# 4.17 Utilities and Service Systems

This section discusses the existing utilities and service systems (water, sewer, stormwater drainage, electricity, natural gas, telecommunications, and solid waste) on the project site and evaluates changes to the physical environment that may result from the expansion of utilities and service systems under the proposed project. This section is based on the following studies prepared by Michael Baker International (2020): Fanita Ranch Development Water Service Study (Appendix O1); Fanita Ranch Development Sewer Service Study (Appendix O2); and Fanita Ranch Water Supply Assessment (WSA) (Appendix O3), which was approved by Padre Dam Municipal Water District (PDMWD) on February 19, 2020. In addition, Dexter Wilson Engineering, Inc. (2020), prepared the Fanita Ranch Private Residential Water Systems Memorandum (Appendix O4). Finally, the solid waste discussion is based on a service letter from Waste Management, Inc., dated May 13, 2019 (Appendix M).

## 4.17.1 Environmental Setting

### 4.17.1.1 Water

The proposed project is in the water service boundary of PDMWD. One hundred percent of PDMWD's potable water supply is imported through the San Diego County Water Authority (SDCWA). The SDCWA is 1 of 26 Metropolitan Water District of Southern California (Metropolitan) member agencies and is the largest Metropolitan member agency in terms of deliveries, purchasing approximately 25 percent of the Metropolitan water delivered in Fiscal Year 2018/2019. The 24 member agencies composing the SDCWA, including PDMWD, purchase water from the SDCWA for retail distribution within their service areas. The purchased treated water from the SDCWA is treated at multiple treatment plants including: Metropolitan's Skinner Treatment Plant near Temecula, California; SDCWA's Twin Oaks Valley Water Treatment Plant in the City of San Marcos; and the Helix Water District's Levy Water Treatment Plant in the unincorporated community of Lakeside through capacity owned by the SDCWA. Treated water is then conveyed to PDMWD through the SDCWA's regional aqueduct system. The water sources upon which Metropolitan draws to provide water to the SDCWA, which in turn is provided to SDCWA's member agencies, including PDMWD, include the Colorado River and the State Water Project (SWP).

PDMWD's 2015 Urban Water Management Plan (UWMP), SDCWA's 2015 UWMP, Metropolitan's 2015 UWMP, and Metropolitan's Integrated Water Resources Plan (IRP) 2015 Update describe water supplies available for the proposed project. Metropolitan obtains supplies from local sources, including the Colorado River, via the Colorado River Aqueduct, which it owns and operates, and the Sacramento–San Joaquin Delta, via the SWP. The Metropolitan 2015 UWMP discusses the availability of these existing supplies and additional supplies necessary to meet future demands. Metropolitan's 2015 UWMP explains that "Metropolitan has supply

capabilities that would be sufficient to meet expected demands from 2020 through 2040 under single dry year and multiple dry year hydrologic conditions, as well as average year hydrologic conditions" (Metropolitan 2016a).

Metropolitan is expected to have a surplus of water with the minimum amount of surplus being 145,000 acre-feet per year (AFY) during the Multiple Dry Year scenario. The IRP 2015 Update, developed by Metropolitan, incorporates a balanced approach to stabilize traditional imported water supplies while continuing to evolve local supplies to assure 100 percent reliability for full-service demands at the retail level. The IRP 2015 Update establishes regional targets for conservation, local supplies, SWP supplies, Colorado River supplies, groundwater banking, and water transfers. The IRP 2015 Update observes long-term planning for additional future resources, such as stormwater capture and seawater desalination, to minimize water shortages and restrictions (Metropolitan 2016b).

The Metropolitan IRP 2015 Update incorporates the following three elements to achieve a balance in resource planning (Metropolitan 2016b):

1. Planning for the future comes with uncertainty as unforeseeable challenges and risks may occur. Metropolitan considers positive and negative situations to analyze in what way supplies can affect future circumstances. The IRP 2015 Update development process provided Metropolitan an opportunity to observe potential challenges and risks identifying nearly 200,000 acre-feet of additional water conservation and supplies.
2. Water agencies develop plans to analyze and prepare for future water supply. Future Supply Actions are necessary actions to prepare for water supply conditions that differ from the original plan, such as water-saving technologies, land acquisition, and new supply alternatives. This action will allow agencies to consider innovative water alternatives for an unforeseeable future.
3. Adaptive water management is an approach for water purveyors to better prepare for the agency's future. Although strategies are established in the present, adaptive management is a quick and cost-effective method for unanticipated events. A history of drought-related supply shortages provoked Metropolitan to seek alternative supplies despite the long-term water strategy established in Southern California.

Using this balanced approach will help ensure that the Southern California region, including San Diego County, will have adequate supplies to meet future demands while adapting to evolving conditions.

The resource targets for Metropolitan's UWMP include the IRP 2015 Update and planned supply and demand projections developed in collaboration with member agencies. Metropolitan's UWMP contains a water supply reliability assessment that includes a detailed evaluation of the supplies necessary to meet demands over a 25-year period in average, single dry year, and multiple dry year periods. As part of this process, Metropolitan also uses regional growth forecasts from the Southern

California Association of Governments and San Diego Association of Governments (SANDAG) to calculate regional water demands for the SDCWA's service area. Metropolitan's UWMP also takes into account the impacts of global climate change on its water supply, using hydraulic studies to predict the impacts on its water supplies, and incorporates steps to offset the effects of climate change on water supply, including drought response actions. Continuing planning and disputes concerning the Sacramento–San Joaquin Delta, from which Metropolitan's SWP supplies are conveyed, have the potential to affect the SWP component of Metropolitan's supplies. While these developments create some uncertainty regarding future supplies, that uncertainty is currently speculative and has yet to impose any actual operational constraints on the SWP that would affect Metropolitan's supplies. Metropolitan's supplies also include an Intentionally Created Surplus from conservation and a System Efficiency Intentionally Created Surplus from facility improvements, both of which leave water stored in Lake Mead (operated by the U.S. Bureau of Reclamation), which can be imported by Metropolitan as surplus supply in dry years. Metropolitan is prioritizing the development of water supply reliability, taking into consideration the current supplies available from the SWP and actions taken to ensure a reliable water supply (Metropolitan 2016a).

In addition to the water that the SDCWA purchases from Metropolitan, the SDCWA obtains transfers of conserved agricultural water from Imperial Irrigation District. Additionally, the SDCWA began operation of the Carlsbad Desalination Plant in late 2015, delivering nearly 50 million gallons per day (mgd) (56,000 AFY) of potable water to its member agencies. As of May 2019, the Carlsbad Desalination Plant received approval to increase the production of potable water from desalination from 50 mgd to 60 mgd (67,000 AFY). This source was not accounted for in SDCWA's 2015 UWMP (SDCWA 2016), which projected supply from the Carlsbad Desalination Plant at 50,000 AFY through 2040. This potential increased capacity could be placed into service prior to 2025. SDCWA's 30-year 2012 Water Purchase Agreement provides that the SDCWA will purchase the entire output from the Carlsbad Desalination Plant. The SDCWA also produces a small amount of groundwater. Further information regarding the Metropolitan and SDCWA water supplies, including conservation and drought contingency plans, supply uncertainties, and future plans for diversification and augmentation of supplies, is in Appendix O3.

In addition to the water supplied by the SDCWA (SDCWA acquired and Metropolitan provided), PDMWD's water supplies also include recycled water and a small amount of groundwater used to supplement the recycled system (PDMWD 2016).

Projecting future supplies and demands involves uncertainties. However, as discussed previously, in the WSA, UWMP, and other planning documents referenced, Metropolitan, SDCWA, and PDMWD have developed a number of water supply and management plans to improve long-term reliability, diversify supplies, reduce dependence on existing imported supplies, incorporate conservation, and account for uncertainties.

PDMWD currently serves a population over 100,000 persons and provides approximately 24,000 combined water, sewer, and recycled water service connections. The 85-square-mile service area is in the eastern section of the County of San Diego (County) and is divided into two service areas: Western Service Area and Eastern Service Area. The Western Service Area serves potable, wastewater, and recycled water to the City of Santee (City), including the proposed project, and parts of the City of El Cajon and the unincorporated community of Lakeside. The unincorporated County communities of Alpine, Blossom Valley, Crest, Dehesa, Flinn Springs, and Harbison Canyon are provided potable water service in the Eastern Service Area.

Drinking water supplied by PDMWD meets or exceeds the public health requirements enforced by the State Water Resources Control Board's Division of Drinking Water and the U.S. Environmental Protection Agency.

PDMWD's current infrastructure includes approximately 580 miles of water, wastewater, and recycled water pipe; 29 reservoirs; 16 pump stations; 4 lift stations; a wastewater recycling facility (WRF); and additional infrastructure. PDMWD's potable water system primarily consists of water storage facilities with a combined storage capacity of approximately 107.23 million gallons and 389 miles of transmission and distribution water mains. Pipelines in PDMWD's service area include a combination of asbestos cement pipe, polyvinyl chloride (PVC), and concrete cylinder pipe. Booster stations are distributed throughout the district area to pump water from lower pressure zones to higher pressure zones. The use of pressure reducing stations provides the ability to transfer water from higher to lower pressure zones to serve customers located in different pressure zones. In the Eastern Service Area, PDMWD is currently completing the Secondary Connection Project, comprising a new flow control facility that would provide a secondary supply from the SDCWA, a new aboveground storage tank, and new booster facility. When completed, the Secondary Connection Project will provide additional system reliability and operational flexibility. The SDCWA is also actively planning new water storage and conveyance system improvements, which have been identified in PDMWD's 2015 Comprehensive Facilities Master Plan.

The existing PDMWD potable water infrastructure has been designed to facilitate and accommodate future water system expansion to serve projects identified in PDMWD's 2015 Comprehensive Facilities Master Plan, PDMWD's 2015 UWMP, and other PDMWD planning documents. The proposed project falls within three water pressure zones (880 Zone, 1230 Zone, and 629 Zone) (see Figure 3-11, Conceptual Potable Water Plan). The proposed project would connect to the following three existing facilities, two of which are in the 880 Zone, and one is in the 629 Zone:

- Magnolia Summit Tank, also known as the Magnolia Zone, is in the existing 880 Zone.
- Cuyamaca Tank and Magnolia Pump Station is in the existing 880 Zone.
- Carlton Hills Tank, also known as the Gravity Zone, is in the existing 629 Zone.

Section 4.17.5.1 describes the proposed project's proposed connections to these existing facilities.

### 4.17.1.2 Wastewater and Recycled Water

In 1959, Ray Stoyer, the general manager for the then Santee County Water District, developed a WRF to satisfy mandated wastewater treatment requirements, reduce the demand for imported water, and meet the needs of the growing Santee community. PDMWD opted to develop a local wastewater treatment and WRF in lieu of joining the regional wastewater collection and treatment system being developed at the time by the City of San Diego. By 1961, seven recreational recycled water lakes, known as the Santee Lakes Recreation Preserve, were constructed and established using treated recycled water effluent from the Ray Stoyer WRF. Construction of a recycled water distribution system allowed for irrigation, commercial use, and other non-potable purposes throughout the City and nearby communities in the County, including parts of the City of El Cajon and unincorporated community of Lakeside. The treatment facility expanded to treat approximately 2 mgd in 1997. The Ray Stoyer WRF uses a chemical-free secondary treatment system followed by advanced tertiary treatment to provide recycled water that meets Title 22 water quality standards.

Approximately 1,731 AFY of recycled water is used in PDMWD's service area through 232 existing recycled water connections, representing less than 1 percent of its total service connections. Wastewater pipelines are allocated in developed streets surrounding the project site to collect wastewater from existing development. Raw wastewater is transported from an influent pump station south of the Santee Lakes Recreation Preserve to the Ray Stoyer WRF directly north of the Santee Lakes Recreation Preserve by a main pipeline in Fanita Parkway. The treated recycled water is equally distributed between the Santee Lakes Recreation Preserve and the Fanita Terrace Reservoir. The facility treats wastewater to the tertiary level. Historically, approximately 1 mgd goes into Santee Lakes. The rest of the recycled water is used for irrigation at community parks, schools, City streetscapes, and community decorative fountains. Recycled water stored in the 1.5-million-gallon Fanita Terrace Reservoir is gravity fed to the recycled water distribution system. PDMWD's recycled water distribution system consists of 26 miles of recycled water pipelines. The remaining wastewater not treated by the Ray Stoyer WRF, approximately 2,251 AFY, is conveyed by the influent pump station to the City of San Diego's Metropolitan Wastewater System (Metro) to be treated at the Point Loma Wastewater Treatment Plant and discharged into the Pacific Ocean.

PDMWD also offers free recycled water at a temporary recycled water fill station in the City to PDMWD customers during a Level 1 drought watch. Local customers must fill their own recycled water container approved by PDMWD, no larger than 300 gallons, and use this source solely for irrigation at their property.

Currently, there are plans to expand the Ray Stoyer WRF to perform advanced water purification by taking recycled water from East County though an additional four-step water purification process, then pumping it into Lake Jennings, and treating it again at the Helix Levy Treatment

Plant before distributing it into the drinking water supply. PDMWD, in collaboration with Helix Water District, the County, and the City of El Cajon, plans to develop the East County Advanced Water Purification (ECAWP) Program to create its own reliable local source of water. The program would increase the capacity of the existing Ray Stoyer WRF from 2 to 15 mgd and construct a new ECAWP facility. The purified water produced from the new facility would reduce reliance on imported water purchases through the SDCWA and improve water supply reliability by up to 30 percent through surface water augmentation in Lake Jennings. The ECAWP project is currently in the preliminary engineering and permitting phase, and construction is estimated to be completed in 2025. Refer to Section 4.2, Air Quality, and Section 4.8, Hazards and Hazardous Materials, for a detailed description of the active safety programs and components of the PDMWD Ray Stoyer WRF.

#### 4.17.1.3 Stormwater Drainage

For a discussion of existing stormwater drainage facilities in the vicinity of the project site, refer to Section 4.9, Hydrology and Water Quality, of this EIR.

#### 4.17.1.4 Electric Power Facilities

The San Diego Gas & Electric Company (SDG&E) provides electricity to the San Diego region, including the City. SDG&E owns a 150-foot-wide transmission line easement that traverses the central portion of the proposed project site from east to west (Refer to Figure 3-6, Conceptual Park, Trails, and Open Space Plan). The City is currently served with electricity through both aboveground and underground transmission lines within City streets.

#### 4.17.1.5 Natural Gas Facilities

The SDG&E provides natural gas to the San Diego region, including the City. Natural gas facilities are not currently provided on the project site. The City is currently served with natural gas through underground gas mains within City streets.

#### 4.17.1.6 Telecommunications Facilities

There are currently no telecommunications facilities on the project site because it is currently undeveloped land. The City is currently supplied with telecommunications services through various private companies. The infrastructure is typically located underground in vaults and conduit and aboveground on overhead power lines with pole mounted cables and transformers. Antennas may also be mounted in towers or on roofs.

#### 4.17.1.7 Solid Waste

The City's franchise waste hauler, Waste Management Inc., is responsible for the collection, removal, and disposal of solid waste for residential and commercial uses in the City. In addition, the hauler provides curbside recycling and yard waste collection, household hazardous waste

disposal services, public education, and other services required to meet the waste management needs of the City. This includes the development of programs necessary to meet the state-mandated 50 percent waste reduction goal established by Assembly Bill (AB) 939 (the California Integrated Waste Management Act of 1989).

As of 2017, the waste disposal rate in California per resident was approximately 6.2 pounds per day and a recycling rate of 42 percent. The 2017 per-employee disposal rate was 11.9 pounds per day with a recycling rate of 62 percent (CalRecycle 2017). Currently, most of the waste collected in the City of Santee is disposed at the approximately 603-acre Sycamore Landfill in the eastern portion of the City of San Diego west of the project site. The project site is approximately 1 mile east of Sycamore Landfill. According to the Solid Waste Information System database maintained by the California Department of Resources Recycling and Recovery (CalRecycle), the landfill's maximum permitted capacity is approximately 147,908,000 cubic yards, with a current remaining capacity of approximately 113,972,637 cubic yards as of 2016. Based on the remaining capacity and disposal rates, the Sycamore Landfill is expected to remain open until December 31, 2042 (CalRecycle 2019).

## 4.17.2 Regulatory Framework

Applicable federal, state, and local regulations pertaining to utilities and service systems are discussed below. Regulations pertaining to stormwater drainage are discussed in Section 4.9 of this EIR.

### 4.17.2.1 Federal

#### Telecommunications Act of 1966

The Telecommunications Act of 1996 amended the Communications Act of 1934. It provided major changes in laws affecting cable television, telecommunications, and the internet. The law's main purpose is to stimulate competition in telecommunication services. The law specifies (1) how local telephone carriers can compete, (2) how and under what circumstances local exchange carriers can provide long-distance services, and (3) the deregulation of cable television services.

### 4.17.2.2 State

#### Assembly Bill 341

In 2011, the state legislature enacted AB 341 (California Public Resources Code, Section 42649.2), increasing the diversion target to 75 percent statewide. AB 341 also requires the provision of recycling service to commercial facilities that generate 4 cubic yards or more of solid waste per week, and multi-family residences with five or more units.

### Assembly Bill 939

AB 939, the California Integrated Waste Management Act of 1989, establishes the current organization, structure, and mission of CalRecycle as an integrated waste management hierarchy that consists of the following (in order of importance): source reduction, recycling, composting, and land disposal of solid waste. AB 939 requires cities and counties in the state to reach a 50 percent waste reduction goal by the year 2000 and beyond. It also requires counties to develop an integrated waste management plan that describes local waste diversion and disposal conditions, and lays out realistic programs to achieve the waste diversion goals.

### Assembly Bill 1826

In October 2014, Governor Brown signed AB 1826, Chesbro (Chapter 727, Statutes of 2014), requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. Organic waste means food waste, green waste, landscape and pruning waste, non-hazardous wood waste, and food-soiled paper waste that is mixed in with food waste. Currently, businesses that generate 4 cubic yards or more of solid waste per week must have had an organic waste recycling program in place. Multi-family properties are regulated but only required to divert green waste and non-hazardous wood waste. This law also requires local jurisdictions across the state to implement an organic waste recycling program to divert organic waste generated by businesses, including certain multi-family residential units, starting on January 1, 2016. An exemption process is available for rural counties.

### Assembly Bill 1881

AB 1881, the Water Conservation in Landscaping Act of 2006, requires the California Department of Water Resources to prepare an updated Model Water-Efficient Landscaping Ordinance (Model Ordinance) in accordance with specified requirements to conserve water through efficient irrigation and landscaping. By January 1, 2010, local agencies were to adopt either the updated Model Ordinance or a local landscape ordinance that is at least as effective in conserving water as the Model Ordinance. The City adopted Ordinance No. 491 in December 2009. In response to further regulations from the state, the City amended its Landscape Regulations (San Diego Municipal Code, Chapter 14, Article 2, Division 4) and Landscape Standards in April 2016. The Landscape Standards implement the requirements of the Landscape Regulations. Landscape plans and installations are required to be in compliance with the Landscape Standards.

### Senate Bills 221 and 610

On January 1, 2002, SB 221 and SB 610 amended state law to improve the link between information on water supply availability and certain land use decisions made by cities and counties. SB 221 requires water suppliers to prepare written verification that sufficient water supplies are planned to be available prior to approval of large-scale subdivisions. SB 610 requires water

suppliers to prepare a WSA for land use agencies to include in the CEQA process for new developments subject to SB 610. SB 610 states that the assessment must evaluate water supplies that are or will be available during normal, single dry, and multiple dry years during a 20-year projection to meet existing and planned future demands, including the demand associated with the proposed project. The assessment includes, among other information, an identification of existing water supply entitlements, water rights, or other water service contracts relevant to the identified water supply for the proposed project and water received in prior years pursuant to those entitlements, rights, and contracts, and a description of the quantities of water received in prior years by the public water system.

### Senate Bill 1374

SB 1374 seeks to assist jurisdictions with diverting their construction and demolition (C&D) waste material with a primary focus on CalRecycle developing and adopting a model C&D diversion ordinance for voluntary use by California jurisdictions. CalRecycle adopted such an ordinance at its March 16, 2004, meeting. In 2011, the City adopted an ordinance to promote the recycling of C&D debris to meet the City's obligations under AB 939 and the California Green Buildings Standards Code.

### Urban Water Management Planning Act (California Water Code, Division 6, Part 2.6, Section 10610 et. seq.)

The Urban Water Management Planning Act was developed due to concerns for potential water supply shortages throughout California. It requires information on water supply reliability and water-use efficiency measures. Urban water suppliers are required, as part of the act, to develop and implement UWMPs to describe their efforts to promote the efficient use and management of water resources.

## 4.17.2.3 Local

### Santee General Plan

Divided into nine elements, the Santee General Plan is a statement of intent as to the future development of the City. This is accomplished through objectives and policies that serve as a long-term policy guide for physical, economic, and environmental growth.

The Santee General Plan Land Use Element and Safety Element include provisions for utilities and service systems. Those objectives and policies include the following (City of Santee 2003):

#### *Land Use Element*

- **Objective 3.0:** Provide and maintain the highest level of service possible for all community public services and facilities.
  - **Policy 3.1:** The City should ensure that land divisions and developments are approved within the City only when a project's improvements, dedications, fees and other revenues to the City and other agencies fully cover the project's

incremental costs to the City and other agencies. These costs are for providing new or upgraded capital improvements and other public facilities and equipment resulting from, and attributable to the project, which are necessary to protect and promote the public's health, safety and welfare and to implement feasible mitigation measures. Such facilities include, but are not limited to: parks, bridges, major roads, traffic signals, street lights, drainage systems, sewers, water, flood control, fire, police, schools, hiking/bicycle trails and other related facilities. In calculating benefits of land divisions and developments, the City may consider other public objectives and goals including social, economic (job creation, secondary economic benefits, etc.) and environmental factors.

- **Policy 3.2:** The City should encourage the development and use of recycled water for appropriate land uses to encourage the conservation of, and reduce demand for, potable water.
- **Policy 3.6:** Development projects shall be reviewed to ensure that all necessary utilities are available to serve the project and that any land use incompatibilities or impacts resulting from public utilities shall be mitigated to the maximum extent possible.

***Safety Element***

- **Policy 3.8:** Promote safe, environmentally sound means of solid waste disposal for the community.
- **Policy 3.9:** Investigate ways to encourage businesses to recycle their waste.

## 4.17.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, impacts to utilities and service systems would be significant if the proposed project would:

- **Threshold 1:** Require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities which could cause significant environmental effects.
- **Threshold 2:** Not have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.
- **Threshold 3:** Result in determination by the wastewater 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.
- **Threshold 4:** Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.
- **Threshold 5:** Not comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

## 4.17.4 Method of Analysis

The analysis of utilities and service systems impacts is based on the Water Service Study, Sewer Study, and WSA (Appendices O1, O2, and O3) and the Private Residential Water Systems Memorandum detailing the proposed project's residential water system beyond the connection points from PDMWD's system (Appendix O4). The method of analysis includes performing hydraulic analyses using PDMWD's existing Innovyze InfoWater hydraulic water model and Innovyze InfoSWMM hydraulic sewer and stormwater model to evaluate the impacts of proposed project water demand as well as evaluate the proposed gravity sewer infrastructure for the proposed project. In addition, the impacts analysis is based on the service letter from Waste Management, Inc. (Appendix M).

## 4.17.5 Project Impacts and Mitigation Measures

### 4.17.5.1 Threshold 1: New or Expanded Utilities or Service Systems

***Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities which could cause significant environmental effects?***

| | |
|---|---|
| **Impact**: Implementation of the proposed project would require the construction of new and expanded water, wastewater, drainage, electric power, natural gas, and telecommunications facilities, some of which could cause significant environmental effects. | **Mitigation**: Applicable mitigation measures from other resources topics including air quality; biological resources; cultural and tribal cultural resources; geology, soils, and paleontological resources; greenhouse gas emissions; noise; transportation; and wildfire in this EIR. |
| **Significance Before Mitigation**: Potentially significant. | **Significance After Mitigation:** Significant and unavoidable with respect to air quality, noise, and transportation impacts. All other impacts would be reduced to less than significant. |

### Impact Analysis

#### *Water Infrastructure and Facilities*

Development of the project site would increase the demand for potable water to serve the proposed project site land uses. Water service for the proposed project would be provided by PDMWD.

The proposed project would develop the currently undeveloped site with residential uses, along with parks, agricultural, commercial, office, retail, and service uses. To accommodate the development, the proposed project proposes to construct a new domestic water system consisting of transmission and distribution pipelines, two reservoirs that include tanks, and two pump stations to distribute potable water throughout the project site. Water from the existing Carlton Hills water tank and existing Cuyamaca water tank would provide water to the proposed project. Refer to Figure 3-11 for a depiction of potable water facilities that would supply potable water to the proposed project.

The proposed water system would be a public water system throughout the project site, designed and installed per PDMWD and Santee Fire Department requirements. Some private hydrants would be installed on the project site in coordination with PDMWD. The proposed project would require a redundant, or looped, water supply system for fire protection and system reliability. Sixteen-inch water mains would be installed in Fanita Parkway and Cuyamaca Street and transition to 12-inch mains in Fanita Commons and Orchard Village and would be looped through the villages to provide adequate domestic and fire flow service in the event of a disruption of water supply from one of the mains. Pipelines in Fanita Commons and Orchard Village would be 12 inches in diameter, while pipelines in Vineyard Village would be 16 inches in diameter. The proposed project would make two connections to PDMWD's system: one at the intersection of Chaparral Drive and Cuyamaca Street to the Cuyamaca Tank, and one at the Carlton Hills Tank at the Gravity Zone.

As previously discussed in Section 4.17.1.1, the proposed project falls within three water pressure zones (880 Zone, 1230 Zone, and 629 Zone). Water would be conveyed from three existing facilities described in Section 4.17.1.1. The proposed project would connect to the existing 880 Zone in Cuyamaca Street and Magnolia Avenue. The proposed project would construct new lines connecting to existing lines in Magnolia Avenue, which would convey water from the existing Magnolia Summit Tank (Magnolia Zone) at the terminus of Princess Joann Road. Similarly, new transmission lines would be extended in Cuyamaca Street from the existing 880 Zone (Cuyamaca Tank and Magnolia Pump Station) at the terminus of Woodglen Vista Drive to the project site. Additionally, a redundant feed of 880 Zone water to the proposed project would be formed by connecting to the existing 629 Zone near the Carlton Hills Tank (Gravity Zone) and constructing a new 880 Zone pump station on the project site adjacent to the Santee Lakes Recreation Preserve to pump water through a proposed transmission line in Fanita Parkway to serve the proposed project.

The water system for the proposed project would be designed to provide a minimum 2,500 gallons per minute (gpm) for 2 hours of fire flow with fire hydrants spaced on average every 300 feet. The proposed 880 tank would be sized to serve the proposed project demands and fire storage equal to the deficit in the existing Magnolia Zone storage. The proposed project would provide 2,500 gpm fire flow for 4 hours at the proposed 880 Zone Tank and 3,500 gpm for 2 hours at the proposed 1230 Zone Tank. The total volume of the proposed 880 Zone Tank is 3.63 million gallons, and the total volume of the proposed 1230 Zone Tank is 2.59 million gallons. The proposed 880 Zone water supplies would feed the proposed on-site 880 Zone water tank that is planned south of Street "W" and east of Cuyamaca Street. Refer to Tables 4-2 and 4-3 in Appendix O1 for recommended tank and pump station sizing for the proposed project.

A new on-site 1230 Zone pump station would be constructed north of the proposed 880 Zone water tank at the eastern edge of the Farm along the northern side of proposed Street "W." This second pump station would convey water to an on-site 1230 Zone water tank in Vineyard Village with a

capacity that serves the northeastern areas of the project site. Approximately 21 single-family lots (Low Density Residential units) in the southeastern corner of Vineyard Village would receive adequate fire protection service from the 1230 Zone system and would also be equipped with private booster pumps to increase domestic service pressures. The private booster pumps installed at each of these residences would increase pressure in both the domestic plumbing that supplies the residential fixtures and the fire sprinkler system (Appendix O4).

Since PDMWD has existing 880 Zone water tanks (Cuyamaca Tank and Magnolia Pump Station and Magnolia Summit Tank) in the system, the new proposed 880 Zone water tank would consist of a single storage reservoir. The proposed 880 Zone pump station, to be north of the existing 629 Carlton Hills Tank, would be sized to serve the entire project site as the primary supply. The 880 Zone pump station would not need to pump full fire flow because this need is already met elsewhere in the system. Therefore, the new 880 Zone pump station would serve the maximum day demand of the entire project plus fire flow recharge in the 880 Zone water tank over 3 days.

Since the 1230 Zone would be formed by constructing a new 1230 Zone water tank, this storage facility would require either two reservoirs at this site or a single reservoir with two storage bays ("tank in a tank" type design). The proposed 1230 Zone pump station would be sized to serve the 1230 Zone fire flow needs of 3,500 gpm. The pump station is anticipated to house three identical pumps, each with a design point near 1,750 gpm. The proposed 880 Zone and 1230 Zone water tank reservoirs would be sized to accommodate the operational and fire flow storage needs for their respective service areas.

In addition, new buildings would be designed with the latest water-efficient plumbing systems, fixtures, and faucets. Native and drought-tolerant landscaping would reduce the demand for irrigation water. Turf would be limited to active play areas. Irrigation systems would use smart controllers to automatically adjust the amount and frequency of water based on current weather and soil conditions. Mulching, hydrozoning, and other water-conserving planting and maintenance techniques would be implemented in common areas and park landscaping. These techniques and water-wise educational information would be discussed as part of a community education program at the Farm or elsewhere in Fanita Commons.

The proposed project would be constructed in four phases, as analyzed in the Water Service Study (refer to Figure 3-5, Potable Water System Phasing, in Appendix O1). The following includes a summary of demands by phase:

- **Phase 1.** Initial connection to the proposed project would be provided by an extension of both Fanita Parkway and Cuyamaca Street. Phase 1 includes the development of Fanita Commons and the eastern portion of Orchard Village, which includes some Village Center areas, the Active Adult land use, a fire station, agriculture, and several park areas. The connection to the Gravity Zone includes the proposed 880 Zone pump station and

associated piping that would take suction from the existing Gravity Zone at the 629 Carlton Hills Tank. Phase 1 would also require the construction of the new 880 Zone Tank, which would be served entirely from the Gravity Zone through the proposed 880 Zone pump station. The connection in Cuyamaca Street at Chaparral Drive to the existing 16-inch pipeline in the Magnolia Zone would be completed during Phase 1.

- **Phase 2.** The second phase would construct the western portion of Orchard Village, which includes single- and multi-family residential uses and Village Center areas. Phase 2 would be served by making internal connections to Phase 1 infrastructure.
- **Phase 3**. The third phase includes the construction of the southerly half of Vineyard Village. This area would include predominantly single and multi-family residential uses with several internal parks and agriculture. Due to the elevation change within Phase 3, a new 1230 Zone tank would be required, along with a new 1230 Zone pump station. The 1230 Zone pump station would be on the western side of proposed Street "W," as shown on Figure 3-11. Phase 3 would connect to the Phase 2 water system near the intersection of Street "A" and Cuyamaca Street. Phase 3 would be served entirely by the 1230 Zone.
- **Phase 4**. The final phase would build out the remainder of the proposed project north, which includes single- and multi-family residential uses, parks, some Village Center areas, and agriculture. This phase would connect to the Phase 3 water system; no additional off-site facilities would be required to serve Phase 4. Phase 4 would be served entirely by the 1230 Zone.

A hydraulic analysis was conducted (Appendix O1) to assess the proposed water system's ability to supply peak-hour demands and maximum day demands plus fire flow conditions based on Water Agency Standard (WAS) design criteria, which is shown in Table 4.17-1.

**Table 4.17-1. Water Agency Standard Design Criteria**

| Criteria | |
|---|---|
| **Land Use** | **Fire Flow[1]** |
| Single-Family Fire (per Fire Marshal) | 2,500 gpm for a 3-hour duration |
| Multi-Family Fire | 2,500 gpm for a 3-hour duration |
| Commercial | 3,500 gpm for a 4-hour duration |
| Park and Open Space (per Fire Marshal) | 2,500 gpm for a 3-hour duration |
| **Pipelines** | |
| Max Velocity during Peak-Hour Demand | 8 feet per second |
| Max Velocity during Maximum Day Demand+ Fire | 10 feet per second new, 15 feet per second existing |
| C-factor: </= 12-inch diameter | 120 |
| C-factor: >12-inch diameter | 130 |
| **Pressures** | |
| Minimum: Peak-Hour Demand | 40 psi |
| Minimum: Maximum Day Demand + Fire | 25 psi[2] |
| With a Pressure Regulator at the Service Meter | 150 psi max |
| Without a Pressure Regulator at the Service Meter | 80 psi max |
| **Storage Volume** | |
| Operational | 30% of Maximum Day Demand |
| Fire | Max Fire Flow x 50% Duration |
| Emergency Storage | 300% Average Day Demand |
| **Pump Station Capacity** | **Max Fire Flow** |
| Normal Conditions – Zones with Gravity Storage | Flow, redundant pump, and emergency generator backup supply |

**Source:** Appendix O1.

**Notes:** gpm = gallons per minute; psi = pounds per square inch

[1] Per the Santee Fire Department, all fire flows shall be minimum 2,500 gpm.

[2] PDMWD has specifically requested that the minimum pressure during Maximum Day Demand + Fire be evaluated at 25 psi before the meter for this project.

C-factor is the factor or value used to indicate the smoothness of the interior of a pipe. The higher the C-factor, the smoother the pipe, the greater the carrying capacity, and the smaller the friction or energy losses from water flowing in the pipe (Sacramento State University 2019).

Modeling was conducted to verify the hydraulic performance of the proposed on-site distribution system and the off-site facilities serving the proposed project. The Water Service Study (Appendix O1) evaluates the most conservative land use plan for the system based on residual pressures and pipe velocities. Residential uses generate slightly higher water demand than a school use on the same site. Thus, the land use plan without school would have a higher water demand than the preferred land use plan with school. The Water Service Study evaluates the development of 3,008 residential units, as proposed under the land use plan without a school, which represents the worst-case water demand for the proposed project based on PDMWD's 2015 Comprehensive Facilities Master Plan consumption criteria.

According to the results of the modeling in the Water Service Study (Appendix O1), the proposed project would result in low pressure in some lots in Vineyard Village that are planned to be constructed in Phase 3. The Maximum Day Demand + Fire flows show low node pressures for some of the residential uses in Vineyard Village; however, these areas would remain above the minimum 25 pounds per square inch (psi) pressure requirement. For the Peak-Hour Demand, some of the residential uses (approximately 21 single-family units) in Vineyard Village show low node pressure and are projected to have less than the minimum 40 psi pressure requirement. To meet the minimum requirement of 40 psi for operating pressure, private booster pumps would be installed as a project design feature in the areas that would have Peak-Hour Demand pressure below 40 psi to supply higher pressures for domestic water use. Therefore, the proposed project includes a design feature that would ensure adequate pressures are provided in Vineyard Village. In addition, smaller booster pumps would be needed for certain areas of the project site for parks and landscaping irrigation. The remaining developed areas of the proposed project would achieve adequate pressures without requiring booster pumps.

The proposed project would remain less than the maximum pipeline velocities of 10 feet per second in all areas analyzed, except for a 10-inch pipeline that would serve fire hydrants along proposed Street "V." Velocities would exceed the maximum for the pipeline size (10 feet per second) and would be 10.5 feet per second in Phase 3 and 10.2 feet per second in Phase 4. However, PDMWD staff recommended this size pipeline to minimize oversizing of the pipeline and have agreed to accept this minimal velocity increase over the standard maximum of 10 feet per second (Appendix O1).

The proposed project would include water infrastructure improvements in Magnolia Avenue, Cuyamaca Street, and Fanita Parkway, which would convey water from two existing water tanks (Carlton Hills Tank and the Magnolia Summit Tank). The pipeline improvements in Magnolia Avenue would serve proposed hydrants on the extended portion of the street.

Based on the Water Service Study (Appendix O1) prepared for the proposed project, the existing PDMWD water system is capable of meeting the demands of the proposed project without compromising pressure or velocity standards to existing customers and has been approved by PDMWD. However, to meet the demands of the proposed project, new and expanded facilities would be required to accommodate the additional development, the construction of which could result in physical impacts on the environment related to air quality, biological resources, cultural and tribal cultural resources, geology/soils, paleontological resources, noise, and transportation. Therefore, impacts would be potentially significant.

#### *Wastewater Infrastructure and Facilities*

PDMWD would provide sewer service for the proposed project. The proposed project is conceptually planned in four phases, as described previously, to provide coordination support for the development of public facilities and services.

To accommodate project development, a new gravity sewer system consisting of 8-inch, 10-inch, and 12-inch pipelines would be constructed on site to collect and convey wastewater from the highest elevated areas in the eastern portion of the project site to a 15-inch trunk sewer main at the western edge of Orchard Village. Sewer flows produced in Vineyard Village would be conveyed to Fanita Commons by an 8-inch pipeline along proposed Street "V" and to Orchard Village by an 8-inch pipeline along proposed Street "W." Sewer pipeline sizes would increase to 10 and 12 inches in diameter farther west near the proposed intersection of Street "W" and Fanita Parkway. South of the confluence of the sanitary sewers from Fanita Commons and Orchard Village, a 15-inch trunk sewer main would convey wastewater by gravity from the project site to the following two discharge locations identified by PDMWD:

- **Discharge Location 1.** Discharge Location 1 is at the existing PDMWD Ray Stoyer WRF. Connection to the WRF would be provided by gravity but would require the construction of a new headworks facility to provide screening and grit removal for the proposed project's sanitary flow. Due to operation and odor control requirements for the new headworks facility, PDMWD anticipates that this facility would be constructed at the northern end of the existing WRF on PDMWD property, adjacent to the western boundary of the project site. The proposed project would not require a lift station or force main since there would be adequate vertical fall to convey the flow by gravity to the new headworks facility. However, a portion of the new 15-inch trunk sewer main east of the headworks facility would be continuously surcharged. Therefore, this portion of pipeline may need special construction and material requirements.
- **Discharge Location 2.** Discharge Location 2 involves connection of the proposed project's sanitary sewer system to an existing 18-inch and 24-inch sewer system that connects the Ray Stoyer WRF to the City of San Diego's Metro, ultimately sending wastewater to the Point Loma Wastewater Treatment Plant. The proposed project would not require a lift station or force main for this location either since there would be adequate vertical fall to convey the flow by gravity to the existing 18-inch and 24-inch sewer system to Metro.

Refer to Figure 3-12, Conceptual Sanitary Sewer Plan, in Chapter 3, Project Description, for a depiction of the proposed sewer system on the project site.

The Sewer Service Study (Appendix O2) analyzed the following sewer demand scenarios: average dry weather flow (ADWF) generation, peak dry weather flow (PDWF) generation, and peak wet weather flow (PWWF). The Sewer Service Study (Appendix O2) assessed the proposed sewer collection system's ability to convey the ADWF, PDWF, and PWWF while meeting the design requirements based on WAS design criteria, as summarized in Table 4.17-2.

**Table 4.17-2. Water Agency Standard Sewer Criteria**

| Sewer Criteria | |
|---|---|
| **Sewer Generation Factors** | **From 2015 Comprehensive Facilities Master Plan** |
| Residential (AC/M/R/R-1/VC) | 60 gallons per capita per day |
| Institutional (S) | 15 gallons per capita per day (Elementary) |
| | **Based on WAS (converted by MBI[6])** |
| Commercial (VC) | 3,000 gpd[7]/acre |
| Farm Commercial Use Component (A) | 3,000 gpd/acre |
| **Peak Flow and Infiltration Inflow (I/I)** | |
| Peak-Hour Factor | WAS Figure 4-2-1 or WAS Figure 4-2-2 (Curve 2 Utilized) |
| Infiltration/Inflow | 5% to 50% of ADWF (10% used for new system) |
| **Manning's and Hazen-Williams (H-W) Coefficients** | |
| **Gravity Sewer (Manning's)** | |
| DIP (lined) | 0.013 |
| HDPE | 0.011 |
| PVC | 0.011 (Note: 0.013 used) |
| VCP | 0.013 |
| **Force Main (H-W)** | |
| DIP (Lined) | 120 |
| HDPE | 140 |
| PVC | 140 |
| **Depth to Diameter Ratio** | |
| ≤ 12-inch Pipe | 0.50 |
| > 12-inch Pipe | 0.75 |
| **Manhole Minimum Depth (Rim to Invert)** | 6.0 feet |
| **Pipe** | |
| **Minimum Slope** | 1.0% for upper reach until 50 EDU attained; then as follows: |
| 8-inch | 0.40% |
| 10-inch | 0.28% |
| 12-inch | 0.21% |
| 15-inch | 0.18% |
| **Maximum Slope Velocities (Gravity)** | 10% (or PDMWD approved) |
| Minimum | 2.0 feet per second |
| Maximum | 10.0 feet per second |
| **Velocity Range (Force Main)** | 3.5 to 8.0 feet per second |
| **Pump Stations** | WAS Section 4.2.12 |

**Source:** Appendix O2.

**Notes:** A = Agricultural; AC = Active Adult; ADWF = average dry weather flow; DIP = ductile iron pipe; EDU = equivalent dwelling units; GPD = gallons per day; HDPE = high-density polyethylene; H-W = Hazen-Williams; M and R = Medium Density Residential; MBI = Michael Baker International; PVC = polyvinyl chloride; R = Low Density Residential; S = elementary school; VC = Village Center; VCP = vitrified clay pipe; WAS = Water Agency Standard

Hydraulic sewer modeling was conducted to determine whether the proposed improvements would be able to adequately serve the project site. Using the results of the modeling and the sewer criteria shown in Table 4.17-2, the following discussion identifies project design features necessary to

ensure that sewer flows are capable of being conveyed by the proposed sewer collection system to meet the proposed project's sewer demand.

**Phasing.** The four phases of construction were analyzed using the sewer hydraulic model to evaluate sewer flow direction, slopes, size, and connectivity based on proposed surface topography and lot pad elevations. Phase 1 would include the development of Fanita Commons and eastern half of Orchard Village and would require that the southwest portion of the Orchard Village sewer system be constructed. To meet the WAS design criteria in Table 4.17-2, as a project feature, sewer installation along proposed Street "F" and the western portion of proposed Street "E" would be installed during Phase 1 to convey gravity flows from the higher elevated residential lots in Orchard Village to the Ray Stoyer WRF. As a result, the conceptual sanitary sewer plan and limits for Phases 1 and 2 were modified to reflect this project design feature. Sanitary sewer infrastructure in Phases 3 and 4 would meet WAS design criteria and not require phasing modification.

**Pipeline Velocities**. Under the ADWF, PDWF, and PWWF scenarios, the proposed project would construct 8-inch pipelines generally located in the upstream reaches of the collection system, which would have velocities less than the 2 feet per second required minimum in Table 4.17-2. To address this issue, as a project design feature, pipeline slopes would be adjusted where possible during sewer design to maximize velocities by setting the upper reaches to a minimum slope of 1 percent until 50 equivalent dwelling units are connected upstream to address velocities that are less than 2 feet per second.

In the proposed 8-inch sewer pipelines along the steep portions of proposed Streets "V" and "W," maximum pipe velocities would range between 5 and 8.4 feet per second in the ADWF, PDWF, and PWWF scenarios. These velocities would be below the maximum velocity of 10 feet per second and within acceptable ranges. Figures 4-4 through 4-11 in the Sewer Service Study (Appendix O2) illustrate the proposed sewer collection system flows and velocities under ADWF, PDWF, and PWWF scenarios.

**Steep Slopes**. Due to topography in some areas, the Sewer Service Study (Appendix O2) identified several sewer segments that would exceed 10 percent slopes. To meet the WAS design criteria shown in Table 4.17-2, as a project design feature, sewer pipelines that are installed at a greater than 10 percent gradient would require lined manholes and odor control measures. Sewer pipelines installed at a gradient of greater than 15 percent would require special review and approval from the PDMWD Director of Engineering. Sewer mains would not be installed at a depth greater than 14 feet without approval by PDMWD. Where pipelines are installed outside of the public right-of-way, easements would be granted in accordance with PDMWD standards.

**Flows**. According to the Sewer Service Study (Appendix O2), a pipeline segment connecting to the proposed headworks facility would exceed the maximum depth to diameter ratios during the PWWF scenario. To meet the WAS design criteria in Table 4.17-2, as a project design feature,

proposed pipelines P-1004, P-1006, and P-1008 would be upsized from 12 inches to 15 inches and pipelines P-1154, P-1156, P-1158, P-1160, and P-1195 would be upsized from 8 inches to 10 inches (see Figures 4-1 through 4-4 in Appendix O2). With the pipeline size modifications, the collection system would be capable of conveying wastewater during the PWWF scenario to the proposed headworks facility or to Metro's pipeline.

**Gravity Discharge Locations**. PDMWD anticipates that the proposed sanitary sewer system would connect to Discharge Location 1. However, to ensure operational flexibility, PDMWD is also requiring that the proposed sanitary sewer system be connected to Discharge Location 2. As a project design feature, to accommodate discharge to both discharge locations, a new diversion structure would be constructed to facilitate sanitary sewer flow routing to both locations.

The implementation of the proposed sanitary sewer system, along with the project design features identified in this section, would ensure that the proposed project would have adequate capacity to convey flows to PDMWD. To meet the demands of the proposed project, new and expanded sewer facilities would be required to accommodate project development, the construction of which could result in physical impacts on the environment related to air quality, biological resources, cultural and tribal cultural resources, geology/soils, paleontological resources, noise, and transportation. Therefore, impacts would be potentially significant.

### *Stormwater Infrastructure and Facilities*

As discussed in Section 4.9, implementation of the proposed project would result in land use changes that include drainage modification and changes from pervious to impervious surfaces on approximately 988 acres. Construction of the proposed project would occur over the course of four phases and would include activities such as vegetation clearing, grading, and excavation of project sites. Construction phase activities implemented under the proposed project would be required to comply with Chapter 9.06 of the Santee Municipal Code Construction General Permit, which requires preparation of a stormwater pollution prevention plan. The stormwater pollution prevention plan would include a series of specific best management practices to be implemented during construction to address erosion, accidental spills, and the quality of stormwater runoff, which have been developed in part to reduce the potential adverse effects associated with construction activities.

The proposed project would result in the construction of new building foundations, streets, driveways, and trenches for utilities, which could result in localized alteration of drainage patterns. As discussed in Section 4.9, the proposed project would construct an on-site storm drain system that would collect drainage at various points throughout the site and route it through a series of basins prior to reaching Sycamore Canyon Creek. To meet the demands of the proposed project, new and expanded facilities would be required to accommodate the additional development, the construction of which could result in physical impacts on the environment related to air quality; biological

resources; cultural and tribal cultural resources; geology, soils, and paleontological resources; noise; and transportation. Therefore, impacts would be potentially significant.

#### *Electric Power, Natural Gas, and Telecommunications Facilities*

The SDG&E would provide electricity and natural gas service the proposed project. These utilities would be extended to the proposed project site from existing local distribution systems in the region. The existing east–west SDG&E electrical transmission easement on the project site would not be altered as part of the proposed project. New electricity and natural gas facilities would be installed on the project site in joint utility trenches in public rights-of-way as required by the City. In conjunction with electricity and natural gas facilities, telephone and cable television and internet facilities would also be constructed in the joint utility trenches. Through the project approval process, the applicant would coordinate with the appropriate service providers and City Engineering Department staff to properly connect to existing facilities. Therefore, in order to meet the demands of the proposed project, new and expanded facilities would be required to accommodate the additional development, the construction of which could result in physical impacts on the environment related to air quality; biological resources; cultural and tribal cultural resources; geology, soils, and paleontological resources; noise; and transportation. Impacts would be potentially significant.

### Mitigation Measures

Mitigation measures necessary to reduce project impacts from construction of new utilities infrastructure to facilitate water, wastewater, stormwater, electric power, natural gas, and telecommunications facilities are addressed throughout this EIR under the various resource topics in Section 4.2, Air Quality; Section 4.3, Biological Resources; Section 4.4, Cultural and Tribal Cultural Resources; 4.6, Geology, Soils, and Paleontological Resources; Section 4.7, Greenhouse Gas Emissions; Section 4.12, Noise; Section 4.16, Transportation; and Section 4.18, Wildfire. As described in these EIR sections, some impacts would be reduced to a less than significant level with mitigation, while others (air quality, noise, and transportation) would remain significant and unavoidable after all feasible mitigation is applied. No additional mitigation measures are required. Therefore, the construction of new utilities infrastructure would result in significant and unavoidable air quality, noise, and transportation impacts.

### 4.17.5.2 Threshold 2: Water Supply Availability

***Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?***

**Impact:** The proposed project would increase the demand on water supply from PDMWD; however, sufficient water supplies are available to serve the proposed project and reasonably foreseeable future development during normal, dry and multiple dry years.

**Mitigation:** No mitigation required.

**Significance Before Mitigation:** Less than significant.

**Significance After Mitigation:** Less than significant.

## Impact Analysis

The WSA (Appendix O3) prepared for the proposed project provides an assessment of the availability of water supplies for the proposed project in compliance with SB 610 and provides further detail to augment the discussion in this section. The purpose of the WSA is to evaluate water supplies that are, or would be, available during normal, single dry year, and multiple dry years during a 20-year projection and determine if the available water supplies meet existing, projected, and future water demands served by PDMWD, including the proposed project.

Water supplies available to PDMWD generally and the supplies specifically available to serve the proposed project are described in Sections 4.17.1 and 4.17.2, as well as in the WSA (Appendix O3).

Proposed project water demand was calculated based on land use type, number of residential units, the Santee Municipal Code, and the PDMWD-defined unit demand factors. The calculation also took into account the effects of climate change on water supply, including the rising sea levels and changes in weather events, details of which can be found in Section 4.7. For water demand per residential land use area, the residential units are multiplied by a per capita water-use factor of 100 gallons per capita per day obtained from PDMWD's 2015 Comprehensive Facilities Master Plan and multiplied by the estimated number of persons per residential unit as defined in the Santee Municipal Code. Commercial and irrigation water demands are calculated per WAS design criteria based on land area type. Table 4.17-3 illustrates the proposed project water demands by land use, including the total water demand. The total projected water demand for the entire project site is 1.44 mgd, or 1,618 AFY.

**Table 4.17-3. Project Site Water Demands (by Land Use)**

| Land Use | Gallons per Day | Acre-Feet/Year |
|---|---|---|
| Residential | 969,370 | 1,086 |
| Commercial | 9,183 | 10 |
| Irrigation | 465,615 | 522 |
| **Total** | **1,444,168** | **1,618** |

**Source:** Appendix O3.

Tables 4.17-4, 4.17-5, and 4.17-6 show the normal, single dry year, and multiple dry year water demands, respectively, and the water supply availability in 5-year intervals from 2020 through 2040. PDMWD's 2015 UWMP accounts for 840 AFY of demand associated with the proposed project. Thus, the WSA evaluates the additional demand of 778 AFY associated with the proposed project that was not previously accounted for.

**Table 4.17-4. Normal Year Supply and Demand Comparison (Acre-Feet/Year)**

| Water Supply Sources | 2020 | 2025 | 2030 | 2035 | 2040 |
|---|---|---|---|---|---|
| Potable Water Demand | 10,519 | 14,033 | 14,214 | 14,445 | 14,800 |
| Recycled Water Demand | 2,016 | 2,016 | 2,016 | 2,016 | 2,016 |
| **Total PDMWD Demand** | **12,535** | **16,049** | **16,230** | **16,461** | **16,816** |
| Proposed Project Water Demand[1] | NA | 778 | 778 | 778 | 778 |
| **Demand Totals (Including Proposed Project)** | **NA** | **16,827** | **17,008** | **17,239** | **17,594** |
| Projected Imported Water (SDCWA)[2] | 10,519 | 14,033 | 14,214 | 14,445 | 14,800 |
| Recycled Water (PDMWD) | 2,016 | 2,016 | 2,016 | 2,016 | 2,016 |
| Projected Additional Supply to SDCWA[3] | NA | 778 | 778 | 778 | 778 |
| **Total Supply** | **12,535** | **16,827** | **17,008** | **17,239** | **17,594** |

**Source:** Appendix O3.

**Notes:** PDMWD = Padre Dam Municipal Water District; SDCWA = San Diego County Water Authority

[1] The 2015 UWMPs for PDMWD and SDCWA included 840 AFY of demand for the proposed project in accordance with a study done by Boyle Engineering for the project in 2007. The total projected water demand for the proposed project is 1,618 AFY. Therefore, after subtracting the 840 AFY previously planned, an additional 778 AFY of demand is projected beginning in 2025.

[2] Projected imported water extracted from Table 6-9 of the PDMWD 2015 UWMP.

[3] The accelerated forecasted growth component of SDCWA's 2015 UWMP can provide additional supply capacity to PDMWD. The SDCWA has confirmed the availability of 778 AFY to serve the proposed project demand. See Appendix A of EIR Appendix O3 for confirmation from the SDCWA. The ECAWP Program is not included in the additional supply projections.

**Table 4.17-5. Single Dry Year Supply and Demand Comparison (Acre-Feet/Year)**

| Water Supply Sources | 2020 | 2025 | 2030 | 2035 | 2040 |
|---|---|---|---|---|---|
| Normal Year Supply | 12,535 | 16,827 | 17,008 | 17,239 | 17,594 |
| PDMWD Recycled Water Supply | 2,016 | 2,016 | 2,016 | 2,016 | 2,016 |
| Single Dry Year Supply Available from SDCWA[1] | 11,241 | 14,148 | 14,214 | 14,445 | 14,016 |
| Additional Single Dry Year Supply from SDCWA[2] | 0 | 778 | 778 | 778 | 778 |
| **Total Single Dry Year Supply** | **13,257** | **16,827** | **17,008** | **17,239** | **16,810** |
| Single Dry Year Demands[3] | 12,535 | 16,827 | 17,008 | 17,239 | 17,594 |
| *Difference* | *722* | *0* | *0* | *0* | *(784)* |

**Sources:** PDMWD 2016; Appendix O3.

**Notes:** PDMWD = Padre Dam Municipal Water District; SDCWA = San Diego County Water Authority

[1] From Table 7-3 (Row G) of the PDMWD 2015 UWMP.

[2] The accelerated forecasted growth component of the SDCWA 2015 UWMP is projected to provide additional supply capacity to PDMWD to meet the additional 778 AFY required by the proposed project. See Appendix A of EIR Appendix O3 for confirmation from SDCWA. ECAWP is not included in the additional supply projections.

[3] Single Dry Year Demand Totals include the additional 778 AFY water demand needed to fulfill the proposed project's needs starting in 2025.

**Table 4.17-6. Multiple Dry Year Supply and Demand Comparison (Acre-Feet/Year)**

| Water Supply Sources | | Supply and Demand Comparison – Multiple Dry Year Events | | | | |
|---|---|---|---|---|---|---|
| | | 2020 | 2025 | 2030 | 2035 | 2040[1] |
| Normal Year Supply | | 12,535 | 16,827 | 17,008 | 17,239 | 17,594 |
| 1st Year | Supply (PDMWD Recycled Water) | 2,016 | 2,016 | 2,016 | 2,016 | 2,016 |
| | Supply (SDCWA) | 11,960 | 14,931 | 14,635 | 14,445 | 14,016 |
| | Supply (Add'l SDCWA[2]) | — | 778 | 778 | 778 | 778 |
| | **Supply Totals** | **13,976** | **17,725** | **17,432** | **17,239** | **16,810** |
| | **Demand Totals[3]** | **12,535** | **16,827** | **17,008** | **17,239** | **17,594** |
| | *Difference* | *1,441* | *898* | *424* | *0* | *(784)* |
| 2nd Year | Supply (PDMWD Recycled Water) | 2,016 | 2,016 | 2,016 | 2,016 | 2,016 |
| | Supply (SDCWA) | 11,163 | 14,033 | 14,214 | 14,125 | 13,766 |
| | Supply (Add'l SDCWA[2]) | — | 778 | 778 | 778 | 778 |
| | **Supply Totals** | **13,179** | **16,827** | **17,008** | **16,919** | **16,560** |
| | **Demand Totals[3]** | **12,535** | **16,827** | **17,008** | **17,239** | **17,594** |
| | *Difference* | *644* | *0* | *0* | *(320)* | *(1,034)* |
| 3rd Year | Supply (PDMWD Recycled Water) | 2,016 | 2,016 | 2,016 | 2,016 | 2,016 |
| | Supply (SDCWA) | 10,519 | 13,868 | 13,573 | 13,282 | 12,995 |
| | Supply (Add'l SDCWA[2]) | — | 778 | 778 | 778 | 778 |
| | **Supply Totals** | **12,535** | **16,662** | **17,008** | **16,076** | **17,594** |
| | **Demand Totals[3]** | **12,535** | **16,827** | **17,008** | **17,239** | **17,594** |
| | *Difference* | *0* | *(165)* | *(641)* | *(1,163)* | *(1,805)* |

**Source:** Appendix O3.

**Notes:** PDMWD = Padre Dam Municipal Water District; SDCWA = San Diego County Water Authority

[1] The Multiple Dry Years Supply and Demand Comparison from PDMWD 2015 UWMP Table 7-8 did not determine values for 2040; these values were estimated by Michael Baker International based on the trends of the years 2025–2035.

[2] The accelerated forecasted growth component of the SDCWA 2015 UWMP is projected to provide additional supply capacity to PDMWD to meet the additional 778 AFY required by the proposed project. See Appendix A of EIR Appendix O3 for confirmation from the SDCWA. The ECAWP Program is not included in the additional supply projections.

[3] Demand Total includes the additional 778 AFY water demand needed to fulfill the proposed project's needs starting in 2025.

As shown in Tables 4.17-4, 4.17-5, and 4.17-6, supply shortfalls are projected in the single and multiple dry year scenarios. The SDCWA maintains that such shortfalls can be mitigated through the use of its carryover storage capacity, which currently totals 170,000 AFY, and if necessary, through water conservation actions and dry year transfers, which the SDCWA successfully acquired and used during the 2007–2011 shortage period. Further, the shortfalls identified in the SDCWA's 2015 UWMP would be mitigated by the interim demand forecast reduction of approximately 60,000 AFY for the 2020 to 2040 planning horizon identified in the 2018 SDCWA Annual Report based on water-use efficiency increase projections throughout the region and with the increased output at the Carlsbad Desalination Plant in comparison with the SDCWA's 2015 UWMP. Similarly, PDMWD can address the shortfalls identified in its 2015 UWMP through the

implementation of conservation measures identified in Section 8 of its 2015 UWMP, Water Shortage Contingency Planning (Appendix O3).

The proposed project's projected demand is 1,618 AFY. PDMWD's projected total water demand for 2040 is 16,816 AFY (14,800 AFY potable and 2,016 AFY recycled) or 15 mgd. According to PDMWD's 2015 Comprehensive Facilities Master Plan and Program Environmental Impact Report, which were approved by the PDMWD Board in May 2017, only 0.75 mgd or 840 AFY of proposed project demand is accounted for in the 2040 projections for PDMWD because it was based on the previously proposed project from 2007. Therefore, the 2015 UWMP only accounts for 56 percent of the proposed project's calculated demand. The proposed project's accounted for demand of 840 AFY is 5 percent of PDMWD's total potable demand for the year 2040. The proposed project's total demand of 1,618 AFY would be about 9.6 percent of PDMWD's 2040 adjusted potable water demand of 15,578 AFY (14,800 AFY + 778 AFY [unaccounted for demand by the proposed project]).

Since PDMWD's 2015 UWMP only accounts for 840 AFY of the proposed project's total projected demand of 1,618 AFY over the 20-year planning horizon, the WSA evaluates and concludes that the additional required 778 AFY can be accommodated by additional imported water from the SDCWA. The SDCWA has confirmed in a response letter (refer to Appendix A of EIR Appendix O3) that it can meet the additional 778 AFY demand associated with the proposed project through the use of its accelerated forecast growth (AFG) component of its 2015 UWMP. The AFG is incorporated into the SDCWA's demand forecast at a regional level and is available to all member agencies to meet additional demand increments not previously identified. The demand associated with the AFG component is included in the SDCWA's regional total demand forecast and is intended to account for a portion of SANDAG's estimated residential land use development that is currently projected to occur beyond the SDCWA's 2040 planning horizon but that has the potential to move forward on an accelerated schedule. This AFG demand was incorporated by the SDCWA at a regional level for planning purposes and is not portioned out by member agencies. This allows for an additional 4,807 AFY beginning in 2025, a portion of which (778 AFY) has been allocated by SDCWA to PDMWD for the proposed project (Appendix O3).

In addition, the proposed project would implement water-efficient irrigation, landscaping, appliances, and fixtures to further reduce water demand. Landscape plans would be required to ensure compliance with applicable requirements, and the applicant would be required to plan and install water-efficient devices and landscaping in accordance with applicable PDMWD development guidelines and standards, ordinances, and requirements. Refer to Chapter 3 for a complete list of the sustainability features incorporated into the proposed project.

PDMWD is also planning and developing a regional drought-proof water supply known as the ECAWP Program, which would decrease PDMWD's reliance on imported water supplies and

improve water supply reliability. The ECAWP Program, which is currently in the project procurement and permitting phase, is expected to produce up to 11.5 mgd to be pumped into Lake Jennings for surface water augmentation, created from 15 mgd recycled water from the upgrade of the Ray Stoyer WRF by the end of 2025. If the ECAWP Program is implemented, based on this projected time frame, the proposed project would be able to fully use purified water from the ECAWP Program within the 20-year water supply planning horizon and beyond. However, this program would not be necessary for PDMWD to meet the demand associated with the proposed project but could provide an additional supply source for further water supply security to the proposed project and other PDMWD customers if it is implemented. Further, PDMWD plans to reduce its dependence on imported supplies from the SDCWA by continuing permanent water conservation efforts.

Therefore, based on PDMWD's projected supplies, combined with additional confirmed supplies from the SDCWA AFG, water supplies are sufficiently available to meet the proposed project's demand in normal, single dry, and multiple dry years, provided that the water shortage contingency planning measures identified in PDMWD's 2015 UWMP and the SDCWA's 2015 UWMP are implemented in dry years. In addition, efforts underway by Metropolitan, SDCWA, and PDMWD to diversify and augment their supplies provide further assurance of the sufficiency of the water supply for the proposed project. Therefore, the proposed project would have a less than significant impact on water supply availability.

### Mitigation Measures

The proposed project would have sufficient water supplies available to serve the proposed project and reasonably foreseeable future development during normal, dry, and multiple dry years. Therefore, no mitigation is required.

## 4.17.5.3 Threshold 3: Wastewater Treatment Capacity

***Would implementation of the project result in determination by the wastewater 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?***

| | |
|---|---|
| **Impact:** PDMWD would have adequate capacity to serve the proposed project's projected demand in addition to its existing commitments. | **Mitigation:** No mitigation is required. |
| **Significance Before Mitigation:** Less than significant. | **Significance After Mitigation:** Less than significant. |

### Impact Analysis

As described in Section 4.17.5.1, the proposed project would construct new public sewer infrastructure that would be owned, operated, and maintained by PDMWD. Sewage generated on the project site would be treated at two gravity discharge locations: the existing Ray Stoyer WRF through a new headworks facility or the Ray Stoyer WRF to the Metro system. PDMWD plans to

expand the Ray Stoyer WRF to ultimately provide highly purified water to enhance PDMWD's water supply portfolio as part of the ECAWP Program.

The Sewer Service Study (Appendix O2) prepared for the proposed project used flow generation rates developed in PDMWD's 2015 Comprehensive Facilities Master Plan. Sewer demand assumptions in PDMWD's 2015 Comprehensive Facilities Master Plan were based on historical records (year 2012). Future sewer flow generation rates were adjusted in the 2015 Comprehensive Facilities Master Plan to account for water conservation efforts and increasing use of efficient appliances and fixtures in new developments (PDMWD 2015). Refer to Table 4.17-2 for the sewer flow generation rates used for the proposed project.

The study analyzed ADWF, PDWF, and PWWF scenarios, as described in Section 4.17.5.1. The ADWF was estimated on the proposed project's land use and phasing plans coupled with the revised sewer flow generation rates from PDMWD 2015 Comprehensive Facilities Master Plan. A summary of the ADWF for the residential, commercial, fire station, and school land uses within the proposed project is provided in Table 4.17-7.

**Table 4.17-7. Proposed Project Average Daily Flow Summary**

| Phase | Phase | Total Area (Acres) | Total Units | Total ADWF (GPD) | Total ADWF (AFY) |
|---|---|---|---|---|---|
| 1 | Fanita Commons and Orchard Village | 119.71 | 1,050 | 218,610 | 245 |
| 2 | Orchard Village | 74.10 | 573 | 111,741 | 125 |
| 3 | Vineyard Village | 110.13 | 512 | 103,350 | 116 |
| 4 | Vineyard Village | 88.21 | 814 | 157,457 | 176 |
| | **Total** | **392.15** | **2,949[1]** | **591,158** | **662** |

**Source:** Appendix O2.

**Notes:** AFY = acre-feet per year; GPD = gallons per day

[1] This assumes that the proposed project will include a school. If the school site is not utilized for school purposes, the school site may be developed with residential uses and the total authorized units would be increased to 3,008 residences and the estimated population would increase. However, this land use plan would generate less ADWF.

The average daily flow was analyzed for the proposed project under both the preferred land use plan with school and the land use plan without school. Based on the analysis performed, the school site would produce an ADWF of 15,000 GPD while the alternative residential use would generate an ADWF of just under 11,000 GPD. Therefore, the preferred land use plan with school is used because it would generate a higher ADWF and thus represents a worst-case scenario based on PDMWD's 2015 Comprehensive Facilities Master Plan consumption criteria. As shown in Table 4.17-7, the proposed project would generate approximately 591,158 GPD of wastewater. This equates to approximately 662 AFY.

According to the 2015 UWMP, PDMWD's wastewater collection system consists of sewer mains, lift stations, and flow diversion structures. Almost all of the collected wastewater flows to the PDMWD's influent pump station. Up to 2,240 AFY of wastewater is pumped to the PDMWD

WRF and 2,175 AFY is pumped to the Metro system where it receives advanced primary treatment at the Point Loma Wastewater Treatment Plant. In total, PDMWD can collect approximately 4,426 AFY, or 3,951,277 GPD. However, for the purposes of this analysis, the PDMWD's Ray Stoyer WRF is analyzed for adequate treatment capacity for the proposed project, which can treat up to 2,240 AFY. According to PDMWD's 2015 UWMP, the Ray Stoyer WRF treated approximately 2,175 AFY in 2015.

As shown in Table 4.17-7, the proposed project would generate approximately 662 AFY, or 591,158 GPD ADWF. In addition, PDMWD's 2015 Comprehensive Facilities Master Plan has already included 1,380 residential units on the project site consistent with the Santee General Plan as part of the ADWF future projections. Therefore, a portion of the proposed project's sewer demand totaling approximately 392 AFY has already been planned for by PDMWD. Further, there are plans to expand the existing PDMWD influent pump station and Ray Stoyer WRF through the ECAWP Program, described previously. This program would increase the capacity of the wastewater system to approximately 6,725 AFY by 2040, consistent with buildout of the proposed project. However, the remaining sewer demand of approximately 270 AFY from the proposed project would be capable of being treated by PDMWD facilities with or without this expansion. Thus, PDMWD has sufficient existing or planned capacity to receive and treat wastewater from the project site. The proposed project would have a less than significant impact on wastewater treatment capacity.

### Mitigation Measures

PDMWD would have adequate wastewater capacity to serve the proposed project; therefore, no mitigation is required.

### 4.17.5.4 Threshold 4: Generation of Solid Waste

***Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?***

| | |
|---|---|
| **Impact:** The proposed project would increase the volume of solid waste that enters Sycamore Landfill. However, it would not generate solid waste in excess of state or local standards or in excess of the capacity of the local infrastructure. | **Mitigation:** No mitigation is required. |
| **Significance Before Mitigation:** Less than significant. | **Significance After Mitigation:** Less than significant. |

### Impact Analysis

Construction activities including clearing, grubbing, grading, and building would occur and produce green waste, scraps, and other debris typical of construction. Operation of the proposed project would require services to pick up solid waste generated by the proposed land uses on the project site.

Residential and commercial trash hauling and industrial solid waste, green waste, and recycling collection and disposal services for the proposed project would be provided by Waste Management, Inc., under a contractual franchise agreement with the City. Waste Management, Inc., would provide trash, recycling, and yard waste pickup services on a weekly basis for residential customers and up to seven times per week for business customers. Waste Management Inc., identified in the solid waste service letter (Appendix M) that they are capable of adequately serving the proposed project and would not need to provide additional services or expand existing facilities to do so.

Solid waste from the proposed project that is not recycled or diverted would be hauled to Sycamore Landfill, a 349-acre site at 8514 Mast Boulevard approximately 1.7 miles southwest of the project site. Sycamore Landfill is fully permitted as a Class III landfill and accepts only routine household and commercial waste; thus, hazardous wastes are not collected. According to the Solid Waste Information System database maintained by CalRecycle, the landfill's maximum permitted capacity is approximately 147,908,000 cubic yards with a current remaining capacity of approximately 113,972,637 cubic yards as of 2016. Based on the remaining capacity and disposal rates, the Sycamore Landfill is expected to close December 31, 2042 (CalRecycle 2019).

Based on CalRecycle's 2017 waste disposal rate of approximately 6.2 pounds per day per resident and recycling rate of 42 percent, the residential portion of the proposed project would dispose of approximately 28,675 pounds per day of waste (7,974 residents x 6.2 pounds per day – 42 percent) under the preferred land use plan with school and 28,289 pounds per day (8,145 residents x 6.2 pounds per day – 42 percent) under the land use plan without school. Based on CalRecycle's employee disposal rate of 11.9 pounds per employee per day and an employee recycling rate of 62 percent, the commercial portion of the proposed project would generate approximately 2,035 pounds per day (450 employees x 11.9 pounds per day – 62 percent) under the preferred land use plan with school and approximately 904 pounds per day (200 employees x 11.9 pounds per day – 62 percent) under the land use plan without school. The total waste generated for the proposed project would be approximately 30,710 pounds of municipal solid waste per day under the preferred land use plan with school and approximately 29,193 pounds of municipal solid waste per day under the land use plan without school. Converting Sycamore Landfill's remaining capacity to pounds, it has approximately 192 billion pound capacity as of 2016. Thus, the landfill has adequate capacity to serve the proposed project. In addition, waste diversion rates are expected to continuously increase as more waste is diverted from the landfills as mandated by AB 1826 and SB 939. Therefore, the proposed project would not generate solid waste in excess of state or local standards or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals and impacts would be less than significant.

## Mitigation Measures

The proposed project would not result in a significant impact related to solid waste generation; therefore, no mitigation is required.

### 4.17.5.5 Threshold 5: Compliance with Solid Waste Regulations

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

**Impact:** The proposed project would comply with applicable solid waste regulations.

**Mitigation:** No mitigation is required.

**Significance Before Mitigation:** Less than significant.

**Significance After Mitigation:** Less than significant.

## Impact Analysis

Development of the proposed project would result in an increase in domestic municipal solid waste generation. Solid waste generated by the proposed project would be hauled away by Waste Management, Inc., to Sycamore Landfill in the City of San Diego. On January 1, 2017, the 2016 California Building Standards Code went into effect, including an updated edition of the California Green Building Standards Code (CALGreen). One of the most notable changes in the 2016 edition of CALGreen is a new statewide requirement that at least 65 percent of waste from new C&D projects be recycled or salvaged for reuse. Before this latest update, CALGreen had a less stringent 50 percent C&D diversion requirement. During construction, the proposed project would comply with these requirements, which are also found in the City's Construction and Demolition Debris Recycling Ordinance (Santee Municipal Code, Chapter 9.04) requiring the diversion of 65 percent of construction waste as required under AB 939.

As California laws get more stringent, the amount of waste sent and managed at Sycamore Landfill would be expected to decrease. Waste Management, Inc., is required to implement measures to divert 65 percent of waste generated during construction/demolition activities. Santee Municipal Code, Section 9.04.080, also requires that any covered project[1] submit a completed C&D debris management plan that identifies waste materials expected to be generated by the proposed project at the time of demolition or building permit application.

Standard solid waste practices identified in AB 939 and AB 1826 would be implemented throughout operation of the proposed project. Example measures include waste characterization, source reduction, recycling, composting, education and public information, special waste, household hazardous waste, and programs for organic waste. Waste and recycling for project construction and operation would comply with CALGreen and current regulations, such as SB

[1] Santee Municipal Code, Section 9.04.040, defines covered projects and includes the construction of new residential structures, including single-family, multifamily, and condo conversions, regardless of the square footage of the floor area and the construction of all new commercial/industrial buildings.

1374, designed to divert waste from landfills. Effective January 1, 2017, all jurisdictions are required to divert 65 percent of construction waste.

Non-residential development and attached residential development in the proposed project would comply with the trash enclosure requirements. Detached residential development and attached residential development where private garages are attached to individual units would participate in the residential curbside pickup program managed by Waste Management, Inc. Solid waste containers for these units, which would be stored in private side or rear yards or in garages, would be picked up from the street curbside or alley edge on collection days. In addition, the proposed project would be required to institute recycling services to divert at least 90 percent of the waste generated and 70 percent of non-hazardous construction waste, and provide recycling and composting services (Mitigation Measure GHG-2), which includes providing recycling containers within multi-family residential communities and non-residential buildings and providing composting containers and compost collection services within commercial and office facilities.

Proposed development on the project site would involve the reuse of on-site rock materials, such as large boulders, rock cobble, decomposed granite, and processed rock. There are large quantities of rock cobble existing on site. Rock cobble would be collected and used in the construction of water quality and landscape features. It is also anticipated that a temporary aggregate processing operation would be set up on site during construction. The aggregate processing plant would produce roadway sub-base and other aggregate materials for use on site. In addition to rock materials, there are large deposits of decomposed granite on site, which would be reused for trails and other landscape-related purposes. Use of on-site materials would eliminate the need for importing and exporting rough or finished materials, reducing the number of solid waste disposal truck trips and associated construction-related vehicle emissions in support of the Sustainable Santee Plan (2020).

The design of residences on the project site would be constructed of durable materials and simple design to minimize materials waste. The Architectural Design Guidelines for the proposed project include recommendations for efficient residence designs that can potentially reduce the amount of lumber and other building materials needed. Strategies include simple massing forms and efficient framing techniques, use of rapidly renewable resources, and installation of durable material that require less frequent replacement. Therefore, the proposed project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. Impacts would be less than significant.

### Mitigation Measures

The proposed project would have a less than significant impact regarding compliance with solid waste regulations; therefore, no mitigation is required.

## 4.17.6 Cumulative Impacts and Mitigation Measures

***Would implementation of the project have a cumulatively considerable contribution to a cumulative public services impact considering past, present, and probable future projects?***

| Cumulative Impact | Significance | Proposed Projects Contribution |
|---|---|---|
| **Threshold 1:** New or Expanded Utilities or Service Systems | Potentially significant | Cumulatively considerable and unavoidable |
| **Threshold 2:** Water Supply Availability | Less than significant | Not cumulatively considerable |
| **Threshold 3:** Wastewater Treatment Capacity | Less than significant | Not cumulatively considerable |
| **Threshold 4**: Generation of Solid Waste | Less than significant | Not cumulatively considerable |
| **Threshold 5:** Compliance with Solid Waste Regulations | Less than significant | Not cumulatively considerable |

### 4.17.6.1 Cumulative Threshold 1: New or Expanded Utilities or Service Systems

The geographic context for the analysis of cumulative impacts in regard to water, wastewater, stormwater drainage, electric power, natural gas, and telecommunications facilities is the individual service provider's service area in the County. A significant cumulative impact would result if combined cumulative projects would require the need for new or expanded utilities or service systems facilities that cause significant environmental effects. To support regional growth, including the cumulative projects listed in Table 4-2, Cumulative Projects, in Chapter 4, Environmental Impact Analysis, new water, wastewater, stormwater drainage, electric power, natural gas, and telecommunications facilities would be constructed in the City and elsewhere in the region. A majority of these new facilities would connect to existing systems. These new facilities could result in new significant physical impacts on the environment, mostly associated with construction activities and placement within sensitive resource areas. It is reasonable to expect that these projects, like the proposed project, would comply with CEQA, and any project-specific impacts identified with the construction of these facilities would be mitigated to the extent feasible. Due to the proposed project's significant and unavoidable impacts to air quality, noise, and transportation, the construction or expansion of utilities or service systems under the proposed project would contribute to the significant impacts identified for these environmental issues. Therefore, in combination with other cumulative projects, the proposed project would have the potential to result in a significant cumulative impact related to the construction or expansion of new utilities or service systems. The proposed project's contribution would be cumulatively considerable.

### 4.17.6.2 Cumulative Threshold 2: Water Supply Availability

The geographic context for the analysis of cumulative impacts in regards to water supply is the PDMWD water service area. A significant cumulative impact would occur if the combination of

existing and future projects occurring in the PDMWD service area would result in insufficient water supplies, resulting in the need for new or expanded entitlements. PDMWD's 2015 UWMP evaluates the sufficiency of water supplies to accommodate future growth and ensure long-term reliability for the region, including the identification of alternative water supply sources to alleviate the risk of unforeseen water shortages. The 2015 UWMP takes into account regional population growth and future supplies, including supply development and conservation.

To address regional demand, PDMWD requires projects of a certain size to prepare WSAs, in accordance with SB 610, which takes into consideration new demands for potable water and whether those demands have been accounted for in the regional growth forecasts used to project demand in the 2015 UWMP. Projects that are not included in the regional growth forecasts are accounted for in the regional water supply plans through use of the AFG demand increment in the SDCWA's 2015 UWMP. The AFG component would account for a portion of SANDAG's estimated residential land use development that is currently projected to occur beyond the SDCWA's 2040 planning horizon but that has the potential to move forward on an accelerated schedule. The purpose of the AFG component of the demand forecast is to estimate, on a regional basis, additional demand associated with projects not yet included in local jurisdictions' general plans and to plan for additional sufficient regional supplies to reliably meet the water demand of those projects (such as the proposed project).

As documented in PDMWD's 2015 UWMP, the SDCWA is planning to meet future and existing demands, which include the demand increment associated with the AFG. Part of the SDCWA toolkit in these projections consists of WSAs prepared for applicable projects. The SDCWA would assist its member agencies in tracking the agency-provided certified EIRs that include WSAs, which use the AFG demand increment to demonstrate adequate supplies for the development. In addition, similar to the proposed project, prior to approval, all cumulative projects in the City would be required to demonstrate water and sewer availability by submitting water and sewer availability forms to the City that are signed by PDMWD. Therefore, in combination, cumulative projects would not result in a significant cumulative impact related to water supply.

According to the WSA conducted for the proposed project (Appendix O3), demand totals for the project site could exceed supplies available by PDMWD in single dry and multiple dry years. However, the additional project demands would be supplied by the SDCWA through the AFG component of the 2015 UWMP because the SDCWA has confirmed that it can meet the additional demand associated with the proposed project in normal, single dry, and multiple dry years, provided that the water shortage contingency planning measures identified in the PDMWD 2015 UWMP and SDCWA 2015 UWMP are implemented in dry years. In addition, PDMWD is developing the ECAWP Program. Phase 1 of the ECAWP Program would have the ability to provide up to 12,880 AFY to augment PDMWD supply. This additional supply could result in a decrease in needed SDCWA imported water supply beginning in 2025 or could be used to augment

PDMWD supplies. However, this program is not necessary for PDMWD to meet the demand associated with the proposed project. Therefore, a significant cumulative impact would not occur and the proposed project's contribution would not be cumulatively considerable.

#### 4.17.6.3 Cumulative Threshold 3: Wastewater Treatment Capacity

The geographic context for the analysis of cumulative impacts related to wastewater treatment capacity is the PDMWD wastewater service area. A significant cumulative impact would occur if the combined cumulative projects identified in Chapter 4 would result in inadequate wastewater treatment capacity. As discussed in Section 4.17.5.3, the Ray Stoyer WRF has the capacity to treat up to 2,240 AFY of wastewater generated within the region. Further, there are plans to expand the existing PDMWD influent pump station and Ray Stoyer Water Treatment Facility through the ECAWP Program, described previously. If approved, this program would increase the capacity of the wastewater system to approximately 6,725 AFY by 2040.

Because PDMWD has the current capacity to treat up to 2,240 AFY and pass additional wastewater on to Point Loma Water Treatment Plant for treatment, and the planned ECAWP Program would increase the wastewater treatment system to 6,725 AFY by 2040, it is anticipated that there would be adequate capacity to receive and treat wastewater from future development occurring in the City, including the proposed project site and associated cumulative projects. Therefore, in combination, cumulative projects would not result in a significant cumulative impact related to wastewater capacity. Since the proposed project's future demand of 662 AFY of wastewater treatment under the proposed project would be adequately served by PDMWD, the proposed project's contribution to regional wastewater treatment capabilities would not be cumulatively considerable.

#### 4.17.6.4 Cumulative Threshold 4: Generation of Solid Waste

The geographic context for the analysis of cumulative impacts related to solid waste is the County landfill system. Implementation of the proposed project, as well as other regional off-site development, would increase the amount of solid waste produced in the region. However, there are extensive regulations and waste management programs in place at the state and local levels focused on increasing diversion and conversion of waste into the future. Most cumulative projects would undergo CEQA review similar to the proposed project. This process would include verifying with Sycamore Landfill that there is adequate capacity to accept trash and recycling for the cumulative projects. Therefore, in combination, cumulative projects would not result in a significant cumulative impact related to solid waste generation.

Based on a service letter provided by Waste Management, Inc. (Appendix M), the service provider is capable of adequately serving the proposed project and would not need additional services or expanded facilities to do so. Additionally, based on existing capacity, remaining capacity, and disposal rates, Sycamore Landfill has available capacity to accept trash from the project site.

Therefore, a significant cumulative impact would not occur and the proposed project's contribution would not be cumulatively considerable.

#### 4.17.6.5 Cumulative Threshold 5: Compliance with Solid Waste Regulations

The geographic context for the analysis of cumulative impacts related to compliance with solid waste regulations is the San Diego region. Implementation of the proposed project, as well as other cumulative development, would increase the amount of solid waste produced in the region. However, there are extensive regulations and waste management programs in place at the state and local levels focused on increasing diversion and conversion of waste into the future. Waste and recycling, including construction waste and recycling, would comply with CALGreen and current regulations, such as SB 1374 designed to divert waste from landfills. Effective January 1, 2017, in all jurisdictions, the owners/builder of construction projects will be required to divert 65 percent of the construction waste materials. In addition, the operation of future projects would be required to comply with the mandates identified in AB 939 and AB 1826, which set requirements for waste diversion as well as solid waste and organic waste programs. Cumulative projects would be required to comply with state and local solid waste regulations. Therefore, in combination, cumulative projects would not result in a significant cumulative impact.

The proposed project would comply with the same state and local regulations as the cumulative projects. This includes the Santee Municipal Code, Section 9.04.080, which requires that any covered project submit a completed C&D debris management plan identifying waste materials expected to be generated as a result of the proposed project at the time of demolition or building permit application as well as AB 939. Therefore, the proposed project would comply with state and local management and reduction statutes and regulations related to solid waste. A significant cumulative impact would not occur and the proposed project's contribution would not be cumulatively considerable.

### 4.17.7 Comparison of Proposed Project to 2007 Project

The City's approval of the previously proposed project (Barratt American Project) was challenged, and the Court of Appeal found deficiencies in the 2007 EIR relating to the water supply impact analysis for that project. Initially, the court found a large discrepancy between the 2007 EIR's estimation of that project's water demands and PDMWD's estimation of water demands. For the currently proposed project, the estimated water demands used in this EIR and those estimated by PDMWD in its WSA are consistent, and the basis of those estimates is explained in detail (see above and in Section 3.5 of the WSA [Appendix O3]). In addition, the proposed project does not include a 10-acre lake and does not rely on groundwater as a source of supply. Thus, the portion of the court's ruling addressing water supplies for the lake and potential impacts associated with the extraction of groundwater are not applicable to the present analysis. Finally, the Court of Appeal held that uncertainties in the reliability of water supplies were not accurately described in

the 2007 EIR for the previous project. In the years following approval of the previous project, water sources have become more diversified as a result of efforts by PDMWD, SDCWA, and Metropolitan, as discussed previously.

Finally, the Court of Appeal held that an October 2007 addendum to the PDMWD WSA for the previously proposed Fanita Ranch project acknowledged uncertainty in the reliability of water supplies to PDMWD, which was not addressed in the 2007 EIR, relating to possible mandatory cutbacks in water supply from the SWP. PDMWD has issued no such addendum in connection to the current WSA. For the currently proposed project, the PDMWD WSA and this EIR (and the UWMPs on which they are based) specify the sources of water that are relied on; analyze the sufficiency of those water supplies in differing types of water years to meet the demands of the proposed project (in addition to other existing, projected, and future demands); and describe conservation and drought contingency plans, supply uncertainties, and future plans for diversification and augmentation of supplies.

## 4.17.8 References

CalRecycle (California Department of Resources Recycling and Recovery). 2017. "California's 2017 Per Capita Disposal Rate Estimate." Accessed May 2020. https://www.calrecycle.ca.gov/LGCentral/GoalMeasure/DisposalRate/MostRecent/.

CalRecycle. 2019. Solid Waste Information System Facility Detail Sycamore Landfill (37-AA-0023). Accessed May 2020. https://www2.calrecycle.ca.gov/swfacilities/Directory/37-AA-0023.

City of Santee. 2003. Santee General Plan. Adopted August 27.

City of Santee. 2020. Sustainable Santee Plan. Final. December 2019. Adopted January 8.

Metropolitan (Metropolitan Regional Water District of Southern California). 2016a. 2015 Urban Water Management Plan. June. Accessed May 2020. http://www.mwdh2o.com /PDF_About_Your_Water/2.4.2_Regional_Urban_Water_Management_Plan.pdf.

Metropolitan. 2016b. Integrated Resources Plan 2015 Update. Report No. 1518. January. Accessed May 2020. http://www.mwdh2o.com/PDF_About_Your_Water/2015%20IRP%20Update %20Report%20(web).pdf.

PDMWD (Padre Dam Municipal Water District). 2015. Comprehensive Facilities Master Plan. October.

PDMWD. 2016. 2015 Urban Water Management Plan. October 26.

Sacramento State University. 2019. Water and Wastewater Terms C Factor. Accessed May 2020. https://www.owp.csus.edu/glossary/c-factor.php.

SDCWA (San Diego County Water Authority). 2016. 2015 Urban Water Management Plan. June. Accessed May 2020. https://www.sdcwa.org/sites/default/files/UWMP2015.pdf.