

2.11.3.1.8 Utilities and Service Systems

This subchapter of the EIR addresses water and wastewater services required for Project development, as well as service providers and facilities needed to meet this demand. Project Facility Availability Forms, ~~as well as~~ along with personal communications from service providers, are summarized below and included in Appendix O. The following water and wastewater services technical reports were prepared for the Proposed Project: ~~Conceptual~~ (1) Water and Recycled Water Study (Atkins 2015b) included in Appendix P; and (2) Final Conceptual Sewer Study (Atkins 2015a) included in Appendix Q.

Natural gas and electricity for the Proposed Project would be provided by SDG&E. A detailed analysis of the energy demands of the Project compared to existing energy production and consumption conditions is provided in Section 3.1.2, *Energy*, and is not discussed further in this section.

2.11.3.1.8.1 Existing Conditions

2.11.3.1.8.1.1 Water Supply

Water service would be provided to the Project site by the Rincon MWD, which ~~Rincon MWD~~ provides potable and recycled water and recycled services to areas within the cities of Escondido, San Marcos, and San Diego, as well as ~~Service is also provided~~ to customers within various unincorporated areas of San Diego County. The Rincon MWD delivers potable and recycled water to a population of approximately 30,000 within its service area, through nearly 8,000 connections representing residential, agricultural, landscape, and commercial/industrial water users. The Rincon MWD was annexed into the SDCWA and Metropolitan Water District of Southern California in 1954, for the purpose of securing additional water supplies (and is a member agency of the SDCWA). Rincon MWD is a retail water supplier and does not routinely sell wholesale water supplies to any entity (Rincon MWD 2011). Additionally, it is a member agency of SDCWA, and serves approximately 30,000 people through nearly 8,000 connections (representing residential, agricultural, landscape, and commercial/industrial water users) Rincon's potable water distribution system includes approximately 112 miles of water main (8-inches or larger in diameter), ten-10 reservoirs with a total storage capacity of 25,742,229 million gallons (MG), and four-4 pump stations, with peak production is calculated at 10 mgd.

The Rincon MWD prepared an Urban Water Master Plan (UWMP) in 2010, in compliance with ~~as required by~~ the state law, to restructure its existing 2005 UWMP (amended and adopted on December 13, 2005) ~~in order to~~ and comply with the California Department of Water Resources' review process. The 2010 ~~UWMP~~ UWMP contains a comparison of projected supply and demands within its existing boundaries through the year 2035. Projected potable water resources to meet planned demand would be primarily supplied with imported water purchased from SDCWA.

The Rincon MWD recently ~~also~~ prepared a Water Master Plan and UWMP Update in 2014 to identify the facilities, supplies, and capital funding ~~Rincon MWD would need~~ necessary to continue providing reliable water and recycled water service to its customers through 2035.

Rincon has set a strategic goal to offset all new potable water demand through the development of local supplies. Supply and demand conditions have changed substantially since the Rincon MWD last updated their Master Plan in 2005~~2010~~, and the 2014 Master Plan and UWMP update addresses these changes (Rincon MWD 2014).

The Project site is located ~~to the just~~ west of the current Rincon MWD's current service area, and would be ~~served~~ supplied by the adjacent 959 Pressure Zone in this area (with the Project site to include a proposed extension of the 959 Pressure Zone and a new 1030 Pressure Zone, as outlined below in Subsection 3.1.8.2). Potable water service for the ~~Plan area~~ Project site would be primarily provided by connecting ~~ons~~ to an existing 14-inch water main along the southern site boundary, with secondary connections to existing ~~8-inch and 10-inch~~ water mains located in Eden Valley Lane, Mt. Whitney Road, and ~~south of~~ Hill Valley Drive, and Country Club Drive, as well as north of Mt. Whitney Road and west of Country Club Drive (within the Project site, refer to Figure 1-19a, *Proposed On-site Water System*).

2.11.1.2 Wastewater

~~In terms of wastewater service facilities,~~ The Proposed Project site is not located in the San Diego County Sanitation District, but is proposed to be annexed into the District, which. The County provides sewer service for approximately 50,000 customers within the unincorporated communities of the County of San Diego. The County's Sanitation District was consolidated in 2011 and includes nine County sewer service areas. Collectively, the County's wastewater collection and conveyance system includes approximately 432 miles of pipeline, 8,200 manholes, and 12 lift stations. ~~However,~~ While the Project site is ~~also not located~~ within any of the ~~noted~~ sanitation or maintenance districts, it The Project site is located immediately north of the Harmony Grove Sewer Service Area. ~~Accordingly,~~ the option of utilizing the Harmony Grove Sewer Service Area for the Proposed Project's wastewater treatment needs is discussed in Subchapter 4.5, *Analysis of the Off-site and Combined On-/Off-site Sewer Options Alternative*, which includes along with ~~three~~ two other potential off-site options and a combined on- and off-site option, for the provision of sewer service in lieu of the proposed on-site WTWRF and related facilities.

2.11.1.3 Regulatory Setting

Senate Bills 610 and 221

A Water Supply Assessment (WSA) is required, depending on the size of a proposed project, by Senate Bill 610 (specifically, Public Resources Code Section 21151.9 and California Water Code Sections 10631, 10656, 10657, 10910, 10911, 10912, and 10915). This document addresses the issue of water supply availability and is required through Senate Bill (SB) 610 to be prepared when projects subject to CEQA and larger than certain specified thresholds are under evaluation. The Proposed Project does not exceed the specified size threshold of 500 residential units or equivalent, and thus, preparation of a WSA is not required.

SB 221, a companion bill approved at the same time as Senate Bill 610, requires verification of water supplies as a condition of tentative map approval for residential subdivisions of 500 units or more. The Proposed Project water use is fewer than 500 residential units or equivalent; SB 221 is therefore not applicable to the Project.

Regional Water Supply Agency Plans

SDCWA's 2010 ~~Urban Water Management Plan (UWMP)~~ and Rincon MWD's 2014 UWMP update provides for a comprehensive planning analysis at a regional level, and includes water use associated with accelerated forecasts of residential development as part of its for municipal and industrial sector demand projections. SDCWA utilizes the SANDAG regional growth forecast to calculate future demands within their service area. This provides for consistency between San Diego County planning efforts and SDCWA demand projections, thereby ensuring that adequate supplies are being planned for existing and future water users. The demand associated with accelerated forecasted growth is intended to account for SANDAG's land use development currently projected to occur between 2035 and 2050, but with the likely potential to occur on an accelerated schedule. SANDAG estimates that accelerated residential development could occur within the planning horizon of the 2010 UWMP update. These residential units are not yet included in local jurisdictions' general plans, so their projected demands are incorporated at a regional level. When necessary, this additional demand increment can be used by member agencies (including Rincon MWD), which will provide water service for the Proposed Project to meet the demands of development projects not identified in the general land use plans, as part of general plan amendments, and/or new annexations.

As documented in the 2010 UWMP, the SDCWA is planning to meet future and existing demands, which include the demand increment associated with the accelerated forecasted growth. The SDCWA will also assist its member agencies in tracking certified EIRs provided by the agencies that include water supply assessments that ~~utilize~~utilizing the accelerated forecasted growth demand increment, to demonstrate adequate supplies for the development.

State of California Executive Order-B-29-15

On April 1, 2015, Governor Brown signed an executive order mandating state water restrictions for a 25 percent mandatory potable water reduction through February 28, 2016. These restrictions will require California water suppliers to California cities and towns to reduce usage as compared to the amounts used in 2013.

San Diego County General Plan Policies

The San Diego County General Plan includes a Land Use Element that contains policies regarding water supply and wastewater. These policies are analyzed in the Section 3.1.4, *Land Use and Planning*.

Rincon MWD Drought Ordinance

The Rincon MWD Drought Ordinance, entitled “An Ordinance of the Rincon del Diablo Municipal Water District Finding the Necessity For and Adopting a Drought Response Plan,” was most recently updated on November 12, 2014 to address the current drought in California. The ordinance contains different “Drought Stages,” from Level 1 – Drought Watch to Level 4 – Drought Emergency. The different levels represent target reductions in Rincon MWD water use; at Level 1, water use cuts are voluntary while at Levels 2 through 4 water use cuts are mandatory. Rincon MWD’s Board of Directors voted to continue activation of the Level 2 – Drought Alert on May 27, 2015.

2.11.23.1.8.2 Analysis of Project Effects and Determination as to Significance

2.11.2.1 Water Supply

Guideline for the Determination of Significance

A significant impact to utilities would occur if the Proposed Project would:

1. Create a demand for potable water that cannot be met with the current projected water supplies and/or that requires significant alterations to the existing water pipelines and infrastructure that is needed to convey potable water to the site.

Guideline Source

The identified guideline for significance is based on Appendix G of the CEQA Guidelines and is intended to ensure that adequate public utilities and services are available for local residents.

Analysis

Historical Baseline Water Use

The Project Water Study includes an analysis of historical on-site water records to identify the average use rate for an established baseline year (2013), as well as a “rolling average” use rate for the previous five years. Specifically, 2013 was identified as the appropriate single baseline year due to the following considerations: (1) the Project EIR Notice of Preparation used 2013 as the associated baseline year; (2) 2013 was concluded to represent “reasonable average use during a normal climatic year” (and was subsequent to the economic downturn when water use levels under all climatic conditions were curtailed); (3) the Rincon MWD used 2013 as the baseline year in its 2014 Water Master Plan; and (4) 2013 was concluded to represent a conservative historical water use level within the Rincon MWD, as higher demands were experienced in previous years. From the described analysis, the 2013 baseline water use at the Project site is identified as 59,109,000 gallons, or approximately 162,000 gpd. Similarly, the 5-year rolling average water use at the Project site is identified as approximately 194,000 gpd (Atkins 2015b). Based on the Rincon MWD estimate for single-family residential water use of approximately 510 gpd per unit (with current rates potentially lower due to water conservation

measures/requirements), the noted historical baseline range of 162,000 to 194,000 gpd would compare to between approximately 320 and 380 equivalent single-family units.

Project Demand and Regional Potable Water Supply

As ~~previously noted above~~, water supply for the Proposed Project would be provided by ~~the Rincon MWD, which Rincon MWD's water supply~~ is dependent on the SDCWA as the wholesale water supplier. Therefore, the water supply reliability assessment relies on the Water Authority's 2010 UWMP. Water Code Section 10635 requires that every urban water supplier assess the reliability of its water services during normal, dry, and multiple dry water years. ~~This~~ water supply and demand assessment compares the total projected water use with expected water supply over the next 20 years in 5-year increments. The assessment contained in the 2010 UWMP projects reliability through the next 25 years to correspond with population growth forecasted by SANDAG.

The estimated water demands (~~estimated derived~~ from planned land uses, using unit use factors specific to each land use in the current Project plan) ~~were included~~ are identified in the Project's ~~specific plan~~ Water Study (Atkins 2015b). ~~Specifically, the total average water demand was is~~ estimated to be ~~460,870~~164,590 gpd as detailed in Table 2-113.1.8-1, *Potable Water Demands*. The maximum anticipated single-day demand was estimated to be ~~416,849~~444,400 gpd, with a peak hour demand of ~~437~~445 gallons per minute (gpm). The average demand associated with the Proposed Project is approximately 1.7 percent above the noted 2013 baseline year average use of 162,000 gpd at the site, and well below the 5-year rolling average on-site use of 194,000 gpd. While not included in the Project demand analysis, the following considerations are anticipated to reduce the estimated average demand of 164,590 gpd by up to approximately 20 percent (and below the noted 2013 baseline use of 162,000): (1) the use of current and future technological advances and conservation measures, such as low-flow fixtures, high efficiency appliances, and outdoor use restrictions; and (2) the proposed use of recycled water to irrigate approximately 35.6 acres of on-site landscaping in lieu of potable water use (with additional information provided below under the discussions of Recycled Water and Water Conservation and Future Use).

~~The n~~Near-term service for the ~~p~~Proposed Project water demands ~~of the Project can be are~~ accounted for in the SDCWA's 2010 UWMP accelerated forecasted growth demand increment, as discussed above. This additional demand increment can be used by member agencies to meet the demands of development projects not identified in general land use plans, as part of general plan amendments, and/or new annexations. As documented in the 2010 UWMP, SDCWA is planning to meet future and existing demands, including the demand increment associated with accelerated forecasted growth. SDCWA also will assist its member agencies in tracking the certified EIRs provided by the agencies that include water supply assessments ~~that utilize~~ the accelerated forecasted growth demand increment, to demonstrate adequate supplies for the development. In addition, the next update of the demand forecast for SDCWA's 2015 UWMP will be based on SANDAG's most recently updated forecast, ~~which and~~ would include the Proposed Project.

As noted above, the Rincon MWD used SDCWA's projections for normal, dry year and multiple dry years to determine future demands for the next 20 years. The forecasted normal year water demands compared with the projected supplies for Rincon MWD are shown in Table 2-11-2 3.1.8-2, *Supply and Demand Comparison – Normal Year*. Any shortfall from locally developed potable water would come from SDCWA (Rincon MWD 2011). With existing supplies and implementation of the projects discussed in the SDCWA and Rincon's planning documents, there would be adequate water supplies to serve the Project. Table 2-11-3 3.1.8-3, *Supply and Demand Comparison – Single Dry Year*, provides a comparison of a single dry year supply with projected water demands over the next 20 years. In a single dry year, Rincon MWD would actively promote a "voluntary 10% percent reduction in use" message. Past experience during a single dry year indicates that customers have responded and exceeded voluntary calls for conservation. No shortage in supplies would be anticipated during a single dry year.

Table 2-11-4 3.1.8-4, *Supply and Demand Comparison – Multiple Dry Years*, presents multiple dry year scenarios with corresponding (one, two, and three year supplies). For the multi-year analysis, the planning assumption is that MWD would be allocating provide supplies to its member agencies according to its Water Supply Allocation Plan. Under parameters assumed in the multi-dry year analysis, and by past experience, some level of shortage could potentially be experienced. SDCWA has invested in carryover storage supplies to assist in achieving reliability in dry years as discussed in its 2010 UWMP. Should shortages be experienced after the expenditure of SDCWA carryover supplies, the Rincon MWD would respond to allocations in water demands mandated by MWD and SDCWA, and. Additionally, Rincon MWD would implement its Drought Response Plan accordingly. As demonstrated by in Tables 2-11-2 3.1.8-2 through 2-11-4, 3.1.8-4, the Rincon MWD can reliably meet demands during normal and single dry year conditions. While multiple dry year scenario shortages for 2015 are not likely due to the existence of carryover storage supplies, Rincon MWD has plans in place to deal with such an occurrence, including the aforementioned Drought Response Plan.

Recycled Water

The Project Water Study also addresses the proposed recycled water system, which would be designed to serve on-site common landscape irrigation for parks, open space, and parkways. The primary source of recycled water for the Proposed Project would be the on-site WTWRf, which would generate effluent that meets Title 22 standards and provide a source of recycled water to be used for on-site landscape irrigation. The WTWRf is estimated to produce an average daily flow of 71,500 gpd (or 50 gpm) at buildout, which would be adequate to irrigate approximately 35.6 acres of landscaping with recycled water (Atkins 2015b). This would notably reduce the on-site demand for potable water, although the use of recycled water for on-site irrigation is not factored into the previous discussion of potable water demand to provide a more conservative analysis.

Water Conservation and Future Use

Based on recent climatic conditions and water use restrictions, the Project Water Study notes that "...future water use could be 20-25 percent lower per single-family unit, based on a review of new residential developments throughout San Diego County." In addition to water use

restrictions, reductions in future water demand may be achieved through improved water saving technology such as low-flow fixtures and high-efficiency appliances. The Water Study includes a reduced water demand projection based on drought conditions and permanent conservation measures, with water demands for single- and multi-family units reduced to 400 and 300 gpd per unit, respectively (compared to 510 and 400 gpd per unit for the Proposed Project analysis), and an average demand for the Project site of 128,750 gpd (compared to 164,590 gpd for the Proposed Project analysis). While some measure of the described water demand reduction would likely be achieved based on the noted considerations, the projected lower use figures were not utilized in the Proposed Project demand forecast to provide a more conservative analysis.

~~In summary, the Proposed Project has been found to create a demand for potable water that would be met by water supplies that are planned for and intended to be available over a 20-year planning horizon, under normal conditions and in both single and multiple dry years. Therefore, impacts associated with the Project's water supply demand would be less than significant.~~

Water Supply Facilities

Potable Water Supply System. Specifics regarding the water supply system for the Proposed Project are described in Subsection 1.2.1.3 of this EIR, and in the ~~Specific Plan~~ Project Water Study (April Appendix P2015). Figure 1-19a illustrates the proposed water system for the Project.

As noted above, the Project site is located entirely within the boundaries of Rincon MWD, which would provide water service for fire protection and residential use. Specifically, the Proposed Project would be served by the Improvement District 1 (ID-1) South water system, which ID-1 South includes incorporates existing development located generally south of SR-78 and west of I-15. The ID-1 South system includes four reservoirs with varying high water levels, the highest being R-1A and R-1B reservoirs at 959 feet (with the R-1A reservoir proposed for conversion to recycled water use, as outlined below). SDCWA is the sole supplier of water to the ID-1 service area via two connections to the First Aqueduct, near the Hubbard Hill area to the northeast of the Project site.

Rincon MWD, in their Project Facility Availability Form (see Appendix O), discussed the fact that some of the proposed home elevations are above the service levels of the existing reservoirs. ~~Per their recommendation, a~~ The Project onceptual wWater and recyeled water sStudy has been prepared to determine the potable facilities requirements required to serve the ~~new~~ Proposed Project development and integrate it with both the existing system and the Harmony Grove water system (Atkins 2015b).

~~The water study also addresses the recycled water system, which would be designed to serve on-site common landscape irrigation for parks, open space, and parkways. The primary source of recycled water for the Proposed Project would be the on-site WTWRF. The WTWRF is estimated to produce 70,100 gpd or 50 gpm average daily flow at buildout, which would equate to approximately 36 acres of land that could be permanently irrigated using recycled water (Atkins 2015b). This would reduce the on-site demand for potable water.~~

The water supply system facilities referenced above would be sized to provide the required capacity, and would not necessitate significant alterations to existing systems beyond those assumed as part of the Project design. As described above and discussed in more detail in Subsection 1.2.1.3, potable water service for the Project site would be primarily provided primarily by a connection to an existing 14-inch water main along the southern site boundary, and would connect with infrastructure that is currently being constructed by the adjacent Harmony Grove project. Secondary sources of water supply would be provided via a new 12-inch main in Eden Valley Drive Lane, as well as connections ~~the backbone 16-inch water main along Country Club Drive, to the north at Hill Valley Drive, and other locations~~ (as noted above in Subsection 3.1.8.1, refer to Figure 1-19a). These proposed water supply system would include a 16-inch “backbone” water main and related facilities as noted (the proposed 959 Pressure Zone extension), and would ultimately connect to the proposed in the future to the Rincon MWD’s planned reservoir (R7 Reservoir (as described below) discussed below) and transmission projects identified in the Water Master Plan under the five year Capital Improvement Program) to serve future development and to provide appropriate increased fire storage and pressure for existing and future customers the Project site and other locations (Atkins 2015b/Rincon MWD 2014).

~~Since existing potable water storage is located near the Proposed Project with the R-1B reservoir, it is assumed that the fire storage portion is available and can be used for the Proposed Project. Water storage required for the Proposed Project can be estimated based on the District’s criteria of approximately 3.33 times the average annual demand (0.16 million gallons [MG] per day for the Project). Therefore, a total of approximately 0.53 MG is recommended to meet the in-District storage needs, exclusive of fire storage which is assumed available in existing storage reservoirs.~~

Existing water mains within the Project site boundary are planned to be abandoned and replaced with Proposed Project improvements as described.

A small boosted pressure zone ~~is anticipated to~~ would be needed ~~required~~ to serve the western portion of the Proposed Project site where elevations are above 800 feet and would be beyond the service area of the 959 Pressure Zone (including the proposed extension of the 959 Pressure Zone within the Project site). Specifically, ~~the~~ The Project proposed 1030 Pressure Zone would include ~~construct~~ a new booster pump station, a 12-inch backbone system, and 8-inch distribution pipelines within the Project development boundaries and within the Project footprint to serve approximately 75-80 homes (see Figure 1-19a). The pump station would be owned and operated by Rincon MWD and would be sized for domestic ~~and maximum daily plus fire~~ flow demands (with fire flow to be provided by the proposed R7 Reservoir as outlined below). As shown in Figure 1-19, a new 1130 Pressure Zone would be supplied by the pump station. ~~As a condition of Project approval, a~~ An analysis of future hydraulic requirements for the proposed water system study would be ~~was~~ also prepared by Rincon MWD during final Project design as part of the Project Water Study, to verify the final associated sizing and scheduling requirements of the proposed water system, with the proposed water system phasing depicted on Figure 1-19b, Proposed Water Phasing System (Atkins 2015b). The hydraulic analysis will be reviewed by the Rincon MWD to verify the associated sizing and scheduling conclusions, with any resultant modifications to be incorporated into the final Project design.

Potable Water Storage. Based on the estimated development growth within the District from 2015 to 2035, Rincon MWD would need approximately 3.0 MG of additional potable water storage to meet accommodate a regional increase in water demand. Table 2.11-5, *Summary of District Treated Water Storage Criteria*, presents this additional storage required by 2035. To meet these storage requirements, the 2014 Water Master Plan recommended a 3.0 MG Reservoir, referred to as the “R7 Reservoir.” This additional District facility would be constructed as part of the Proposed Project, located within a separate parcel surrounded by (but not part of) the northern portion of the Project site (refer to Figure 1-19a) and would include a water tank, an access road within the existing easement, and a connecting pipeline within the access road from the water tank to existing pipeline. The R7 Reservoir would also include an access road within an existing easement, and a connecting pipeline from the water tank to the proposed 16-inch backbone pipeline (as outlined below), and would provide fire flow and supply by “gravity flow” for the Project site, storage capacity for the ID-1 South system, and fire storage and supply service for other future development projects in the area. With implementation of the R7 Reservoir and related facilities as described, an overall storage surplus of 0.3 MG would result in 2035, as shown in Table 3.1.8-5, *Future (2035) Storage Analysis*. It should also be noted that associated storage capacity within the ID-1 South system would exhibit a deficit of 0.7 MG with the R7 Reservoir and conversion of the R-1A Reservoir, as previously described, in 2035. The Project Water Study notes, however, that because the ID-1 North and ID-1 South systems are interconnected, “Surplus storage in ID-1 North can be used to help offset the 0.7 MG storage deficit in ID-1 South.” (Atkins 2015b). Proposed phasing for water supply infrastructure is also evaluated in the Project Water Study and depicted on Figure 1-19b. As indicated in the noted hydraulic analysis conducted for the Project water system, the R7 Reservoir is anticipated to be constructed as part of the Phase 3 water system development. As previously noted, the hydraulic analysis will be reviewed by the Rincon MWD to verify and/or update the associated conclusions proposed as part of Rincon MWD’s five-year capital improvement program, and is not included as part of the Proposed Project. However, because environmental review has not been performed on the Water Master Plan Update and given the timing of the Proposed Project, this EIR is providing a brief environmental analysis based on conceptual design contained in the 2014 Water Master Plan. Any mitigation deemed necessary would, however, be the responsibility of Rincon MWD.

The proposed R7 water tank would be approximately 32 feet high and 138 feet in diameter, and would be located on a the described 3.2-acre site parcel located within an existing grove area of active (or recently active) avocado orchards. In order to provide the base for the tank, the top of a knoll (at approximately 945 feet) would be lowered by approximately 5 feet, and flattened to 940 feet AMSL. A new 16-inch subsurface pipeline would be required to deliver water to and from the tank as described. This proposed subsurface pipeline and is presumed to would be partially located under the proposed access road and in an existing slope, with a would connection to existing the proposed 16-inch backbone pipeline to the east north. Figure 1-19a 2.11-1, *Rincon MWD Access Easement and Reservoir*, shows the approximate location of the proposed R7 water tank Reservoir in relation to the proposed residential development Project, as well as the locations and path of the related the proposed access road and pipeline. The proposed access road is approximately 2,000 feet long and includes 20-foot wide a 15-foot wide paved surface within a 20-foot wide easement, while the pipeline would consist of a 16-inch diameter metal or PVC facility within a 20-foot wide easement. Other issue areas would be limited to short-

term construction impacts and are not covered in this discussion. The analysis below includes a conservative estimate of 3.0 MG of water storage capacity.

Relative to visual effects, potentially visible elements over the long term would relate to the tank itself, as well as a six foot retaining wall that would support the tank at a bottom elevation of 940 feet AMSL. The tank would add a new—and notable—built feature to the north of the Project development footprint. The size of the water tank would be similar to a large two-story residence, and would be visible to off-site viewers. The knoll upon which the tank would be located, however, is lower than the topographic feature to the west of it. That knoll is never lower than approximately 1,000 feet AMSL, and goes up to approximately 1065 feet AMSL. As a result, the tank would be visually “backed” by topography a minimum of 28 feet higher than the top of the tank (at 940 feet AMSL, plus 32 feet of tank height), and would not be skylined. The six-foot retaining wall is expected to be obscured from off-site viewers by intervening grove trees. This feature would be visually consistent with other tanks located on higher hills in the vicinity (although somewhat atypical due to the lack of skylining), and also consistent with the grove uses within which it would be located.

As discussed in the Biological Resources Addendum contained in Appendix E, construction of the reservoir and access road would not impact sensitive vegetation communities, as only orchard, non-native vegetation, and developed land are present in these areas. Construction of the reservoir would also not impact jurisdictional wetlands or waters, as none are present within the 3.2-acre parcel; however, as shown in Figure 2.11-2, *Sensitive Biological Resources for the Rincon MWD Easement and Reservoir*, construction of the easement access road does have the potential to result in impacts to non-wetland WUS/streambed.

As discussed in the Cultural Resources Addendum contained in Appendix F, the 3.2-acre site and access road were surveyed for cultural resources on March 12, 2014 by Affinis archaeologists with Native American monitors from Saving Sacred Sites (Luiseño) and Red Tail Monitoring and Research (Kumeyaay). The parcel was walked in parallel transects spaced approximately 10 to 15 meters apart. The parcel was an avocado grove, which afforded poor ground visibility. No cultural resources were previously recorded within the reservoir site or the associated easement, based on records searches conducted at the South Coastal Information Center (SCIC) for the Project, including a records search obtained in March 2015 in conjunction with the Section 404 permit process. No cultural resources have been identified within or adjacent to the reservoir site or the associated easement; therefore, there would be no impacts to cultural resources.

Although the Proposed Project would not directly result in impacts to utilities and service systems, the District’s proposed R7 Reservoir has the potential to result in impacts related to visual and biological resources. Therefore, **impacts to water service facilities would be potentially significant. (Impact UT-1)**

Recycled Water System. As previously noted, the proposed recycled water system would be designed to serve on-site landscape needs, and includes an 8-inch PVC backbone pipeline extending from the recycled pump station at the WTWRF through the Project site to Hill Valley Drive (along with 4-inch PVC distribution pipelines). A connection would also be provided to the Harmony Grove recycled water system located south of the Project site. The District would be able to expand the recycled water system in Hill Valley Drive and Country Club Lane to serve

future recycled water customers as applicable, consistent with the 2014 Water Master Plan. The proposed recycled water system would be served by a proposed 959 Pressure Zone, similar to the system noted above for potable water, with the Project Water Study also recommending the installation of private irrigation booster pumps at locations with elevations above 800 feet to meet required irrigation system pressures (Atkins 2015b). The preliminary locations of proposed reclaimed water system facilities are shown on Figure 1-22, *Reclaimed Water Areas*, with the preliminary facility locations and sizes to be refined during final irrigation system design.

Summary of Water Supply Impacts

As outlined in the above analysis, **impacts associated with the Project's water supply demand would be less than significant** based on the following considerations: (1) projected water use associated with the Proposed Project would be consistent with (i.e., within approximately 1.7 percent of) on-site use during the identified baseline year of 2013, and well below the rolling average use at the site over the past five years; (2) while not included in the Project demand projections, current and future technological advances and conservation measures, as well as the proposed use of recycled water to irrigate approximately 35.6 acres of proposed on-site landscaping in lieu of potable water use, are assumed to result in a lower overall water demand than that used for the Proposed Project analysis (and to reduce the average on-site use below the 2013 baseline year average); (3) the Project demand for potable water would be met by water supplies identified to be available over a 20-year planning horizon under normal, single dry year, and multiple dry year conditions; (4) the proposed R7 Reservoir would, in combination with surplus capacity in the ID-1 North system, ensure adequate storage capacity for the Rincon MWD and the ID-1 South system; and (5) the Proposed Project water supply system facilities would be sized to provide adequate capacity for identified on-site development, and would not necessitate significant alterations to existing off-site systems beyond those assumed as part of the Project design.

2.11.2.2 Wastewater Management

Guideline for the Determination of Significance

A significant impact to utilities would occur if the Proposed Project would:

2. Generate wastewater that cannot be treated by an existing or proposed facility and/or requires significant alterations to existing sewage systems and infrastructure.
3. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

Guideline Sources

The identified guidelines for significance are based on Appendix G of the CEQA Guidelines and are intended to ensure that adequate public utilities and services are available for local residents.

Analysis

A conceptual sewer study has been prepared for the Proposed Project to provide an overall sewer service plan and determine the requirements for an on-site collection system (Atkins 2015a). The proposed development would be served by a system of primarily public sewer mains and an on-site WTRF to be located at in the southeastern portion of the Project site, which with the WTRF (and other applicable facilities) would to be owned and operated by the San Diego County Sanitation District. More specifics regarding the sewer system are provided below, as well as in Chapter 1 of this EIR and in the Conceptual Sewer Study contained in Appendix Q (with and an analysis of the previously noted Sewer Options Alternative is provided in Subchapter 4.5).

Projected wastewater flows for the Proposed Project are based on the sewage generation factors contained in Appendix Q and summarized in Table 2-113.1.8-6, *Project Wastewater Generation*. The total average wastewater flow is projected to be approximately 70,10071,500 gpd. Peak wastewater flows from the Proposed Project are calculated based on the peaking factor of 2.11 and average flows of 70,10071,500 gpd, ~~for~~ with an approximate peak wastewater flow of 280,360286,120 gpd, or ~~approximately roughly~~ 199195 gpm, under a peak hour wet weather condition.

The proposed on-site sewer system includes the WTRF, an associated wet weather storage facility, three pump (lift) stations, and a network of predominantly 8-inch diameter pipeline (refer to Figure 1-21, Proposed On-site Sewer System). On-site wastewater would flow generally south to the WTRF based on site topography (i.e., gravity flow), although variable conditions would necessitate the three noted lift stations and related facilities as described below.

The proposed WTRF would have be designed to provide the appropriate treatment capacity for the Proposed Project, based on the previously described average and peak flow levels. The WTRF is proposed as an Aero-Mod system using an extended aeration wastewater treatment process, and would include on-site digester basins to reduce settled solids produced by the treatment process (with additional detail provided in Subsections 1.2.1.1 and 1.2.1.3, as well as Appendix Q). Additionally, ~~the~~ sewer service area within the Project site would be annexed into the San Diego County Sanitation District, subsequent to LAFCO approval of an amendment to the SOI for this district. Since the WTRF would be owned and operated by the County, it would be designed to County standards. Accordingly, a preliminary design report outlining the specific design requirements of the WTRF and associated infrastructure would be prepared and submitted to the County for review as a condition of Project approval.

The proposed wet weather storage facility would be located approximately 1,500 feet northwest of the WTRF site, and includes a capacity of approximately six million gallons per associated regulatory requirements. This facility would provide seasonal storage for recycled water to be produced at the WTRF, with additional description of proposed recycled water facilities provided above in Subsection 3.1.8.2 (refer also to Subsections 1.2.1.1 and 1.2.1.3).

Preliminary sizing of the primary (County-owned) LS 2 lift station includes two 120-gpm pumps and approximately 20,0006,000 gallons of emergency storage, assuming storage for six hours of

average flow. Two smaller lift stations, ~~each~~ serving 10 (LS 1) ~~to~~ and 15-37 (LS 3) homes, ~~respectively~~, are assumed to be owned and maintained by an HOA, ~~and~~ but also would be designed to County standards for applicable facilities (e.g., the emergency overflow storage basin). The proposed sewer pipeline system would include predominantly 8-inch pipeline as noted, with several segments of force main ranging from 2 to 6 inches in diameter also provided to accommodate flows in applicable areas (refer to Figure 1-21). ~~The WTWRF would be an Aero Mod system using an extended aeration wastewater treatment process, as described in detail in Section 1.2.1.1. The Aero Mod style process would include on-site digester basins to reduce settled solids produced by the treatment process. A preliminary design report outlining the specific design requirements of the WTWRF and associated infrastructure would be prepared and submitted to the County as a condition of Project ap~~

Based on these considerations outlined above, wastewater generated by the Project would be collected, conveyed, and treated by the proposed on-site facilities, which would be designed to accommodate projected flows from the proposed development. ~~and~~ As a result, implementation of the Proposed Project would not require significant alterations to existing sewage systems and infrastructure, and would not ~~or~~ substantially reduce the capacity of existing wastewater facilities. Thus, **impacts related to wastewater management would be less than significant.**

2.11.3.1.8.3 Cumulative Impact Analysis

Several related cumulative development projects have been recently completed or are planned for development in the vicinity of the Proposed Project, as listed in Table 1-5. These future projects include residential developments totaling approximately 15,500 units (including the Proposed Project), as well as other types of development, such as a light recycling processing facility and offices. Cumulative impacts of these development projects are analyzed below within the context of comprehensive regional planning and forecasting of water supplies and facility needs. The significance guidelines that were used to evaluate Project-specific impacts also are used here to evaluate cumulative impacts.

2.11.3.1.8.3.1 Water Supply and Facilities

As discussed previously, the SDCWA's 2010 UWMP provides for a comprehensive planning analysis at a regional level and includes water use associated with accelerated forecasts of residential development as part of its municipal and industrial sector demand projections. The demand associated with accelerated forecasted growth is intended to account for SANDAG's land use development currently projected to occur between 2035 and 2050, but which has the likely potential to occur on an accelerated schedule. SANDAG estimates that this accelerated residential development could occur within the planning horizon of the 2010 UWMP update. These units are not yet included in local jurisdictions' general plans, so their projected demands are incorporated at a regional level. When necessary, this additional demand increment can be used by member agencies to meet the demands of development projects not identified in the general land use plans or for new annexations.

As documented in the 2010 UWMP, the SDCWA is planning to meet future and existing demands, which include the demand increment associated with the accelerated forecasted growth. SDCWA will also assist its member agencies in tracking the certified EIRs provided by

the agencies that include water supply assessments ~~that utilize~~ the accelerated forecasted growth demand increment, to demonstrate adequate supplies for the development. Therefore, cumulative impacts on water supply and water facilities would be **less than significant**.

2.11.3.2 Wastewater Management

The Proposed Project would not rely upon an existing sanitation or maintenance district, but rather, would involve the construction of an on-site facility to treat the wastewater generated from the Proposed Project. Because the Proposed Project would not rely upon an existing facility for wastewater treatment, the Project's contribution to cumulative impacts on wastewater treatment services would be **less than significant**.

2.11.43.1.8.4 Significance of Impacts Prior to Mitigation

Based on the analyses provided above in Subsection 3.1.8.2, implementation of ~~the Proposed Project would not result in any significant impacts related to utilities and service systems, however, potential impacts could occur as a result of the Rincon MWD planned R7 Reservoir~~ The R7 Reservoir is planned to be constructed by Rincon MWD within the Project site, although not as part of the Proposed Project. This new facility is the responsibility of the Rincon MWD and could result in the following impact related to utilities and service systems:

Impact UT-1 Construction of the R7 Reservoir could result in:

~~Visual impacts to neighboring areas if the surrounding grove trees are not tall enough to provide sufficient screening of the water tank; and~~

~~**Biological resource impacts if construction of the easement access road cannot avoid the non-wetland WUS/streambed**~~**2.11.5 Mitigation**

~~The mitigation measure would be implemented when the reservoir is being designed and approved. The agency responsible for approving the facility (Rincon MWD) would also be responsible for the mitigation to reduce utility related impacts to less than significant.~~

~~**M-UT-1** — The Applicant will coordinate with Rincon MWD at the time the tank is designed and constructed to ensure that there is adequate mitigation for utility related impacts. The mitigation is anticipated to include, but may not be limited to:~~

~~In order to be fully consistent with seen elements of notable tanks east of Harmony Grove, tall trees shall be planted around the tank to provide more height screening than may be provided by grove trees. These plantings shall soften the line of the tank top, which otherwise would provide a rigid horizontal element to the view. Rincon MWD shall plant this facility similarly to their other nearby tanks for visual continuity.~~

~~If impacts to the WUS/streambed crossings cannot be avoided by constructing structures spanning these areas rather than using fill, Rincon MWD shall obtain permits from the USACE, Regional Water Quality Control Board, and CDFW, and shall provide appropriate mitigation.~~

2.11.6 Conclusion

The implementation of the mitigation measure listed above would reduce utility-related impacts to less than significant

**Table 2-11-13.1.8-1
POTABLE WATER DEMANDS**

Site	Units	Unit Demand (gpd/du)	Average Demand		Max Day Demand (2.6xAAD)		Peak Hour Demand (3.9xAAD)
			(gpd)	(gpm)	(gpd)	(gpm)	(gpm)
Condominium Residential (detached)	4953	400	19,600 21,200	1415	50,960 57,240	3540	5557
Single-family Residential	277273 ¹	510	141,270 139,740	9897	365,889 377,300	254262	382378
Neighborhood Park	-- ²	500	1,350	0.94	3,645	3	4
Recreation Center	-- ²	1,000	2,300	1.6	6,210	4	6
TOTAL	326	--	160,870 164,590	112 114.54	416,849 444,395	289 309	437 445

Source: Atkins 2014b/2015b

¹ Includes up to 51 secondary units in estimated water demand.

² Demand based on a 2.7-acre neighborhood park, and a 2.3-acre recreation center.

**Table 2-11-23.1.8-2
SUPPLY AND DEMAND COMPARISON – NORMAL YEAR**

	2015	2020	2025	2030	2035
Supply Totals	9,400	9,600	9,800	10,000	10,100
Demand Totals	9,669	9,823	10,041	10,263	10,371
Difference	269	223	241	263	271
Difference as % of Supply	3%	3%	3%	3%	3%
Difference as % of Demand	97%	97%	97%	97%	97%

Source: Rincon MWD 2011

Units are in acre-feet per year

**Table 2-11-3 3.1.8-3
SUPPLY AND DEMAND COMPARISON – SINGLE DRY YEAR**

	2015	2020	2025	2030	2035
Supply Totals	9,400	9,600	9,800	10,000	10,100
Demand Totals	9,669	9,823	10,041	10,263	10,371
Difference	(269)	(223)	(241)	(263)	(271)
Difference as % of Supply	-3%	-3%	-3%	-3%	-3%
Difference as % of Demand	-97%	-97%	-97%	-97%	-97%

Source: Rincon MWD 2011

Units are in acre-feet per year

**Table 2.11-43.1.8-4
 SUPPLY AND DEMAND COMPARISON – MULTIPLE DRY YEAR**

		2015	2020	2025	2030	2035
Multiple Dry-Year	New Sources	2,000	2,500	3,000	3,500	4,000
	Supply Totals	9,400	9,600	9,800	10,000	10,100
	Demand Totals	9,669	9,823	10,041	10,263	10,371
First Year Supply	Difference	-269	-223	-241	-263	-271
	Difference as % of Supply	-3%	-3%	-3%	-3%	-3%
	Difference as % of Demand	-1%	-2%	-2%	-3%	-3%
Multiple Dry-Year	New Sources	2,000	2,500	3,000	3,500	4,000
	Supply Totals	9,400	9,600	9,800	10,000	10,100
	Demand Totals	10,055	10,216	10,443	10,674	10,790
Second Year Supply	Difference	-655	-616	-643	-674	-690
	Difference as % of Supply	-7%	-6%	-7%	-7%	-7%
	Difference as % of Demand	-7%	-6%	-6%	-6%	-6%
Multiple Dry-Year	New Sources	2,000	2,500	3,000	3,500	4,000
	Supply Totals	9,400	9,600	9,800	10,000	10,100
	Demand Totals	8,748	8,888	9,085	9,286	9,474
Third Year Supply	Difference	652	712	715	714	726
	Difference as % of Supply	7%	7%	7%	7%	7%
	Difference as % of Demand	8%	8%	8%	8%	8%

Source: Rincon MWD 2011

Units are in acre-feet per year

This data included indirect potable water from a project that is not yet implemented. Rincon will utilize local supplies as feasible. Shortfalls will be augmented with SDCWA imported supplies.

**Table 3.1.8-5
FUTURE (2035) STORAGE ANALYSIS**

<u>Reservoir</u>	<u>Average Annual Demand</u>		<u>Operational (33-40% of AAD)</u>	<u>Fire (2 hours, dual fire)</u>	<u>Emergency (3x AAD)</u>	<u>Total Storage Required (mg)</u>	<u>Total Storage (mg)</u>	<u>Surplus/ (Deficit) (mg)</u>
	<u>(gpm)</u>	<u>(mgd)</u>						
<u>ID-1 North</u>								
R-3A	<u>970</u>	<u>1.4</u>	<u>0.5</u>	<u>0.6</u>	<u>4.2</u>	<u>5.3</u>	<u>3.1</u>	<u>0.6</u>
R-3B							<u>2.8</u>	
							<u>5.9</u>	
<u>Rockhoff</u>								
R-4	<u>77</u>	<u>0.1</u>	<u>0.0</u>	<u>0.6</u>	<u>0.3</u>	<u>1.0</u>	<u>0.6</u>	<u>-0.3</u>
<u>ID-1 South¹</u>								
R-1A ²	<u>3,110</u>	<u>4.5</u>	<u>1.5</u>	<u>0.6</u>	<u>13.4</u>	<u>15.5</u>	<u>0.0</u>	<u>-0.7</u>
R-1B							<u>3.7</u>	
R-5							<u>3.0</u>	
R-6							<u>5.1</u>	
R-7 ³							<u>3.0</u>	
							<u>14.8</u>	
<u>ID-A</u>								
R-2A	<u>677</u>	<u>1.0</u>	<u>0.4</u>	<u>0.6</u>	<u>2.9</u>	<u>3.9</u>	<u>0.4</u>	<u>0.7</u>
R-2B							<u>1.1</u>	
R-2C							<u>3.1</u>	
							<u>4.6</u>	
<u>Total</u>		<u>7.0</u>	<u>2.4</u>	<u>2.4</u>	<u>20.8</u>	<u>25.7</u>	<u>25.9</u>	<u>0.3</u>

Source: Atkins 2015b

gpm = gallons per minute; AAD = Average Annual Demand; mg = million gallons

¹ Future residential growth of 1,800 EDUs assumed in ID-1 South.

² R-1A converted to a recycled water tank in the 2035 analysis.

³ 2035 analysis assumes new 3.0 MG R-7 Reservoir.

**Table 2.11-5
SUMMARY OF DISTRICT TREATED WATER STORAGE CRITERIA**

Storage Type	Volume (as duration)	2013 Volume Required ⁽¹⁾ (MG)	2035 Volume Required ⁽²⁾ (MG)	Description / Notes
Emergency	3.0 average days	18.7	20.9	Emergency reserve for use during supply interruption
Fire Flow	2 at 2,500 gpm for 2 hours, for each of ID 1 & ID A	2.4	2.4	District policy is to provide facilities to supply two concurrent fires
Operational	ID 1: 0.33 average days ID A: 0.40 average days	2.1	2.4	Operational storage addresses time-of-day variation in demands
Total Storage Volume per Criteria		23.2	25.7	
Actual Existing (2013) ⁽³⁾ — Percent of Criteria Total		22.9 99%	22.9 89%	R-1A reservoir volume not included in total
Surplus (Deficit)⁽⁴⁾		(0.3)	(2.8)	2013 volume deficit is not significant. 2035 deficit will require new storage.

Source: Rincon del Diablo Municipal Water District Water Master Plan Update June 2014

MG = million gallons; MGD = million gallons per day

⁽¹⁾—2013 Volume based on average potable demand of 7,000 AF/yr, or 6.25 MGD

⁽²⁾—2035 Volume based on average potable demand of 7,900 AF/yr, or 7.05 MGD. Future potable demand could be less if the District elects to pursue an expansion of its recycled water distribution system as part of its New Local Supply initiative.

⁽³⁾—Potable storage volume does not include the R-1A reservoir (3.1 MG), which is planned to be converted to the recycled water system.

⁽⁴⁾—The totals and surplus/deficit data shown here is for the District system as a whole, and does not account for the distribution of storage among pressure zones.

**Table 2.11-63.1.8-6
PROJECT WASTEWATER GENERATION**

	Units	Unit Rate (gpd/du)	Average Flow (gpd)	Peaking Factor	PDWF	PWWF
Condominium Residential (detached)	4953	215 180	10,540 9,540	2.11	25,495 23,090	42,140 38,160
Single-family Residential	277273 ¹	215	59,560 58,695	2.11	144,123 142,050	238,220 234,8000
Neighborhood Park ²	-- ³	450	1,220	2.11	2,950	4,880
Recreation Center ⁴	-- ³	900	2,070	2.11	5,010	8,280
TOTAL	326	--	70,100 71,525	--	169,618 173,100	280,360 286,120

Source: Atkins 2015a

¹The 277 single-family units include 51 secondary units for wastewater generation.

²The park includes an associated restroom facility assumed at 90 percent of water use for return to sewer flow.

³Flows based on a 2.7-acre neighborhood park, and a 2.3-acre recreation center.

gpd = gallons per day; du = dwelling unit; PDWF = Peak Dry Weather Flow; PWWF = Peak Wet Weather Flow

THIS PAGE INTENTIONALLY LEFT BLANK