

4.15 UTILITIES AND SERVICE SYSTEMS

INTRODUCTION

This section analyzes the potential impacts of the Project on utilities and service systems that serve the project site. The section evaluates whether the Project's estimated water demand, wastewater generation, and solid waste generation would be accommodated by existing and proposed infrastructure. Information in this section is based on correspondence with the Yorba Linda Water District (YLWD) and the Northeast Area Planning Study prepared by the YLWD in March 2013, as well as information and findings obtained in two documents which analyzed the water and wastewater infrastructure within the project site and surrounding areas. These documents include: *Yorba Linda Water District Final 2010 Urban Water Management Plan* (herein referred to as the "YLWD Final 2010 UWMP"), prepared by Malcolm Pirnie, Inc., dated May 2011; and the *Report of the Evaluation of the City of Yorba Linda Sewer System for the Proposed Development Travis Property* (herein referred to as the "Sewer Study"), prepared by Hunsaker & Associates Irvine, Inc., dated June 7, 2006 (see Appendix K of this EIR). Letters of correspondence with the YLWD are located in Appendix J of this EIR. Although the Sewer Study was prepared in 2006, the existing development conditions that contribute wastewater to the serving sewer facilities identified in the study are similar to current conditions. As such, the results of the study have been included in this analysis.

1. ENVIRONMENTAL SETTING

a. Regulatory Framework

(1) Federal

There are no federal regulations pertinent to the Project.

(2) State

(a) California Urban Water Management Planning Act

The California Urban Water Management Planning Act (Act) (California Water Code Section 10610-10656) requires urban water suppliers to develop urban water management plans. While generally aimed at encouraging water suppliers to implement water-conservation measures, it also creates long-term planning obligations. The Urban Water Management Planning Act requires urban water suppliers that either provide over 3,000 acre-feet of water annually or serve more than 3,000 or more connections to assess the reliability of its water sources over a 20-year planning horizon and to update the data in the urban water plans every five years. In preparing the 20-year management plans, water suppliers must directly address the subject of future population growth. The suppliers must also identify sources of supply to meet demand during normal, single-dry, and multiple-dry years.

Since its passage in 1983, several amendments have been added to the Act. The most recent changes include Senate Bill 7, enacted in November 2009, as part of the Seventh Extraordinary Session (SBx7-7)¹ and Senate Bill 1087 (SB 1087), Chapter 127, Government Code Section (GCS) 65589.7. Water Conservation Act of 2009

¹ *An act to amend and repeal Section 10631.5 of, to add Part 2.55 (commencing with Section 10608) to Division 6 of, and to repeal and add Part 2.8 (commencing with Section 10800) of Division 6 of, the Water Code, relating to water.*

or SBx7-7 enacted in 2009 is the water conservation component of the Delta package. It stemmed from the Governor's goal to achieve a 20 percent statewide reduction in per capita water use by 2020 (20x2020). SBx7-7 requires each urban retail water supplier to develop urban water use targets to help meet the 20 percent goal by 2020 and an interim 10 percent goal by 2015.

(b) California Administrative Code

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

(c) California Integrated Waste Management Act of 1989

The California Integrated Waste Management Act of 1989 (AB 939)(amending Sections 41730, 41731, 41734, 41735, 41736, 41800, 42926, 44004, and 50001 of, to add Sections 40004, 41734.5, and 41780.01 to, to add Chapter 12.8 (commencing with Section 42649) to Part 3 of Division 30 of, and to add and repeal Section 41780.02 of, the Public Resources Code, relating to solid waste) redefined solid waste management in terms of both objectives and planning responsibilities for local jurisdictions and the state. AB 939 was adopted in an effort to reduce the volume and toxicity of solid waste that is landfilled and incinerated by requiring local governments to prepare and implement plans to improve the management of waste resources. AB 939 required each of the cities and unincorporated portions of the counties to divert a minimum of 25 percent of the solid waste sent to landfills by 1995 and 50 percent by the year 2000. To attain goals for reductions in disposal, AB 939 established a planning hierarchy utilizing new integrated solid waste management practices. These practices include source reduction, recycling and composting, and environmentally safe landfill disposal and transformation. Other state statutes pertaining to solid waste include compliance with the California Solid Waste Reuse and Recycling Act of 1991 (AB 1327) (Statutes of 1991, Chapter 842, added Chapter 18 [commencing with Section 42900] to Part 3 of Division 30 of the Public Resources Code), which requires adequate areas for collecting and loading recyclable materials within a project site. As a new waste generator, the Project would be subject to the requirements of these solid waste provisions, as enforced by the County of Orange.

(3) Local/Regional

(a) Yorba Linda Water District Final 2010 Urban Water Management Plan

The water purveyor for the project site is the Yorba Linda Water District (YLWD). The YLWD in 2010 prepared its Final 2010 Urban Water Management Plan (YLWD Final 2010 UWMP). The UWMP was prepared consistent with the requirements under Water Code Sections 10610 through 10656 of the Urban Water Management Planning Act, which were added by Statutes 1983, Chapter 1009, and became effective on January 1, 1984. Consistent with the requirements of the Urban Water Management Planning Act, the UWMP identifies the sources for the District's water supplies to meet demand during normal, single-dry, and multiple-dry years.

(b) Metropolitan Water District of Southern California 2010 Regional Urban Water Management Plan

The Metropolitan Water District of Southern California's (MWD) 2010 Regional Urban Water Management Plan (RUWMP) reports on its water reliability and identifies projected supplies to meet the long-term

demand within its service area. It presents Metropolitan's supply capacities from 2015 through 2035 under the three hydrologic conditions: single dry-year, multiple dry-years, and average year.

(c) Orange County General Plan

The Public Services and Facilities Element of the County General Plan sets forth a comprehensive strategy for the planning, management, and implementation of public facilities that are necessary to meet the existing and future demands of the County of Orange. The Element focuses on those publicly managed services and facilities which have a direct influence on the distribution and intensity of development that can be accommodated through the utilization of existing technologies and assumptions that are used to determine adequate service levels. In addition, the Resources Element includes a policy to encourage the use of energy conservation measures within new development projects. The Project's consistency with the applicable goals and policies of the General Plan is discussed in the impact analysis below.

The City's General Plan contains goals and policies that are relevant to utilities and service systems, including goals and policies contained in the General Plan Land Use Element. The Project's consistency with the applicable goals and policies of the Land Use Element is discussed in the impact analysis below.

b. Existing Conditions

(1) Water Demand/Water Supply²

The YLWD is an independent district that provides water to a population of 77,320 throughout its 14,891 acre service area that covers all of the City of Yorba Linda and portions of the Cities of Brea, Placentia, Anaheim, and the unincorporated area of the County of Orange. The service area is bounded by the service areas of the Golden State Water Company (GSWC), City of Anaheim, and the City of Brea. The YLWD has emergency interconnections with each of these surrounding agencies. The YLWD receives its water from two main sources, the Lower Santa Ana River Groundwater Basin (see Groundwater subsection below for further discussion of the Basin), which is managed by the Orange County Water District (OCWD), and imported water from the MWD through the Municipal Water District of Orange County (MWDOC). The sources of imported water supplies include the Colorado River and the State Water Project (SWP). Groundwater is pumped from nine active wells located throughout the YLWD, and imported water is treated at the Diemer Filtration Plant and is delivered to the YLWD through four imported water connections.

The YLWD's potable water system includes approximately 347 miles of pipeline, ranging in diameter from 6-inch to 24-inch, 14 storage tanks with an approximate total capacity of 57 million gallons (MG), and 38 booster pumps. The YLWD proactively maintains and upgrades its facilities to ensure a reliable, high-quality supply. The YLWD's distribution system includes nine wells, one untreated and three treated imported water connections with MWD, 12 booster pumping stations, 14 water storage reservoirs, 41 pressure reducing stations, and 10 emergency interconnections with neighboring agencies. The YLWD obtains approximately 40 percent of its water from wells and the remainder from the MWD import connections. The system consists of six different pressure zones and serves approximately 23,844 potable water service connections. All zones utilize a gravity system.

² *Yorba Linda Water District Final 2010 Urban Water Management Plan, prepared by Malcolm Pirnie, Inc., dated May 2011.*

The passage of SBx7-7 (enacted in November 2009) will increase efforts to reduce the use of potable water supplies in the future. The new law requires all of California's retail urban water suppliers serving more than 3,000 acre-feet per year (AFY) or 3,000 service connections to achieve a 20% reduction in potable water demands (from a historical baseline) by 2020. Due to great water conservation efforts in the past decade, the YLWD is on its way to meeting this requirement on its own. The YLWD is a member of the Orange County 20x2020 Regional Alliance formed by MWDOC. This regional alliance consists of 29 retail agencies in the County. The YLWD has selected to comply with Option 1 of the SBx7-7 (enacted in November 2009) compliance options. Under Compliance Option 1, YLWD's 2015 interim water use target (10 percent reduction) is 257.5 gallons per capita per day (GPCD) and the 2020 final water use target (20 percent reduction) is 228.9 GPCD.

Currently, the total water demand for retail customers served by the YLWD is approximately 20,100 acre-feet annually consisting of 11,800 acre-feet of imported water and 8,300 acre-feet of local groundwater. The YLWD service area is a bedroom community. Residential water use accounts for the majority of YLWD's water demands. The single family residential sector accounts for 70% of the total water demand. Water consumption by the residential sector is projected to remain at about 72% through the 25-year planning horizon. The YLWD's current annual (2010) total water demand is 20,154 acre-feet comprising of 42 percent groundwater and 58 percent imported water. It is projected that through 2035, the water supply mix would remain roughly the same. As illustrated in **Table 4.15-1, YLWD Current and Projected Water Demands (AFY)**, the YLWD's water demand is expected to increase by 38 percent in the next 25 years to 27,784 AFY by 2035.

Table 4.15-1**YLWD Current and Projected Water Demands (AFY)**

Water Supply Sources	Fiscal Year Endings					
	2010	2015	2020	2025	2030	2035
MWDOC (Imported Treated/Untreated Full Service (non-int.))	11,786	14,341	14,597	14,715	14,790	14,864
BPP Groundwater ^a	8,368	12,464	12,688	12,789	12,854	12,920
Total	20,154	26,805	27,285	27,504	27,644	27,784

^a The OCWD manages the Basin by establishing on an annual basis the appropriate level of groundwater production known as the Basin Production Percentage (BPP)

Source: Yorba Linda Water District Final 2010 Urban Water Management Plan, prepared by Malcolm Pirnie, Inc., dated May 2011.

The imported water supply numbers shown in Table 4.15-1 only represent the amount of supplies projected to meet the demands and not the full supply capacity. The MWD 2010 RUWMP evaluated supply reliability by projecting supply and demand conditions for the single- and multi-year drought cases based on conditions affecting the SWP, MWD's largest and most variable supply. For this supply source, the single driest-year was 1977 and the three-year dry period was 1990-1992. Metropolitan's analysis are illustrated in **Table 4.15-2, MWD Average Year Projected Supply Capability and Demands for 2015 to 2035**, **Table 4.15-3, MWD Single-Dry Year Projected Supply Capability and Demands for 2015 to 2035**, and **Table 4.15-4, MWD Multiple-Dry Year Projected Supply Capability and Demands for 2015 to 2035**. These

Table 4.15-2

MWD Average Year Projected Supply Capability and Demands for 2015 to 2035

Average Year
Supply Capability^a and Projected Demands
Average of 1922-2004 Hydrologies (AFY)

Forecast Year	2015	2020	2025	2030	2035
Current Programs					
In-Region Storage and Programs	685,000	931,000	1,076,000	964,000	830,000
California Aqueduct ^b	1,550,000	1,629,000	1,763,000	1,733,000	1,734,000
Colorado River Aqueduct Supply ^c	1,507,000	1,529,000	1,472,000	1,432,000	1,429,000
Colorado River Aqueduct Capacity Limit ^d	1,250,000	1,250,000	1,250,000	1,250,000	1,250,000
Colorado River Aqueduct Capability	1,250,000	1,250,000	1,250,000	1,250,000	1,250,000
Capability of Current Programs	3,485,000	3,810,000	4,089,000	3,947,000	3,814,000
Demands					
Firm Demands of Metropolitan	1,826,000	1,660,000	1,705,000	1,769,000	1,826,000
IID-SDCWA Transfers and Canal Linings ^e	180,000	273,000	280,000	280,000	280,000
Total Demands on Metropolitan	2,006,000	1,933,000	1,985,000	2,049,000	2,106,000
Surplus	1,479,000	1,877,000	2,104,000	1,898,000	1,708,000
Programs Under Development					
In-Region Storage and Programs	206,000	306,000	336,000	336,000	336,000
California Aqueduct	382,000	383,000	715,000	715,000	715,000
Colorado River Aqueduct Supply	187,000	187,000	187,000	182,000	182,000
Colorado River Aqueduct Capacity Limit	0	0	0	0	0
Colorado River Aqueduct Capability	0	0	0	0	0
Capability of Proposed Programs	588,000	689,000	1,051,000	1,051,000	1,051,000
Potential Surplus	2,067,000	2,566,000	3,155,000	2,949,000	2,759,000

CRA = Colorado River Aqueduct; MAF = Million acre-feet; SDCWA = San Diego County Water Authority;

^a Represents Supply Capability for resource programs under listed year type.

^b California Aqueduct includes Central Valley transfers and storage program supplies conveyed by the aqueduct.

^c Colorado River Aqueduct includes water management programs, IID-SDCWA transfers and canal linings conveyed by the aqueduct.

^d Maximum CRA deliveries limited to 1.25 MAF including IID-SDCWA transfer and canal linings.

^e Firm demands are adjusted to include IID-SDCWA transfers and canal linings. These supplies are calculated as local supply, but need to be shown for the purposes of CRA capacity limit calculations without double counting.

Source: Yorba Linda Water District Final 2010 Urban Water Management Plan, prepared by Malcolm Pirnie, Inc., dated May 2011.

tables show that the region can provide reliable water supplies not only under normal conditions, but also under both the single driest year and the multiple dry year hydrologies.

Table 4.15-3

MWD Single-Dry Year Projected Supply Capability and Demands for 2015 to 2035

Single Dry-Year
Supply Capability^a and Projected Demands
Repeat of 1977 Hydrology (AFY)^b

Forecast Year	2015	2020	2025	2030	2035
Current Programs					
In-Region Storage and Programs	685,000	931,000	1,076,000	964,000	830,000
California Aqueduct ^c	522,000	601,000	651,000	609,000	610,000
Colorado River Aqueduct Supply ^d	1,416,000	1,824,000	1,669,000	1,419,000	1,419,000
Colorado River Aqueduct Capacity Limit ^e	1,250,000	1,250,000	1,250,000	1,250,000	1,250,000
Colorado River Aqueduct Capacity	1,250,000	1,250,000	1,250,000	1,250,000	1,250,000
Capability of Current Programs	2,457,000	2,782,000	2,977,000	2,823,000	2,690,000
Demands					
Firm Demands of Metropolitan	1,991,000	1,889,000	1,921,000	1,974,000	2,039,000
IID-SDCWA Transfers and Canal Linings ^f	180,000	273,000	280,000	280,000	280,000
Total Demands on Metropolitan	2,171,000	2,162,000	2,201,000	2,254,000	2,319,000
Surplus	286,000	620,000	776,000	569,000	371,000
Programs Under Development					
In-Region Storage and Programs	206,000	306,000	336,000	336,000	336,000
California Aqueduct	556,000	556,000	700,000	700,000	700,000
Colorado River Aqueduct Supply ^d	187,000	187,000	187,000	182,000	182,000
Colorado River Aqueduct Capacity Limit ^e	0	0	0	0	0
Colorado River Aqueduct Capacity	0	0	0	0	0
Capability of Proposed Programs	762,000	862,000	1,036,000	1,036,000	1,036,000
Potential Surplus	1,048,000	1,482,000	1,812,000	1,605,000	1,407,000

CRA = Colorado River Aqueduct; MAF = Million acre-feet; SDCWA = San Diego County Water Authority;

^a Represents Supply Capability for resource programs under listed year type.

^b Please refer to Section 2.3, Water Supply Reliability, in MWD's 2010 Regional Urban Water Management Plan for a discussion of the assumptions made in evaluating MWD's supply capabilities.

^c California Aqueduct includes Central Valley transfers and storage program supplies conveyed by the aqueduct.

^d Colorado River Aqueduct includes water management programs, IID-SDCWA transfers and canal linings conveyed by the aqueduct.

^e Maximum CRA deliveries limited to 1.25 MAF including IID-SDCWA transfer and canal linings.

^f Firm demands are adjusted to include IID-SDCWA transfers and canal linings. These supplies are calculated as local supply, but need to be shown for the purposes of CRA capacity limit calculations without double counting.

Source: Yorba Linda Water District Final 2010 Urban Water Management Plan, prepared by Malcolm Pirnie, Inc., dated May 2011.

Table 4.15-4

MWD Multiple-Dry Year Projected Supply Capability and Demands for 2015 to 2035

**Multiple Dry-Year
Supply Capability^a and Projected Demands
Repeat of 1990-1992 Hydrology (AFY)^b**

Forecast Year	2015	2020	2025	2030	2035
Current Programs					
In-Region Storage and Programs	246,000	373,000	435,000	398,000	353,000
California Aqueduct ^c	752,000	794,000	835,000	811,000	812,000
Colorado River Aqueduct Supply ^d	1,318,000	1,600,000	1,417,000	1,416,000	1,416,000
Colorado River Aqueduct Capacity Limite	1,250,000	1,250,000	1,250,000	1,250,000	1,250,000
Colorado River Aqueduct Capability	1,250,000	1,250,000	1,250,000	1,250,000	1,250,000
Capability of Current Programs	2,248,000	2,417,000	2,520,000	2,459,000	2,415,000
Demands					
Firm Demands of Metropolitan	2,056,000	1,947,000	2,003,000	2,059,000	2,119,000
IID-SDCWA Transfers and Canal Linings	180,000	241,000	280,000	280,000	280,000
Total Demands on Metropolitan^f	2,236,000	2,188,000	2,283,000	2,339,000	2,399,000
Surplus	12,000	229,000	237,000	120,000	16,000
Programs Under Development					
In-Region Storage and Programs	162,000	280,000	314,000	336,000	336,000
California Aqueduct	242,000	273,000	419,000	419,000	419,000
Colorado River Aqueduct Supply ^d	187,000	187,000	187,000	182,000	182,000
Colorado River Aqueduct Capacity Limite	0	0	0	0	0
Colorado River Aqueduct Capability	0	0	0	0	0
Capability of Proposed Programs	404,000	553,000	733,000	755,000	755,000
Potential Surplus	416,000	782,000	970,000	875,000	771,000

CRA = Colorado River Aqueduct; MAF = Million acre-feet; SDCWA = San Diego County Water Authority;

^a Represents Supply Capability for resource programs under listed year type.

^b Please refer to Section 2.3, Water Supply Reliability, in MWD's 2010 Regional Urban Water Management Plan for a discussion of the assumptions made in evaluating MWD's supply capabilities.

^c California Aqueduct includes Central Valley transfers and storage program supplies conveyed by the aqueduct.

^d Colorado River Aqueduct includes water management programs, IID-SDCWA transfers and canal linings conveyed by the aqueduct.

^e Maximum CRA deliveries limited to 1.25 MAF including IID-SDCWA transfer and canal linings.

^f Firm demands are adjusted to include IID-SDCWA transfers and canal linings. These supplies are calculated as local supply, but need to be shown for the purposes of CRA capacity limit calculations without double counting.

Source: Yorba Linda Water District Final 2010 Urban Water Management Plan, prepared by Malcolm Pirnie, Inc., dated May 2011.

It is required that every urban water supplier assess the reliability to provide water service to its customers under normal, dry, and multiple dry water years. MWD's 2010 RUWMP finds that the MWD is able to meet full service demands of its member agencies with existing supplies from 2015 through 2035 during normal years, single dry year, and multiple dry years. MWDOC projects that it would also be able to meet the demands of its retail agencies under these conditions. The YLWD is therefore capable of meeting the water demands of its customers in normal, single dry, and multiple dry years between 2015 and 2035.³

The YLWD would provide water service for the Project. Existing water facilities adjacent to the project site include an 8-inch diameter main located in Stonehaven Avenue and Aspen Way.

(2) Groundwater⁴

As mentioned above, the YLWD receives its groundwater from the Lower Santa Ana Groundwater Basin, also known as the Orange County Groundwater Basin (Basin) underlies the north half of Orange County beneath broad lowlands. The Basin covers an area of approximately 350 square miles, bordered by the Coyote and Chino Hills to the north, the Santa Ana Mountains to the northeast, the Pacific Ocean to the southwest, and terminates at the County of Orange line to the northwest, where its aquifer systems continue into the Central Basin of Los Angeles County. The aquifers comprising the Basin extend over 2,000 feet deep and form a complex series of interconnected sand and gravel deposits.

The Basin is managed by OCWD for the benefit of municipal, agricultural, and private groundwater producers. The Basin meets approximately 60 to 70 percent of the water supply demand within the boundaries of OCWD. There are 19 major producers including cities, water districts, and private water companies, extracting water from the Basin serving a population of approximately 2.55 million. The Basin's total storage is 66 million acre-feet (MAF) which includes five (5) MAF within the upper aquifer; 32.9 MAF within the principal aquifer; 25.1 MAF within the lower aquifer; and three (3) MAF within the aquitards.⁵ The Basin has 135,000 AF space available for storage. The OCWD estimates that between 400,000 and 500,000 AF of the total basin storage is actually usable in terms of emptying and filling operations. The amount of groundwater producers can use is set annually and changes depending upon the management goals at the time.⁶ The OCWD manages the Basin by establishing on an annual basis the appropriate level of groundwater production known as the Basin Production Percentage (BPP). Groundwater production at or below the BPP is assessed the Replenishment Assessment (RA). The BPP was at 62 percent for the 2010-2011 water year.⁷

Local groundwater has been the least costly and most reliable source of supply for the YLWD. The YLWD relies on approximately 10,000 acre-feet of groundwater from the Basin each year. This local source of supply has historically met approximately 40-50 percent of YLWD's total annual demand.

In the effort to maximize local resources, MWD has partnered with OCWD and MWDOC and its member agencies, which are groundwater producers in various programs to encourage the development of local

³ Yorba Linda Water District Final 2010 Urban Water Management Plan, prepared by Malcom Pirnie, Inc., dated May 2011.

⁴ *Ibid.*

⁵ An aquitard is a bed of low permeability adjacent to an aquifer; may serve as a storage unit for groundwater, although it does not yield water readily.

⁶ Chapter IV – Groundwater Basin Reports, Orange County Basins. DWR, 2004; OCWD, 2004.

⁷ Yorba Linda Water District Final 2010 Urban Water Management Plan, prepared by Malcom Pirnie, Inc., dated May 2011.

resources. MWD's Groundwater Replenishment Program is a program where a groundwater producer may purchase imported water from MWD at a reduced rate when "surplus" water is available in lieu of extracting groundwater. The program indirectly replenishes the Basin by avoiding pumping. Based on the annual MWDOC survey completed by each producer in the spring of 2008, the estimated demand for groundwater in the OCWD boundary would increase from 519,000 AFY in 2015 to 558,000 AFY in 2035 representing a 7.5 percent increase over a 20 year period. It is projected that groundwater would make up 47 percent of YLWD's water supply through to year 2035.⁸

Historic high groundwater levels within the project site range from 0 to 30 feet. These levels are reflective of the canyon areas in the southern portion of the site. The groundwater levels fluctuate seasonally owing to rainfall and other factors.

(3) Wastewater⁹

The YLWD would also provide wastewater service to the project area. Within its service boundary, the YLWD owns and maintains approximately 150 miles of various diameter sewer pipes and one sewer lift station. The service area includes 11,786 single family, commercial, industrial and public school accounts, and 1,240 multiple dwelling units (condominiums, mobile homes, and apartments) for a total of 13,206 service accounts. The existing wastewater collection system consists primarily of vitrified clay pipe (VCP) with a small portion of polyvinyl chloride pipe (PVC), ductile iron pipe (DIP), cast iron pipe (CIP) and asbestos cement pipe (ACP). The diameters range in size from 4-inch to 24-inch. Wastewater generated within the system flows by gravity to the Orange County Sanitation District (OCSD) trunk sewers. These trunk sewers route the flow to the OCSD wastewater treatment plants in Fountain Valley and Huntington Beach.¹⁰ The OCSD treatment facilities have the capacity to treat 372 million gallons per day (MGD).¹¹ In 2008/09, the OCSD treatment facilities treated 207 MGD, approximately 55 percent of the treatment systems capacity.¹² **Table 4.15-5, Wastewater Collection and Treatment (AFY)** summarizes the past, current, and projected wastewater volumes collected and treated, and the quantity of wastewater treated to recycled water standards for treatment plants within OCSD's service area. **Table 4.15-6, Disposal of Wastewater (Non-Recycled) (AFY)**, summarizes the disposal method and treatment level of discharge volumes.

Table 4.15-5

Wastewater Collection and Treatment (AFY)

Type of Wastewater	Fiscal Year Ending						
	2005	2010	2015	2020	2025	2030	2035
Wastewater Collected & Treated in OCSD Service Area	273,017	232,348	302,400	312,704	321,104	329,392	333,536
Volume that Meets Recycled Water Standards	12,156	75,000	105,000	105,000	105,000	105,000	105,000

Source: Yorba Linda Water District Final 2010 Urban Water Management Plan, prepared by Malcolm Pirnie, Inc., dated May 2011.

⁸ Ibid.

⁹ Yorba Linda Water District Final 2010 Urban Water Management Plan, prepared by Malcolm Pirnie, Inc., dated May 2011

¹⁰ Yorba Linda Water District Final 2010 Sewer Master Plan Update, prepared by IDModeling & Psomas, dated February 2011.

¹¹ Oakcrest Terrace Initial Study, prepared by Impact Sciences (for the City of Yorba Linda), March 2012.

¹² Ibid.

Table 4.15-6

Disposal of Wastewater (Non-Recycled) (AFY)

Method of Disposal	Treatment Level	Fiscal Year Ending					
		2010	2015	2020	2025	2030	2035
Ocean Outfall	Secondary	157,348	197,400	207,704	216,104	224,392	228,536

Source: Yorba Linda Water District Final 2010 Urban Water Management Plan, prepared by Malcolm Pirnie, Inc., dated May 2011.

Currently, in the vicinity of the project area, there is an existing 10-inch sewer line that begins at the easterly limit of Aspen Way, which then proceeds south through existing sewer mains to the OCSD trunk sewer in La Palma Avenue. There is also an 8-inch (which turn into a 10-inch line) existing sewer line in Via Del Agua near the Project's proposed access point to Planning Area 1, which then proceeds south and connects to the OCSD trunk sewer in La Palma Avenue.

(4) Solid Waste

A private company, Yorba Linda Disposal Services (YLDS), would collect and manage solid waste collection for the Project. Waste is picked up in neighborhoods once a week and is taken to the CVT Regional Materials Recovery Facility (MRF) in Anaheim for separation and processing. At the MRF, the waste is sorted into trash and recyclables. The trash is then processed at CVT's Regional Waste Transfer Center before being transported to the Olinda-Alpha Landfill, which is located at 1942 N. Valencia Avenue in unincorporated Orange County north of the City of Brea. The Olinda Alpha Landfill has a permitted capacity to receive up to 8,000 tons per day and currently receives 5,500 tons of solid waste per day. The Olinda Alpha Landfill has an estimated remaining capacity of 27.3 million cubic yards and is anticipated to close in 2021. Once the Olinda Alpha Landfill reaches capacity and is closed, solid waste previously disposed of at the landfill would be diverted to the Frank R. Bowerman Landfill, located in Irvine, and the Prima Deshecha landfill, located in San Juan Capistrano. The anticipated close dates for these two landfills are 2053 and 2067, respectively.

2. ENVIRONMENTAL IMPACTS

a. Methodology

The analysis evaluates the potential impacts of the Project regarding utilities and service systems within the vicinity of the project site. The analysis of water supply impacts anticipates the demand of the Project using the Project information provided by the YLWD. The analysis considers whether sufficient water supplies would exist in addition to the existing and planned future demands on the YLWD during a single-dry year, multiple dry years, and a maximum day demand. With regards to wastewater, the Project's estimated increase in wastewater flow is compared to the existing conditions to assess the capacity of the existing sewer system and the ability of the system to accommodate the additional flows. The environmental impacts of the Project with respect to solid waste are determined by comparing the Project's net increase in solid waste to the capacity of existing and proposed solid waste facilities. The analysis of impacts on storm drain facilities compares the amount of existing site runoff to post-development conditions to determine the extent and need, if any, for new or upgraded storm drain facilities.

b. Thresholds of Significance

Appendix G of the *CEQA Guidelines* and the County of Orange Environmental Analysis Checklist provide thresholds of significance to determine whether a project would have a significant environmental impact regarding utilities and service systems. Based on the size and scope of the Project and the potential for utilities and service system impacts, the thresholds identified below are included for evaluation in this EIR.

Would the Project:

- Threshold 1: Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board (refer to Impact Statement 4.15-1);
- Threshold 2: Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects (refer to Impact Statement 4.15-3);
- Threshold 3: Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects (refer to Impact Statement 4.15-4);
- Threshold 4: Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed (refer to Impact Statement 4.15-3); and
- Threshold 5: Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments (refer to Impact Statement 4.15-2);
- Threshold 6: Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs (refer to Impact Statement 4.15-5); and
- Threshold 7: Comply with federal, state, and local statutes and regulations related to solid waste (refer to Impact Statement 4.15-6).

c. Project Design Features

The following Project Design Features (PDFs) have been included in the Project plans and would be included in the Mitigation Monitoring and Reporting Program (MMRP) for the Project. These features would prevent the occurrence and/or minimize the significance of potential impacts on utilities and service systems by minimizing the Project-generated water demand.

- PDF 15-1: Builder-installed indoor appliances, including dishwashers, showers and toilets, would be low-water use. (This PDF would be verified prior to issuance of certificates of use and occupancy for a unit as approved by the Manager, OC Planning.)

- PDF 15-2: Drought-tolerant, native landscaping would be used in public common areas to reduce water consumption. The plant pallette for the Project would ultimately be determined based on OCFA requirements for use of fire-resistant plants in high fire-prone areas, but in consideration of applicable City of Yorba Linda and County of Orange landscaping requirements. (This PDF to be verified through the Landscape Plan review prior to issuance of a building permit by the Manager, OC Planning.) (Also, see PDF 1-7 in Section 4.1, *Aesthetics*, of this EIR.)
- PDF 15-3: Community landscape areas would be designed on a “hydrozone” basis to group plants according to their water and sun requirements. The plant pallette for the Project would ultimately be determined based on OCFA requirements for use of fire-resistant plants in high fire-prone areas, but in consideration of applicable City of Yorba Linda and County of Orange landscaping requirements. (This PDF to be verified through the Landscape Plan review prior to issuance of a building permit by the Manager, OC Planning.) (Also, see PDF 1-7 in Section 4.1, *Aesthetics*, of this EIR.)
- PDF 15-4: Irrigation for both public and private landscape areas would be designed to be water-efficient and comply with Section 7-9-133.5, *Landscape Water Use Standards*, of the Orange County Code of Ordinances. All irrigation systems would have automatic controllers designed to properly water plant materials given the site’s soil conditions, and irrigation systems for all public landscapes would have automatic rain shut-off devices. Drip irrigation would be encouraged. Spray systems would have low volume, measured as gallons per minute (GPM), matched-precipitation heads. Prior to approval of the tentative map, the Project Applicant would obtain approval from the Manager, Permit Services of a preliminary landscape plan including the above listed conservation features and compliance with the County’s County of Orange Landscape Code (Ord. No. 09-010).

d. Analysis of Project Impacts

WASTEWATER TREATMENT REQUIREMENTS

Threshold	Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?
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4.15-1 Implementation of the Project would not exceed wastewater treatment requirements of the Santa Ana RWQCB. Thus, a less than significant impact would occur in this regard.

As discussed in detail in Section 4.8, *Hydrology and Water Quality*, under the Orange County National Pollutant Discharge Elimination System (NPDES) permit system, all existing and future municipal and industrial discharges to surface waters are subject to applicable local, state and/or federal regulations. New development pursuant to implementation of the Project must comply with all provisions of the NPDES program and other applicable waste discharge requirements, as enforced by the Santa Ana Regional Water Quality Control Board (SARWQCB) and the California State Water Resources Control Board. Therefore, implementation of the Project would not result in an exceedance of wastewater treatment requirements.

As discussed in the Existing Conditions section above, the YLWD operates the sewer collection system within the project area. Build-out of the Project would not result in the discharge of wastewater to any surface water. Instead, operational discharges would be sent to the sewer system, which would ultimately be

treated at the OCSO wastewater treatment plants in Fountain Valley and Huntington Beach. As the Project consists of a residential development, discharge of hazardous materials into the sewer system is not anticipated. The wastewater plants are required to comply with associated Waste Discharge Requirements (WDRs) and any updates or new permits issued. WDRs set the levels of pollutants allowable in water discharged from a facility. Compliance with applicable WDRs would ensure that implementation of the Project would not exceed the applicable wastewater treatment requirements of the SARWQCB with respect to discharges to the sewer system. As such, impacts would be less-than-significant in this regard.

WASTEWATER TREATMENT CAPACITY

Threshold	Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?
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4.15-2 The Project's wastewater demand would be met by the YLWD and the OCSO wastewater system and treatment facilities. Thus, a less than significant impact would occur in this regard.

The Sewer Study prepared for the Project was conducted to determine if existing infrastructure facilities could serve the Project. The residences in Planning Area 2 would be served by existing sewer lines that begin at the easterly limit of Aspen Way, which then proceed south through existing sewer mains to the OCSO trunk sewer in La Palma Avenue. The dwelling units in Planning Area 1 would be served by the existing sewer system in Via Del Agua, which then proceeds south through existing sewer mains to the OCSO trunk sewer in La Palma Avenue. **Figure 4.15-1, Sewer Master Plan**, illustrates the sewer master plan proposed by the Project. A conditional will serve letter was issued by the YLWD for the Project indicating that the Project is within the YLWD service area (included in Appendix J of this EIR). The Project would be responsible for ensuring all necessary connections are provided to the existing sewer system prior to occupancy of the proposed residential uses. The connections would be provided by the Project in consultation with the YLWD, with the Project responsible for payment of all applicable sewer connection fees, pursuant to YLWD requirements.

Per the Sewer Study, the anticipated amount of wastewater generated by the Project would be 250 GPD¹³ per dwelling unit (DU) (an average flow of 28,000 GPD¹⁴) with a flow 0.453 cubic feet per second.¹⁵ The Sewer Study concluded that the existing system has the capacity to handle the additional wastewater generated by the Project without requiring any changes to the existing system. The YLWD further noted Project implementation would not present a significant increase in wastewater service demand.¹⁶ Given that the

¹³ Report of the Evaluation of the City of Yorba Linda Sewer System for the Proposed Development Travis Property, prepared by Hunsaker & Associates Irvine, Inc., dated June 7, 2006.

¹⁴ 250 GPD/DU x 112 DU = 28,000 GPD.

¹⁵ Letter correspondence from Steve Conklin, P.E., Engineering Manager, Yorba Linda Water District, dated August 1, 2012, indicated that the Project's peak wastewater flows would be .26 cfs. The flows assessed in the Sewer Study are approximately 74% greater than indicated by the YLWD. It is noted that the Project's Sewer Study assumed 117 units would be built as part of the Project, with 44 homes being served by the sewer system beginning in Aspen Way and 73 homes would be served by the sewer system in Via Del Agua. Thus, clearly the Sewer Study provides a conservative analysis of capacity in the Aspen Way system. Regarding the Via Del Agua sewer system, while the number of units studied was only 73 compared to 95 as currently proposed, given the assumed flows in the Sewer Study were 74% greater than assumed by the YLWD, the Sewer Study provides a conservative analysis of flows based on YLWD assumed flows.

¹⁶ Letter of Correspondence from Steve Conklin, P.E., Engineering Manager, Yorba Linda Water District, dated August 1, 2012.

system is currently operating at a little over half capacity, the additional wastewater generated by the Project would be accommodated by the existing sewer system.

As discussed in the Existing Conditions section above, wastewater generated by the Project would ultimately be treated at the OCSD wastewater treatment plants in Fountain Valley and Huntington Beach. The OCSD treatment facilities have the capacity to treat 372 MGD.¹⁷ In 2008/09, the OCSD treatment facilities treated 207 MGD, approximately 55 percent of the treatment systems capacity.¹⁸ Therefore, adequate capacity exists to treat wastewater generated by the Project at these facilities.

Overall, based on the above, the Project's wastewater demand would be met by the existing YLWD and OCSD wastewater system and treatment facilities. Thus, a less than significant impact would occur in this regard.

WASTEWATER AND WATER INFRASTRUCTURE/WATER SUPPLY

Threshold	Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?
Threshold	Would the project have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?

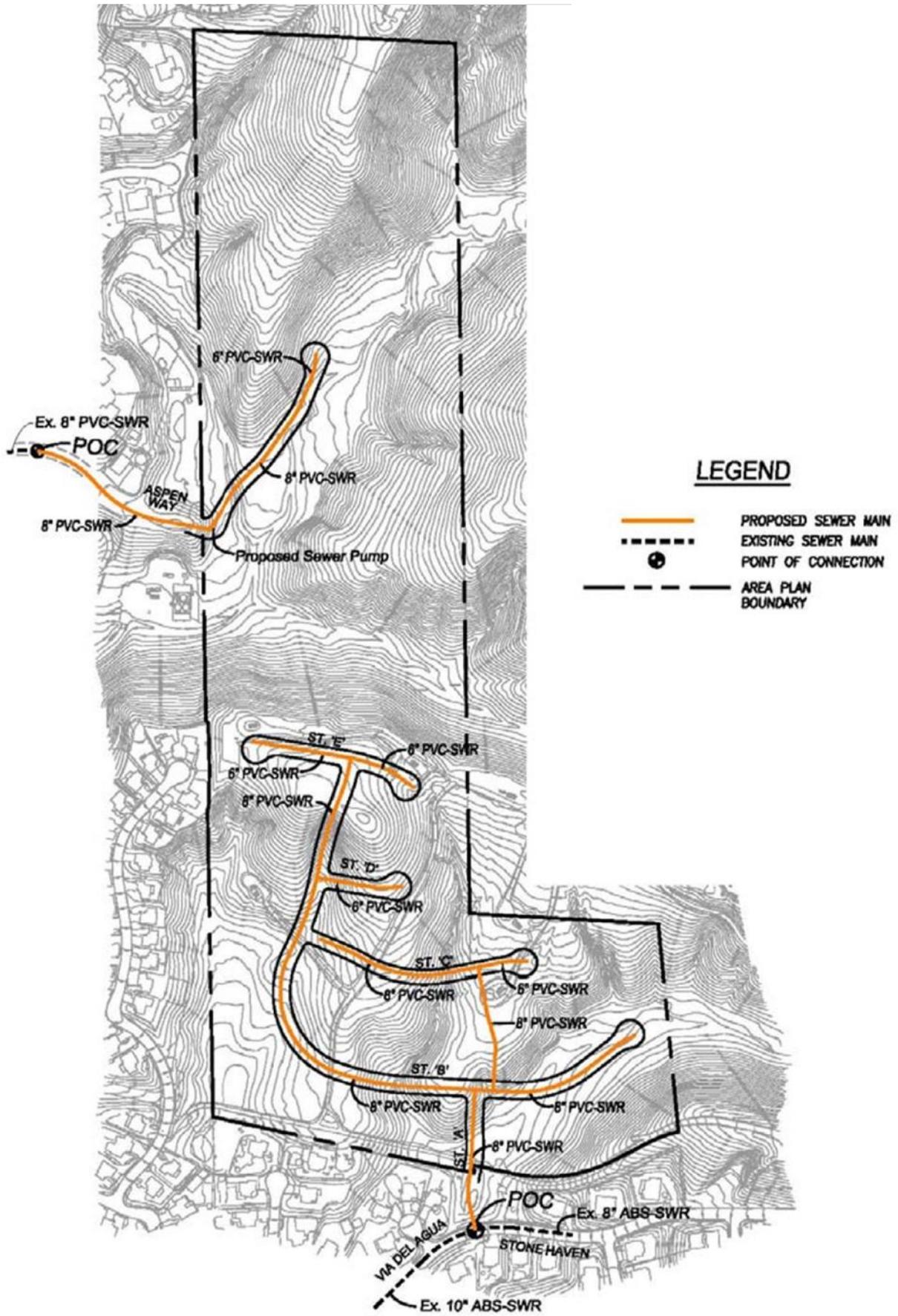
4.15-3 Implementation of the Project would not require the construction of new wastewater treatment facilities or expansion of existing off-site facilities, but could require new off-site water infrastructure facilities. Implementation of the prescribed mitigation measures would reduce the Project's potentially significant impacts regarding the availability of supporting water infrastructure to a less than significant level. Further, the Project would have sufficient water supplies available to serve the Project from existing entitlements and resources. Thus, impacts regarding water supply would be less than significant.

As discussed under Impact Statement 4.15-2, connections would be provided by the Project to the existing sewer system. Further, as discussed therein, the Project's wastewater demand would be met by the existing YLWD and OCSD wastewater system and treatment facilities. Environmental impacts associated with development of the Project, including sewer connections have been evaluated throughout this EIR. As concluded in this EIR, all potentially significant impacts associated with development of the Project, including sewer connections, would be less than significant after implementation of the prescribed mitigation measures.

The YLWD would provide water service for the Project. A conditional will serve letter was issued by the YLWD for the Project indicating that the Project is within the YLWD service area (included in Appendix J of this EIR). Per the conditional will serve letter, "Any future, binding commitment by the District to service the Cielo Vista project would be subject to the availability of sewer facilities and the planning, design, and construction of adequate facilities to meet the demands of the project in accordance with (1) the terms and conditions of a Pre-annexation Agreement to be executed by the applicant and the District; and (2) the terms and conditions of an Application to an Agreement with the Yorba Linda Water District for Water and Sewer

¹⁷ *Oakcrest Terrace Initial Study, prepared by Impact Sciences (for the City of Yorba Linda), March 2012.*

¹⁸ *Ibid.*



N
No scale

Sewer Master Plan

FIGURE

4.15-1

Cielo Vista Project

Source: Cielo Vista Area Plan, Sage Community Group, Inc., 2011.

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Service executed by the applicant and the District; both in accordance with the District's policies existing at the time such agreements are executed.”

Points of connection for water utilities exist in Alpine Way and Via Del Agua. On-site water facilities planned for the Project include a system of 8-inch diameter plans within local streets connecting to existing 8-inch diameter mains located within Stonehaven Way and Aspen Way. Planning Areas 1 and 2 would be connected to form a looped system. The Project's proposed on-site water service facilities are illustrated on **Figure 4.15-2, Water Facilities Plan**. The Project would be responsible for ensuring all necessary connections are provided to the existing water system prior to occupancy of the proposed residential uses. The connections would be provided by the Project in consultation with the YLWD, with the Project responsible for payment of all applicable water connection fees, pursuant to YLWD requirements.

The YLWD currently has two sources of supply: water imported from the MWD through the MWDOC and groundwater from the Lower Santa Ana Basin. As discussed in the Existing Conditions section above, Metropolitan's 2010 RUWMP finds that the MWD is able to meet full service demands of its member agencies with existing supplies from 2015 through 2035 during normal years, single dry year, and multiple dry years; refer to Table 4.15-2 through Table 4.15-4. MWDOC projects that it would also be able to meet the demands of its retail agencies under these conditions. Based upon MWDOC projections, the YLWD would be capable of meeting the water demands of its customers in normal, single dry, and multiple dry years between 2015 and 2035.¹⁹ Based on correspondence with the YLWD, the projected average and maximum water daily demand for the Project is 0.1198 MG²⁰ and 0.1773 MG²¹, respectively.²² The Project's estimated water demand was accounted for in the YLWD Final 2010 UWMP.²³ According to the YLWD, the Project's estimated water demand can be served by the YLWD's supplies available during normal, single dry year, and multiple dry years.²⁴ The YLWD further noted Project implementation would not present a significant increase in service demand.²⁵ Based on the above, sufficient water supplies are available to serve the Project from existing entitlements and resources and no new or expanded entitlements are necessary. In addition, it is acknowledged that the Project would implement numerous water conservations, which include, but may not be limited to PDFs 15-1 to 15-4. Per PDF 15-1, the Project would incorporate builder-installed indoor appliances, including dishwashers, showers and toilets, that would be low-water use. Per PDFs 15-2 to 15-4, the Project would include native, drought-tolerant landscaping and water-efficient irrigation systems. Implementation of these PDFs would not only help to ensure the Project does not exceed projected water demands, but would also serve to reduce projected water demands.

The YLWD "received and filed" the Northeast Area Planning Study in March 2013 for the northeast portion of their service area.²⁶ This northeast area includes the project site and the Esperanza Hills property located to the east; the last remaining, large, undeveloped areas of the YLWD. The purpose of the Northeast Area

¹⁹ Yorba Linda Water District Final 2010 Urban Water Management Plan, prepared by Malcom Pirnie, Inc., dated May 2011.

²⁰ Projected Average Day Demand = 112 Lots x 1,070 GPD/Lot = 0.1198 MG.

²¹ Projected Maximum Day Demand = 0.1198 MG x 1.48 = 0.1773 MG.

²² Letter of Correspondence from Steve Conklin, P.E., Engineering Manager, Yorba Linda Water District, dated August 1, 2012.

²³ *Ibid.*

²⁴ *Ibid.*

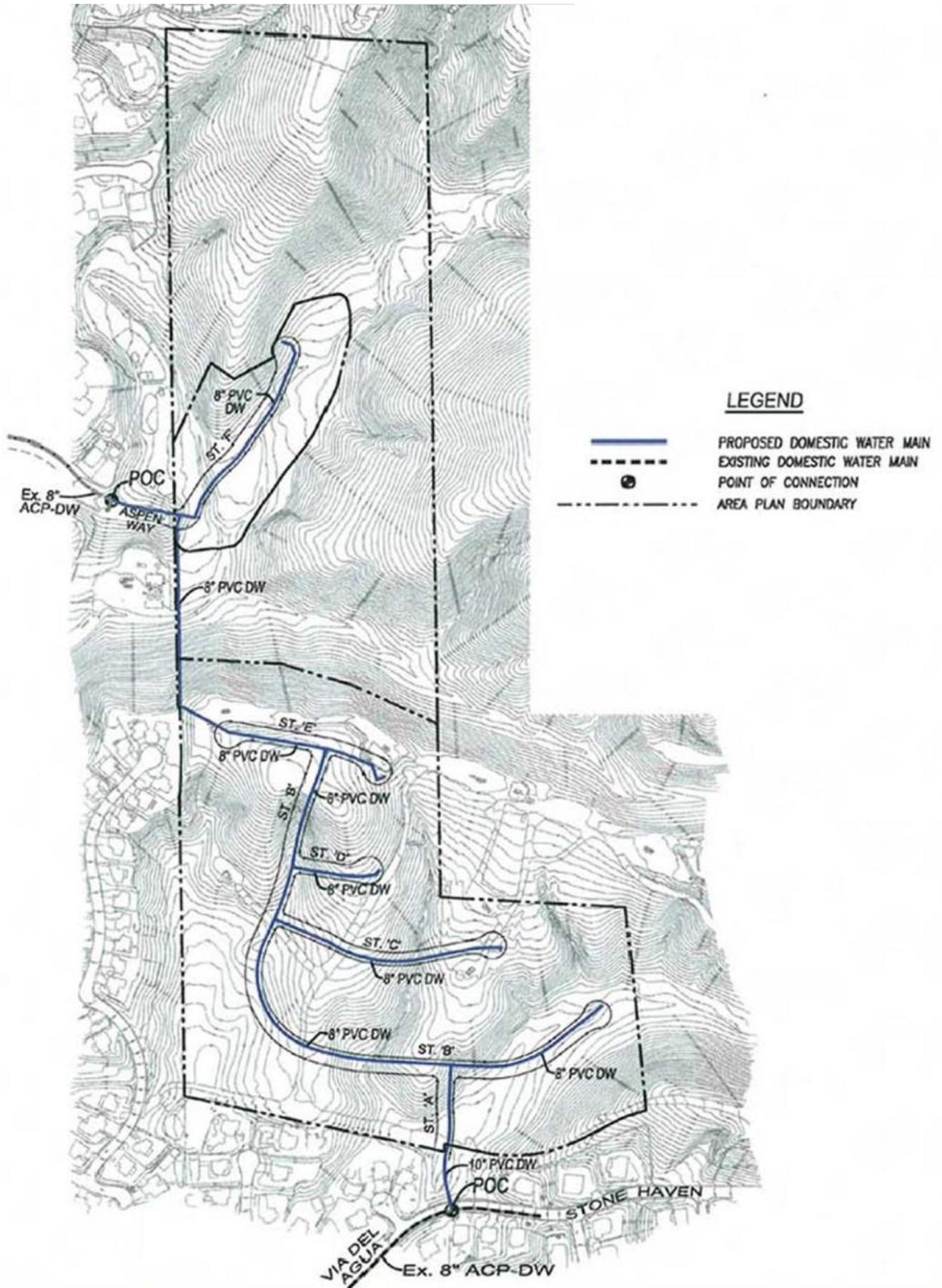
²⁵ *Ibid.*

²⁶ Northeast Area Planning Study, prepared by Carollo Engineers, March 2013.

Planning Study is to evaluate the capacity of existing distribution system facilities and size new infrastructure required to provide water under anticipated operational conditions for future demands. The improvements identified in the Study are recommended to meet the anticipated water service and infrastructure demands within the northeast area as a whole, to which the Cielo Vista and Esperanza Hills Projects are part of. As stated in the Planning Study, the proposed Esperanza Hills Estates Project and the Cielo Vista Project developments are projected to add 542 afy to the District's annual demands, resulting in an overall system annual demand of 25,388 afy, which equates to a 2 percent demand increase. The District's current maximum day demand is estimated to increase by 0.7 mgd to 33.6 mgd. The Planning Study does not separate the demands for each individual development project, rather the Planning Study provides a combined demand for both projects. The combined domestic water demand estimated in the study exceeds the demand of the individual projects based on the proposed number of dwelling units.

As concluded in the Planning Study, due to topography, the proposed Esperanza Hills and Cielo Vista Projects would need to be divided into two pressure zones, with hydraulic grade lines at 1,200 feet above mean sea level (amsl) and 1,390 feet amsl. Based on updated storage criteria, these developments would require approximately 1.3 MG of storage. Clearly, the Cielo Vista Project would result in far less demand and required water storage than the Esperanza Hills Project. Each zone would need 0.18 MG of dedicated fire flow storage (0.36 MG), unless greater fire flow requirements are established by the Orange County Fire Authority. The remaining 0.94 MG storage would need to be prorated by the demands of each pressure zone. The Planning Study also identifies a need to upgrade existing District infrastructure facilities to support the Projects that include: two new pump stations, one for each zone; a pressure reducing station (if upper tank is sized to meet some demands in lower zone; in tract development pipelines; increase in firm capacity of Fairmont Pump Station (approximately 1.75 miles west of the project site); and potential additional offsite improvements including additional well capacity and pipeline upgrades, to be determined by District Staff. The upgrades referenced above would provide the necessary upgrades to meet OCFA's minimum fire flow requirements of 1,000 gpm at 20 pounds per square inch (PSI). Given the need for new infrastructure to support the Project, the Project would have a potentially significant impact on water storage in the area.

While the Planning Study indicates that the proposed Esperanza Hills and Cielo Vista Projects would need to be divided into two pressure zones, with hydraulic grade lines at 1,200 feet amsl and 1,390 feet amsl, it does not indicate specific locations of the required storage water facilities and supporting infrastructure. To ensure that such improvements would adequately deliver water and the necessary fire flow to the project site, Mitigation Measure 4.15-1 has been prescribed for the Project. Implementation of the prescribed mitigation measure would reduce the Project's potentially significant impact regarding the availability of supporting water infrastructure to a less than significant level. Pursuant to this mitigation measure, the Project Applicant would work with the YLWD to prepare an implementation level project site service plan by further defining the conceptual service system proposed in the YLWD's Northeast Area Planning Study. This study covers the project area as well as other properties both in the City and in the City's sphere of influence. The Study proposes a preliminary alternative for addressing water supply needs for the Project, a system that is dependent on simultaneous development of the adjacent property. However, because final planning, buildout, and timing of either property cannot be accurately ascertained at this time, the Project Applicant would work with the YLWD, as required by Mitigation Measure 4.15-1, to further define the study alternative, another alternative that can serve both projects, or a separate system for the Project using a combination of new and/or existing water connections, storage tanks, and a method for conveyance as needed to ensure an adequate supply for the area's future residents and for fire safety purposes.



N
No scale

Water Facilities Plan

FIGURE

4.15-2

Cielo Vista Project

Source: Cielo Vista Area Plan, Sage Community Group, Inc., 2011.

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Mitigation Measures

Refer to Mitigation Measure 4.7-11 in Section 4.7, *Hazards and Hazardous Materials*, in this EIR. The following mitigation measure is also prescribed.

Mitigation Measure 4.15-1 To address the Project's need for water storage, the Project Applicant shall pay a fair-share cost to the YLWD for infrastructure improvements identified in the Northeast Area Planning Study that are required to support the Cielo Vista Project. The payment shall reflect a proportional fair-share of the costs attributable to the Cielo Vista Project toward improvements YLWD has proposed that include construction of facilities which directly benefit and are needed for capacity and conveyance at the project site as determined by District Staff. No grading permits shall be issued for the Project until adequate water storage facilities and related improvements are implemented by YLWD and are operational to the satisfaction of the OCFA, unless otherwise determined acceptable by the YLWD and OCFA.

STORMWATER FACILITIES

Threshold	Would the project require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?
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4.15-4 Implementation of the Project could require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. However, compliance with applicable regulatory requirements and implementation of the prescribed mitigation measures would reduce potentially significant impacts in these regards to a less than significant level.

As discussed in Section 4.8, *Hydrology and Water Quality*, the Project would include new on-site stormwater drainage facilities that would be constructed in accordance with applicable regulatory requirements. Further, no new off-site storm drain facilities would be required as part of the Project. Environmental impacts associated with development of the Project, including on-site drainage facilities have been evaluated throughout this document. As concluded in this document, all potentially significant impacts associated with development of the Project, including on-site stormwater drainage facilities, would be less than significant after implementation of the prescribed mitigation measures. Therefore, impacts would be less than significant in this regard.

SOLID WASTE DISPOSAL

Threshold	Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?
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4.15-5 The Project would be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs. Thus, a less than significant impact would occur regarding landfill capacity.

As discussed in the Existing Conditions section above, YLDS would collect and manage solid waste collection for the Project. Waste collected at the project site would ultimately be disposed of at the Olinda-Alpha

Landfill, which has a permitted capacity to receive up to 8,000 tons per day and currently receives 5,500 tons of solid waste per day. The Olinda Alpha Landfill has an estimated remaining capacity of 27.3 million cubic yards and is anticipated to close in 2021. Once the Olinda Alpha Landfill reaches capacity and is closed, solid waste collected in the City of Yorba Linda and the project site would be diverted to the Frank R. Bowerman Landfill, located in Irvine, and the Prima Deshecha landfill, located in San Juan Capistrano. The anticipated close dates for these two landfills are 2053 and 2067, respectively.

The population generated by the Project would be well within the maximum population forecast anticipated for the site within the County's General Plan. Based on an estimate that approximately 105 to 110 pounds of refuse is collected on a weekly basis per household, the Project with 112 dwellings would generate approximately 12,320 pounds of waste per week or approximately 1,760 pounds per day.²⁷ As the Olinda Alpha Landfill is permitted to receive up to 8,000 tons per day and currently receives 5,500 tons of solid waste per day, the Project's waste (less than w tons per day) could be accommodated by the Olinda Alpha Landfill. In addition, upon closure, trash generated by the Project would be diverted to other landfills in the County landfill system with available capacity. Overall, the Project would not result in any significant impacts to solid waste landfill capacity in Orange County. The impact of the Project on local landfills would be less than significant.

COMPLIANCE WITH SOLID WASTE REQUIREMENTS

Threshold	Would the project comply with federal, state, and local statutes and regulations related to solid waste?
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4.15-6 *The Project would comply with applicable federal, state, and local statutes and regulations related to solid waste. Thus, a less than significant impact would occur in this regard.*

As discussed above, total solid waste generated by the Project would result in an increase of approximately 12,320 pounds of waste per week or approximately 1,760 pounds per day. The City of Yorba Linda and County of Orange are obligated to meet state mandates for solid waste reduction by participating in local and regional programs to encourage per capita reduction of solid waste. Reductions would be achieved through recycling and composting of solid waste, reduction of the amount of solid waste produced, and public education. The Project would comply with mandates regarding solid waste management, and would participate in the County's and/or City of Yorba Linda's recycling program, which provide designated recycle cans for recycling on a weekly basis. No federal statutes apply to the project site. Therefore, the impact of the Project on compliance with federal, state, and local statutes and regulations would be less than significant.

CONSISTENCY WITH COUNTY OF ORANGE AND CITY OF YORBA LINDA PLANS AND POLICIES

(1) County of Orange General Plan

The County's General Plan contains goals and policies that are relevant to utilities and service systems, which are presented in the General Plan Public Services and Facilities and Resources Elements. As discussed below in **Table 4.15-7, Project Consistency with Orange County General Plan**, the Project would be consistent with the applicable goals and policies of the County of Orange General Plan pertaining to utilities and service systems.

²⁷ Solid waste generation rates based on data from the Waste Management of Orange County as included in the Saddle Crest Homes Draft EIR, County of Orange, April 2012.

Table 4.15-7

Project Consistency with Orange County General Plan

Goals, Objectives and Policies	Project Consistency
Public Services and Facilities Element	
<p>Policy 1 Phasing And Funding. To implement public facilities in a manner that supports the implementation of the overall land use development policies and the needs of County residents and is consistent with the funding capabilities of the County. Proponents of planned communities or tentative tract or parcel maps in conventionally zoned communities shall provide ultimate, fair share infrastructure improvements for regional services as required by County and service provider plans in effect at the time of project implementation. Proponents shall also participate, on a fair share basis, in provision of community level facilities. The County and service providers shall strive to provide facilities and services necessary to complete the service system.</p>	<p>Consistent. Conditions of approval would be applied to the Project requiring payment of adopted development impact fees to address the Project’s fair share cost for public services and facilities. As discussed in Section, 4.12, <i>Public Services</i>, the Project would pay applicable development fees for its fair share cost pertaining to schools, police service, fire protection service, libraries, and hospitals. In addition, as discussed within this Section, the Project would pay its fair share costs towards water supply improvements in the area that may be necessary to serve the project, as determined appropriate by the Yorba Linda Water District.</p>
Water System	
<p>Policy 1 To ensure the adequacy of water system capacity and phasing, in consultation with the service providing agency(ies), in order to serve existing and future development as defined by the General Plan.</p>	<p>Consistent. As discussed within this Section, the Project would be required to implement the prescribed mitigation measures (refer to Mitigation Measure 4.15-1) which would ensure the adequacy of water availability and infrastructure to meet the demands of the project. Water connections would be provided by the Project in consultation with the YLWD, with the Project responsible for payment of all applicable water connection fees, pursuant to YLWD requirements.</p>
Wastewater Systems	
<p>Policy 1 To protect quality in both delivery systems and groundwater basins through effective wastewater system management.</p>	<p>Consistent. As discussed within this Section, the Project would provide connections to existing sewer lines maintained by the Yorba Linda Water District. All wastewater leaving the site in the sewer lines would be treated by the Orange County Sanitation District in compliance with applicable wastewater regulatory requirements which would effectively protect groundwater basins in the region.</p>
<p>Policy 3 To ensure the adequacy of wastewater system capacity and phasing in consultation with the service providing agency(ies) in order to serve existing and future developments as defined by the General Plan.</p>	<p>Consistent. As discussed within this Section, the Project’s wastewater demand would be adequately served by existing facilities maintained by the Yorba Linda Water District and Orange County Sanitation District. Sewer connections would be provided by the Project in consultation with the YLWD, with the Project responsible for payment of all applicable sewer connection fees, pursuant to YLWD requirements. Adequate sewage treatment capacity is available to accommodate the Project.</p>
Local Special Services Districts	

Table 4.15-7 (Continued)

Project Consistency with Orange County General Plan

Goals, Objectives and Policies	Project Consistency
<p>Policy 2 Land Use Review. Through the project review process, land use proposals shall be required to incorporate appropriate construction and landscape designs and materials to minimize the costs for public slope, median, and roadside maintenance.</p>	<p>Consistent. The following features of the Project would ensure the Project is consistent with this policy.</p> <ul style="list-style-type: none"> ▪ Drought-tolerant, native landscaping would be used in public common areas to reduce water consumption. ▪ Smart Controller irrigation systems would be installed in all public and common area landscaping. Community landscape areas would be designed on a “hydrozone” basis to group plants according to their water requirements and sun. ▪ The street medians and parkways would be planted with shrubs, low groundcovers, and ornamental grasses are used to the greatest extent feasible to reduce maintenance and conserve resources.
Resources Element	
Energy Resources	
<p>Policy 3 Energy Conservation. To encourage and actively support the utilization of energy conservation measures in all new and existing structures in the County.</p>	<p>Consistent. The Project would include the following energy conserving features:</p> <ul style="list-style-type: none"> ▪ Builder-installed indoor appliances, including dishwashers, showers and toilets, will be low-water use. ▪ Drought-tolerant, native landscaping would be used in public common areas reducing water consumption which reduces the need for operation of automatic sprinkler systems powered by electricity. ▪ Smart Controller irrigation systems would be installed in all public and common area landscaping. Community landscape areas would be designed on a “hydrozone” basis to group plants according to their water and sun requirements. ▪ Implementation of a plant palette which includes canopy trees to achieve natural ventilation and cooling.

Source PCR Services Corporation, 2013.

(2) City of Yorba Linda General Plan

The City’s General Plan contains goals and policies that are relevant to utilities and service systems, including goals and policies contained in the General Plan Land Use Element. As discussed below in **Table 4.15-8, Project Consistency with Yorba Linda General Plan**, the Project would be “potentially consistent” with the applicable goals and policies of the City of Yorba Linda General Plan pertaining to utilities and service systems. The notation of “potentially consistent” is in deference to the City’s authority for making such determinations for projects located within the city limits.

Table 4.15-8

Project Consistency with Yorba Linda General Plan

Goals, Objectives and Policies	Project Consistency
Land Use Element	
<p>Goal 5 New and existing development supported by adequate public infrastructure.</p>	<p>Potentially Consistent. Because the project site is at the periphery of single family neighborhoods to the west and south, water and wastewater connections would be extended to the project site. Off-site road improvements would not be required to maintain acceptable level of service standards with the exception of a traffic signal needed at the Via del Agua and Yorba Linda Boulevard intersection (see Mitigation Measure 4.14-2 in Section 4.14, <i>Traffic/Transportation</i>). In addition, school fees as well as local park fees would be paid at the issuance of building permits (refer to Mitigation Measure 4.12-3 and Mitigation Measure 4.13-1 in Section 4.12, <i>Public Services</i>, and Section, 4.13, <i>Recreation</i>, respectively).</p>
<p>Policy 5.3 Coordinate the timing of the implementation and siting of public infrastructure and public facilities with other related public facilities and development.</p>	<p>Potentially Consistent. Wastewater service to the project site would be provided by a sewer line extension to Planning Area 1 from a sewer main in Via del Agua. Planning Area 2 would be served by the extension of a sewer main in Aspen Way. Wastewater would be conveyed along existing lines to treatment facilities in either Fountain Valley or Huntington Beach with these facilities operating at a 55% average capacity. The project would contribute approximately 28,000 gallons of wastewater per day. These treatment facilities are treating 207 million gallons per day with a capacity of 372 million gallons per day.</p> <p>Potable water service to the project site would be provided by the YLWD. Similar to the provision of wastewater service, the project site would be served by connecting to an 8" water main in Via del Agua for Planning Area 1 and a similar 8" water main in Aspen Way for Planning Area 2. The YLWD receives imported water from the MWD through the State Water Project. Additionally, supply comes from Lower Santa Ana River Basin groundwater. MWD's 2010 UWMP indicates that MWD would be able to provide sufficient water to its retail agencies, including YLWD through 2035, with a substantial surplus. Therefore, sufficient water would be available to the project site at least through 2035, even if groundwater supplies are diminished. The YLWD recently completed the Northeast Area Planning Study that addresses sufficient volumes, pressures, storage, etc. in order to meet domestic supply and fire protection purposes for the Murdock property, including the proposed project. The Project Applicant would participate in fair share funding and/or improvements to implement Study requirements applicable to the project site.</p> <p>The project is anticipated to generate 12,320 pounds of</p>

Table 4.15-8 (Continued)

Project Consistency with Yorba Linda General Plan

Goals, Objectives and Policies	Project Consistency
	solid waste per week which would be transferred to the Olinda Alpha Landfill until its capacity is reached in 2021 and then to the Frank Bowerman and Prima Desheca Landfills with capacity to 2053 and 2067, respectively.
Policy 5.6: Encourage the use of public sewer systems in new and infill development rather than septic systems.	Potentially Consistent. Septic tanks are not proposed for wastewater disposal. Connection to an existing public sewer system is discussed under Policy 5.3 above.
Policy 7.2 Require developers of undeveloped properties to complete improvements for required infrastructure and/or provide funds for required infrastructure (both on-site and related improvements) in accord with City determined service levels.	Potentially Consistent. Please see response to Policy 5.4.
Source PCR Services Corporation, 2013.	

3. CUMULATIVE IMPACTS

4.15-7 *The Project combined with the related projects would not result in substantial adverse effects related to utilities and service systems in the project area. Thus, cumulative utility and service impacts would be less than significant.*

The County of Orange considers the projected population increases within the region in order to plan for increases in the demand for utilities and service systems, and therefore the geographic area in which cumulative effects to utility systems could occur is the County as a whole. Regarding water supply, currently, the total water demand for retail customers served by YLWD is approximately 20,100 acre-feet annually consisting of 11,800 acre-feet of imported water and 8,300 acre-feet of groundwater. The YLWD within their projected future water demands in their 2010 UWMP and have found that the District would have sufficient water supply through 2035. Per the 2010 UWMP, YLWD has approximately 23,800 customer connections to its water distribution system. YLWD is expected to add 2,500 more connections by 2035. The YLWD is projecting a population growth of 13% accompanied by an increasing water demand trend of 38% in the next 25 years.²⁸ As part of the projections, the YLWD factored in the water demand associated with vacant and/or underutilized lands based on current land use designations, which would include the applicable related projects, including this Project and the Esperanza Hills Project, as well as the other cumulative projects. Since before and after the preparation of the 2010 UWMP, allowable residential densities as well as the dwelling unit range in the County and City general plans has not changed for the project area. The Project's 84 acres is part of a larger area designated as the Murdock/Travis Property in the City of Yorba

²⁸ Yorba Linda Water District Final 2010 Urban Water Management Plan (Chapter 2, Water Demand), prepared by Malcolm Pirnie, Inc., dated May 2011.

Linda Land Use Element. Current planning by the City of Yorba Linda for this area consists of the Project and the adjacent Esperanza Hills Project which together consist of 452 dwelling units. The City's Land Use Element provides for 536 dwelling units on the Murdock/Travis property. In addition, the County's General Plan would allow the development of up to approximately 738 dwelling units just on the project site. Thus, for purposes of this EIR, the cumulative water demand of the Project and the Esperanza Hills Project are assumed to be accounted for in the UWMP. Therefore, the water demand associated with the Project and related projects would be within the YLWD's anticipated projections for the number of new connections (2,500), anticipated population growth (13%), and increased water demand (38%). Based on these considerations, the Project would not substantially contribute to a cumulatively considerable impact regarding water supply.

With regards to water infrastructure, the Northeast Planning Area Study conducted by the YLWD identifies the water infrastructure, including that necessary to meet OCFA fire flow requirements, for both the project site and adjacent Esperanza Hills property. The Planning Study does not separate the demands for each individual development project, rather the Planning Study provides a combined demand for both projects. The combined domestic water demand estimated in the study exceeds the demand of the individual projects based on the proposed number of dwelling units. The infrastructure improvements required to support both the Cielo Vista and Esperanza Hills Projects are listed under Impact Statement 4.15-3, above. The prescribed mitigation measure (Mitigation Measure 4.15-1) for the Project would also mitigate the Project's contribution to cumulative water infrastructure impacts. Please refer to Section 6.0, *Other Mandatory CEQA Considerations*, for a discussion of secondary impacts associated with implementation of Mitigation Measure 4.15-1. Further, regarding water supply infrastructure, related projects would be required to ensure that sufficient delivery, pump station, and water pressure requirements are met on a project-by-project basis. With Project water supply already having been addressed by both Metropolitan Water District and the YLWD's 2010 UWMP, the Planning Study addressed one means of providing water to both the project site and the Esperanza Hills property on a conceptual level with sufficient flexibility to allow for implementation to be designed to meet the service needs of both projects. Design engineering will be required to determine the system for delivery to the respective projects which would be completed before the project site is physically modified in preparation for construction. As such, cumulative water system infrastructure impacts would be less than significant.

Regarding wastewater services, the OCSD treatment facilities are currently operating at a little over half existing capacity. The OCSD treatment facilities have the capacity to treat 372 mgd. As such, capacity at these facilities would be available to treat wastewater generated by related projects, including the Esperanza Hills Project. Further, regarding wastewater infrastructure, related projects would be required on a project-by-project basis to include any necessary improvements or upgrades to the existing sewer system.

Regarding stormwater drainage facilities, future growth and development associated with the Project and the related projects would be required to comply with stormwater LID regulatory requirements that mandate the on-site retention of stormwater and the extent of runoff over existing conditions. Regardless, the stormwater drainage improvements included in the project area are site-specific in nature and would not contribute to a cumulative effect.

As the Olinda Alpha Landfill is permitted to receive up to 8,000 tons per day and currently receives 5,500 tons of solid waste per day, it can accommodate up to approximately 2,500 additional tons per day (or 5,000,000 pound per day). Clearly, solid waste generated by the Project (less than 1 ton per day) and the 18

related projects would be far below the remaining available daily capacity at the Olinda Alpha Landfill. Once the Olinda Alpha Landfill reaches capacity and is closed, solid waste would be diverted to the Frank R. Bowerman Landfill and the Prima Deshecha Landfill with anticipated close dates of 2053 and 2067, respectively.

Overall, based on the above, the Project would not substantially contribute to a cumulatively considerable utilities and service systems impacts.

4. REFERENCES

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