establishes a statewide, risk-based, tiered approach for the regulation and management of onsite wastewater treatment system installations and replacements and sets the level of performance and protection expected from onsite wastewater treatment systems in order to avoid water quality degradation and protect public health. The policy lists standards for existing and replacement onsite wastewater treatment systems, as well as corrective action requirements for failing or potentially failing systems. The policy also includes minimum monitoring and reporting requirements; exemption criteria; criteria for determining when an existing onsite wastewater treatment system is subject to major repair, and a conditional waiver of waste discharge requirements (SWRCB, 2012a). The policy also conditionally waives the requirement for owners of wastewater treatment systems to apply for and receive Waste Discharge Requirements in order to operate their systems when they meet the conditions set forth in the Policy. The San Diego RWQCB was required to incorporate these standards into its Water Quality Control Plan (Basin Plan) by May 13, 2014 (SWRCB, 2012b).

California Plumbing Code

“Nonpotable Reuse Systems” of the 2010 California Plumbing Code (Title 24, Part 5, Chapter 16A, Part 1) details definitions and specific design requirements for graywater systems (tanks, irrigation fields and disposal fields). Table 16A-1 describes the required distances of graywater systems from various land features, such as building structures, water supply wells, and streams and lakes. Specifically, a horizontal distance of 100 feet must be maintained between streams and graywater irrigation fields (IAPMO, 2014).

Regional Water Quality Control Board – Guidelines for New Community and Individual Sewerage Facilities

The RWQCB adopted Guidelines for New Community and Individual Sewerage Facilities (Resolution No. 79-44) on June 25, 1979. An updated set of guidelines is included in the 2011 Basin Plan, which supersedes Resolution No. 79-44 and has the goal of improving the efficiency of the review process, eliminating unnecessary Regional Board regulation, and improving protection of ground water quality.

Authority deferral to a County health officer in regard to onsite wastewater treatment systems would occur if the project operator satisfies the following conditions: (1) the use of new individual subsurface disposal systems for any subdivision of land will be in the best public interest; (2) individual disposal systems will comply with all existing county design criteria; (3)

the cumulative impact from proposed individual disposal system(s) or from new commercial and/or industrial development(s) will not cause adverse impacts to the beneficial uses of ground water; (4) individual disposal systems will meet the minimum unsaturated soil thickness between the bottom of leach lines or the bottom of seepage pits and the historic high ground water level. The minimum unsaturated soil thickness is nine feet for soils with good percolation rates, 12 feet for soils with moderate percolation rates, and 14 feet for soils with poor percolation rates. Exceptions to the unsaturated soil thickness criteria may be allowed by the appropriate County health officer, based upon knowledge of local site conditions.

Upon receipt of the report of waste discharge for the proposed onsite wastewater treatment systems, the San Diego RWQCB would determine whether the proposed project would meet the above listed criteria and authority would defer to the County Department of Health for regulation and protection of groundwater quality.

Orange County On-Site Sewage Absorption System Guidelines

Required as part the Orange County Building Plan Check, the Orange County On-site Sewage Absorption System Guidelines are intended to provide a uniform approach to percolation testing requirements and design criteria of an onsite sewage absorption system. The Orange County Public Works Department's approval of proposed onsite sewage systems may be either a requirement for recordation of a parcel/tract map or a requirement before building/structural permits are issued. There are two main conditions for approval of an onsite sewage system: (1) percolation tests must be performed in accordance with County procedures for leach fields and/or seepage pits; and (2) the system must be designed in accordance with County standards.

Four copies of the engineer's soil percolation reports must be submitted to the Plumbing Plan Check Section at the Orange County Public Works Department. All reports must include a log of all soil borings and percolation tests as well as plans showing a designated system. Reports and plans submitted to obtain Building Permits must include (Orange County, 2014):

- Depth to groundwater;
- Depth to any impervious layers;
- Acceptable result of six percolation tests distributed throughout an area set aside for trench leach fields and/or at least one passing percolation for seepage pits for the proposed dwelling;
- Distance between trenches or seepage pits;
- Location of property lines;
- Drainage courses;
- Soils characteristics;
- Trench width or pit diameter;
- Pit depth or depth of gravel below pipe;
- Topographic lines, if steep slopes exist;
- Footprint of house;
- Outline of septic tank and distribution box; and

- The plan must reflect all conditions after precise grading.

Orange County Drainage Area Management Plan

The Orange County Drainage Area Management Plan (DAMP), updated in 2007, documents specific water pollutant control elements and is the primary policy, planning and implementation document for municipal NPDES Stormwater Permit compliance within the County. The main objectives of the DAMP are to present a plan that satisfies NPDES permit requirements and to evaluate the impacts of urban stormwater discharges on receiving waters. Instead of being viewed as single document, the DAMP serves as the foundation for a series of model programs, LIPs and watershed implementation plans. LIPs serve as a baseline program with detailed DAMP implementation information and are watershed-specific. The DAMP requires the effectiveness of each LIP element to be assessed, and through water quality testing and public input, for BMPs to be enhanced.

Orange County Local Implementation Plan

While the 2007 DAMP provides a foundation for the Orange County Stormwater Permittees to implement model programs designed to prevent pollutants from entering receiving waters to the maximum extent practicable, the description and detail of how this is being accomplished on a local level is contained in a Local Implementation Plan (LIP). The LIP is designed to work in conjunction with the DAMP and each city and the County have developed a comprehensive LIP that is specific to their jurisdiction (Orange County, 2016). As the proposed project is located in unincorporated Orange County, it would be subject to the Orange County 2010-2011 LIP.

The 2010-2011 Orange County LIP was prepared as a compliance program for the San Diego RWQCB Fourth Term Municipal Separate Storm Sewer System Permit. The main objectives of this LIP are to fulfill the County's commitment to present a plan that satisfies the requirements of its Municipal Separate Storm Sewer System Permit and to evaluate and reduce the impacts of urban stormwater runoff on the beneficial uses of receiving waters. This LIP, in conjunction with the Countywide programmatic DAMP, is the principal policy and guidance document for the County's NPDES stormwater program (Orange County, 2016).

The LIP characterizes priority projects based on various characteristics as specified by the San Diego Regional Board and requires the preparation of a project-specific WQMP. The WQMP is based on a site assessment which identifies site-specific and targeted watershed pollutants. The assessment results then identify which BMPs are incorporated into the project site. Required BMPs include site design BMPs (e.g., permeability maximization), source control BMPs (e.g., street sweeping), and treatment control BMPs (e.g., vegetated swales). Hydromodification controls as specified in the South Orange County Hydromodification Management Plan (HMP) must also be incorporated. The LIP also requires post-construction BMP inspection and maintenance in compliance with Municipal Separate Storm Sewer System Permit requirements.

Hydromodification Management Plan for South Orange County

This HMP was prepared to comply with the San Diego RWQCB Municipal Separate Storm Sewer System Permit (Order R9-2015-0100, which requires that an HMP be developed and implemented to manage increases in runoff discharge rates and durations from all PDPs.

Hydromodification refers to changes in the magnitude and frequency of stream flows and its associated sediment load due to urbanization or other changes in the watershed land use and hydrology. It also encompasses the resulting impacts on receiving channels, such as erosion, sedimentation, and potentially degradation of in-stream habitat. The HMP seeks ways to mitigate erosion impacts by establishing requirements for controlling runoff from new development.

County of Orange General Plan Public Services & Facilities Element

Waste Management

Goal: Maintain a competitive rate for disposal in Orange County.

Policy 3: To promote the utilization of waste recycling and reuse measures which extend the operating life of existing solid waste facilities.

Water System

Goal 1: Encourage the planning and development of a water conveyance and distribution system to meet the County's future demand.

Policy 1: To ensure the adequacy of water system capacity and phasing, in consultation with the service providing agency(ies), in order to serve existing and future development as defined in the General Plan.

Wastewater System

Goal 1: Support the planning and development of a wastewater system to meet both the County's demand and attain water quality goals.

Policy 1: To protect quality in both delivery systems and groundwater basins through effective wastewater system management.

Policy 3: To ensure the adequacy of wastewater system capacity and phasing in consultation with the service providing agency(ies) in order to serve existing and future development as defined by the General Plan.

3.16.2 Thresholds of Significance

The *CEQA Guidelines* Appendix G provides guidance for assessing the significance of potential environmental impacts. Relative to utilities and service systems, a project could have a significant effect on the environment if it would:

- Exceed wastewater treatment requirements of 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 impacts;
- Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which would cause significant environmental effects;

- 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 with sufficient permitted capacity to accommodate the project's solid waste disposal needs; and
- Comply with federal, state and local statutes and regulations related to solid waste.

It was determined in the NOPs/Initial Studies (see Appendices A1 and A2 of this EIR) that implementation of the proposed project would not result in impacts related to wastewater treatment capacity. The proposed project would install onsite wastewater treatment systems on each residential lot, which would treat wastewater, and the resulting effluent would be used for irrigation. Thus, the proposed project would not result in any impacts related to wastewater capacity of service provider, and no impacts would occur. Therefore, no further analysis of this significance criterion is included in the EIR.

As described in Section 1.0, *Introduction*, Notice of Preparations and Initial Studies were prepared and circulated for public review in both 2013 and 2014; the following comments related to utility and service system topics were received:

- Evaluate the efficiency and reliability of public services
- Provide statement to clarify the proposed annexation to Metropolitan Water District, Western Municipal Water District, and the Elsinore Valley Municipal Water District.
- Describe if the water pipelines supplying the project be new or would the existing pipelines be used.
- Potential impacts related to utility infrastructure installation.

3.16.3 Methodology

The significance determination for the utilities and service systems impact analysis is based on a review of existing literature as well as the WQMPs prepared for both project site parcels (Hunsaker, 2014a; Hunsaker, 2014b) located in Appendices H1 and H2 of this EIR, respectively. These assessments presented findings, conclusions, and recommendations concerning development of the project sites based on the engineering analysis of geotechnical properties of the subsurface conditions, evaluation of geotechnical properties of soils, and a summary of findings, conclusions, and recommendations. The sections that follow discuss the identified impacts and the measures that would be incorporated to mitigate significant impacts.

3.16.4 Project Impacts

Impact 3.16-1: Would the project exceed the wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Less than Significant Impact with Mitigation Incorporated. Based on the average generation unit of 320 gallons of wastewater per day (gpd) per household (PACE, 2014), the proposed residents of the 72 total households from both phases would generate a total of approximately 23,040 gpd of wastewater, which would be treated and disposed of through the use of onsite wastewater treatment systems located on each lot. The onsite wastewater treatment systems installed on each lot would consist of three components: (1) a 1,500-gallon septic tank; (2) three modular peat fiber biofilters; and (3) a 300-gallon water reuse pump station. Approximately 320 gallons per day would be emitted for irrigation of approximately 13,100 square feet; treated effluent would be supplemented with potable water to meet this irrigation demand when necessary.

The project site is located within the jurisdiction of the San Diego RWQCB, who was required to incorporate the SWRCB Policy into its specific Basin Plan by May of 2014. The project operator would not be required to file a report of waste discharge for the proposed onsite wastewater treatment systems, so long as the systems are designed in compliance with the SWRCB Policy. The project would comply with the Orange County Guidelines and SWRCB Policy through implementation of Mitigation Measure MM 3.6-2, in Section 3.6, *Geology and Soils*, which requires the project operator to design and operate the septic system in compliance with the Orange County On-site Sewage Absorption System Guidelines and SWRCB On-Site Wastewater Treatment System Policy. The siting and design of onsite wastewater treatment systems would be designed according to Tier 2 standards, which means Orange County Public Works would supervise the design and approval of the systems.

In addition, components of the onsite wastewater treatment system would be setback from structures, property lines, and the top of descending slopes to ensure appropriate function, as required by the existing State Plumbing Code and County and RWQCB onsite wastewater system requirements, which would be verified by the County's Building and Safety Department prior to approval of permits to operate. Furthermore, Mitigation Measure MM 3.6-3 requires the HOA to educate residents about the proper use and maintenance of septic systems to prevent damage and failure. The septic tanks would also be emptied of sludge regularly and transported to disposal by a County-registered waste hauler.

In the case of a septic malfunction, prior to an overflow event, the system includes high water level alarms that would notify the homeowner and the HOA of a potential overflow condition, which would allow time for corrective action. If an overflow still occurs and the soil becomes saturated, the subsurface irrigation system would shut down and the 1500-gallon emergency storage tank would be used for up to five days of storage.

Overall, the onsite wastewater system would be installed and operated in compliance with County, SWRCB, and RWQCB requirements, which would be verified by the County prior to permit approval; therefore, impacts related to exceedance of RWQCB wastewater treatment requirements from the proposed onsite wastewater treatment systems would be less than significant with implementation of existing requirements, Project Design Features, and mitigation measures.

Mitigation Measures

MM 3.6-2 (Provided in Section 3.6, Geology and Soils under Impact 3.6-5)

MM 3.6-3 (Provided in Section 3.6, Geology and Soils under Impact 3.6-5)

Impact 3.16-2: 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 impacts?

Less than Significant Impact.

Water Facilities

The proposed project would require both offsite and onsite water infrastructure improvements to provide appropriate water distribution and pressure. The improvements have been coordinated with EVMWD since 2013 (as shown in Appendix K). EVMWD has already provided will-serve letters in 2013, 2015, and 2016. In addition, EVMWD has been planning to provide water services to the project area since at least 2006, when a Water System Plan of Service was prepared by EVMWD (June 2006) that describes the ability of EVMWD to provide water services to the project area at a greater density than is currently proposed.

The off-site improvements for the proposed project would extend water supplies from the existing six-inch water main located within the Long Canyon Road right-of-way to the project site. The new onsite water distribution facilities would include a 12-inch distribution line that would be constructed throughout the developed portions of the project site. In addition, the existing six-inch main would feed two new above ground water storage reservoirs; one 615,000 gallon and one 525,000 gallon. The reservoir site on the Phase 1 (south parcel) would be 615,000 gallons and would be located in the northwestern-most part of the Phase 1 development area. The reservoir in the Phase 2 (north parcel) would be 525,000 gallons and would be located at the far northern end of the Phase 2 parcel development area. Both reservoirs would be sited at elevations sufficient to provide water to the respective development phases via gravity flow. New distribution mains from each reservoir would be designed and installed in cooperation with EVMWD to provide water to the respective development phases. The new mains are sufficiently sized based on peak flow demand and fire-flow requirements as required by EVMWD and OCFA standards for service provision and fire protection. These improvements designed pursuant to EVMWD and OCFA requirements would ensure that the proposed project would have sufficient water supply.

The construction of these facilities is included within the project, and have been evaluated throughout this EIR. For example, air quality emissions from construction of the water facilities are included in the Air Quality evaluation in Section 3.3. In addition, construction activities would be required to comply with all County development standards regarding construction noise, air quality, dust suppression, erosion control (through the required SWPPP) and other construction related potential effects as described throughout this EIR. Furthermore, with implementation of the Project Design Features and mitigation measures within this EIR, which would be verified by the County Building and Safety Department prior to permit approval,

impacts related to construction of the water facilities that are needed to serve the proposed project would be less than significant.

Wastewater Facilities

As described above, onsite wastewater treatment systems would be installed on each residential lot, and would consist of three components: (1) a 1,500-gallon septic tank; (2) three modular peat fiber biofilters; and (3) a 300-gallon water reuse pump station. As described above for water facilities, construction of the wastewater facilities is included within the project, and have been evaluated throughout this EIR. For example, activities involved in the construction and installation of the septic onsite wastewater treatment systems and subsurface irrigation system would include excavation and backfilling that would occur as part of the overall project construction activities. As described above, construction activities would be required to comply with all County development standards, Project Design Features, and mitigation measures within this EIR, that would be verified by the County Building and Safety Department prior to permit approval, which would reduce impacts related to construction of wastewater facilities that are needed to serve the proposed project to a less than significant level.

Impact 3.16-3: 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?

Less than Significant Impact with Mitigation Incorporated. The proposed project would install a residential development in a presently undeveloped area, and thus would require the construction of new storm water drainage facilities. Runoff from the improved areas of the site would be conveyed as sheet flow to vegetated swales for conveyance to one of the project's infiltration basins, which would filter and slowly discharge runoff from the site.

Construction of these drainage facilities along with rest of the project would include excavation and backfilling that would expose bare soil to wind and rain, potentially resulting in top soil loss, soil erosion and sedimentation of surrounding water bodies. However, storm drainage facility construction would be part of the entire project that would be required to comply with the NPDES Construction General Permit included as Mitigation Measure MM 3.9-1 (See the discussion in Section 3.9, *Hydrology and Water Quality*, of this EIR for more details). In compliance with this permit, a SWPPP would be prepared and implemented; identifying BMPs that would minimize potential impacts related to construction of the storm drain system. Overall, with implementation of the construction requirements and mitigation measures within this EIR, which would be verified by the County Building and Safety Department prior to permit approval, impacts related to construction of drainage facilities that are needed to serve the proposed project would be less than significant.

Mitigation Measure

MM 3.9-1 *(Provided in Section 3.9, Hydrology and Water Quality under Impact 3.9-1)*

Impact 3.16-4: Would sufficient water supplies be available to serve the project from existing entitlements and resources, or would new or expanded entitlements be needed?

Less than Significant Impact. The project includes development of 72 single-family residences, which would result in the addition of approximately 230 residents to the area (see Section 3.12, *Population and Housing* of this EIR, for more information about onsite population). As part of the project to provide water services for operation of the proposed project, 133.4 acres of land would be annexed in to the service area of EVMWD. Only developed portions of the project that would require potable water supplies would be annexed; and all non-irrigated areas would remain outside of the water service area. EVMWD is wholly within the boundaries of Western, which is wholly within the boundaries of MWD. Because of this arrangement, the project includes annexation into all water districts for service provision. Annexation into the boundaries of EVMWD, Western, and MWD in order to obtain water supply service is required for the project to be implemented, and is included as a Project Design Feature PDF-18.

Construction Water Supplies

As shown in **Table 2-4** in Chapter 2, *Project Description*, construction water usage would total 18.9 AF. Phase 1 (south parcel) would require approximately 3,608,700 gallons (11.1 AF) of water. Phase 2 (north parcel) would require approximately 2,549,550 gallons (7.8 AF) of water. Construction water would be provided by the existing wells on the project site. The Phase 1 (south parcel) currently contains a water well and cistern; and Phase 2 (north parcel) contains two active water wells and water storage tanks (one of them 8,000 gallons). These existing facilities would provide construction water supply throughout construction activities. Construction water usage of these wells would not affect any existing water supply entitlements; thus, water supply impacts related to needing expanded entitlements for construction activities would not occur.

Operational Water Supplies

Based on the average generation unit of 600 gpd per dwelling unit, operation of the proposed 72 single family units would generate a total water demand of approximately 43,200 gpd [25,800 gpd for Phase 1 (south parcel) and 17,400 for Phase 2 (north parcel)], as shown in **Table 2-5**, Operational Water Demand. For both phases, irrigation of the vineyards would require an average of 68,897 gpd; irrigation of roadway and swale landscaping would require 101,821 gpd; and irrigation of fuel modification zones would require 122,210 gpd. Therefore, the total operational demand would be 336,128 gpd.

The project's maximum operational water demand of 336,128 gallons per day (or approximately 370 AFY) is within the potable water supply available by EVMWD (EVMWD, 2016). As described in the EVMWD Water Master Plan, the water demand in 2040 (shown in **Table 3.16-1**) would result in an average annual demand of 75.0 mgd, and a maximum day demand of 80.9 mgd. The Water Master Plan and UWMP describe that EVMWD will be able to meet the maximum day demand with future supplies of 88.89 mgd (EVMWD, 2016). These water demand projections are based on existing land use/zoning and regional growth projections for the service area.

Currently, the project site has a zoning designation of General Agricultural (A1), which allows residential development at a maximum density of four acres per dwelling unit), which would

result in 146 dwelling units on the project site at build out. Conversely, the proposed project would only develop 72 residential units, and the remainder of the project site would consist of preserved open space, landscaping, and fuel modification areas that would be developed. Therefore, the proposed project would result in fewer residential units than the build out allowable by the existing zoning criteria; and development of 72 single-family units on the project site would be within EVMWD's existing water demand projections. EVMWD would not need additional water entitlements to serve the proposed project, and the project would result in a less than significant impact on water supply.

Impact 3.16-5: Would the project be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs?

Less than Significant Impact. As described above, the closest Riverside County landfill is the El Sobrante Landfill, located 10 miles north of the project site in the City of Corona. The landfill is permitted to accept up to 16,054 tons of waste per day through 2044 (Calrecycle, 2016). In August 2016, the average daily amount of solid waste disposed at the landfill was 8,534 tons (Calrecycle September Inspection Report); thus, the landfill has an average daily additional capacity of 7,520 tons (CalRecycle, 2016).

The closest Orange County landfill is the Prima Deshecha Sanitary Landfill, located 11 miles southwest of the project site, which is permitted to accept 4,000 tons per day through 2067 (Calrecycle 2016). In September 2016, the maximum daily amount of solid waste disposed at the landfill was 2,075 tons; thus, the landfill has an average daily additional capacity of 1,925 tons (CalRecycle, 2016).

In addition, the Bowerman Sanitary landfill located 11002 Bee Canyon Access Road in Trabuco Canyon, is permitted to accept 11,500 tons per day of solid waste through 2053. In September 2016, the maximum daily amount of solid waste disposed at the landfill was 7,680 tons; thus, the landfill has an average daily additional capacity of 3,820 tons per day.

Calrecycle estimated residential disposal in California averages 2.49 pounds per day of solid waste per resident (<http://www.calrecycle.ca.gov/LGCentral/Rates/Disposal/Resident.htm>). The proposed project is estimated to generate a population increase of 230 people (see Section 3.12, *Population and Housing* of this EIR). Therefore, the residents of the proposed project would generate approximately 4,009 pounds (or 2 tons) of solid waste per week that can be accommodated by the El Sobrante landfill, Prima Deshecha Sanitary Landfill, or Bowerman Sanitary landfill. As a result, the proposed project would be served by a landfill that has sufficient permitted capacity to accommodate the project's solid waste disposal needs, and impacts would be less than significant.

Impact 3.16-6: Would the project comply with federal, state and local statutes and regulations related to solid waste?

No Impact. As discussed above, total solid waste generated by the proposed project would result in an increase of approximately 2 tons per week of solid waste. All solid waste-generating activities within the County are subject to the requirements set forth in AB 939, that requires diversion of a minimum of 50 percent of solid waste. In addition, after 2020 all development would be required to divert 75 percent of solid waste pursuant to state regulations. The proposed project and the commercial waste hauler that serves the project would be required to comply with these mandates regarding solid waste management, which are also implemented by the landfill facilities. Therefore, impacts related to compliance with regulations related to solid waste would not occur.

3.16.5 Cumulative Impacts

The service providers within County of Orange evaluate the projected population increases within the region to plan for increases in the demand for utilities and service systems. Therefore, the geographic area for cumulative effects to utility systems is the County as a whole. As described in Section 3.12, *Population and Housing*, the growth that would occur from implementation of the proposed project is within the adopted growth projections for the unincorporated area of the County. Thus, utility systems, such as EVMWD and planning for landfills, that would serve the project have anticipated the growth that would occur from implementation of the proposed project. As described above, the existing and planned water and landfill capacity would be able to accommodate the proposed project; thus, implementation of the proposed project would not result in a cumulatively considerable impact upon these service systems.

The drainage and wastewater infrastructure improvements included in the project are site-specific in nature and are designed to be self-contained and would not extend outside of the project area or utilize a service provider's infrastructure or capacity; thus, cumulative impacts related to wastewater and drainage infrastructure would not be cumulatively considerable and would be less than significant.