

Appendix J

Water Supply Assessment

WATER SUPPLY ASSESSMENT

THE VILLAGE SANTA ANA SPECIFIC PLAN PROJECT

Prepared for:

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September 2024

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ACRONYMS AND ABBREVIATIONS

AFY	acre-feet per year
BPP	Basin Production Percentage
CEQA	California Environmental Quality Act
City	City of Santa Ana
CWC	California Water Code
DU	Dwelling Unit
DWR	California Department of Water Resources
EIR	Environmental Impact Report
FY	Fiscal Year
gpd	gallons per day
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
MAF	million acre-feet
MWD	Metropolitan Water District of Southern California
Project	South Coast Plaza Village
SB 610	Senate Bill 610
SGMA	Sustainable Groundwater Management Act
SWP	State Water Project
UWMP	Urban Water Management Plan
WSA	Water Supply Assessment

1 INTRODUCTION

This Water Supply Assessment (WSA) was prepared for the South Coast Plaza Village (Project) pursuant to California Water Code (CWC) Section 10910, as amended by Senate Bill 610 (SB 610). It identifies sources of water supply for the Project to determine if supply is adequate to meet the Project's water demand. A WSA under SB 610 must demonstrate there is sufficient water supply for the next 20 years, based on normal, single-dry, and multiple-dry years, to meet the demand of the Project, plus existing and planned future use, including agricultural and manufacturing uses. The water supply and demand information presented covers a 20-year period, in increments of 5 years.

This WSA will be included as part of the Environmental Impact Report (EIR) prepared for the Project pursuant to the California Environmental Quality Act (CEQA). CWC Section 10911 requires that the WSA be included in any environmental document pursuant to California Public Resources Code Division 13.

To fully comply with the requirements of SB 610, this report follows the organization of the *Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2001* (California Department of Water Resources, 2003) developed by the California Department of Water Resources (DWR). Section 2 of this report provides a description of the Project and Sections 3 through 6 provide the WSA under SB 610.

2 PROJECT DESCRIPTION

2.1 Project Location

The Project is located along the southern edge of the City of Santa Ana (City), adjacent to the City of Costa Mesa. Regionally, the site can be accessed from Interstate 405 via the Bristol Street exit or from State Route 73 via the Bear Street exit. The Project location map is shown in **Figure 1**.

The Project site is approximately 17.2 ac and located on the northeast corner of West Sunflower Avenue and Bear Street, transected by South Plaza Drive. Surrounding properties include South Coast Plaza to the south, across Sunflower Avenue in the City of Costa Mesa; Versailles on the Lake and St. Albans multi-family housing communities to the north; a retail shopping center to the east; and the Village Creek condominium community to the west, across Bear Street in the City of Costa Mesa. The Project's site vicinity map is shown in **Figure 2**.

2.2 Description of Project

The existing site is currently occupied by the South Coast Plaza Village commercial center on both sides of South Plaza Drive and comprises seven parcels on approximately 17.2 acres, which are currently developed with approximately 164,049 ft² of retail shops and restaurants; offices; and the Regency Theatres cinema building. Before constructing the proposed development, the existing site will be demolished. With a demand factor of 2,500 gpd/ac for commercial areas, the water demand of the existing site is approximately 43,000 gpd or 48 AFY.

The Project will redevelop the existing site with a mix of residential and commercial uses. The Project work includes demolition of existing structures and the construction of mixed-use commercial and residential, residential only, and commercial only buildings. The Project consists of the following onsite development:

- Up to 1,583 residential units
- Approximately 80,000 ft² of retail space
- Approximately 300,000ft² of office space

The residential-only buildings would range from 8 to 25 stories and the commercial-only buildings would range from 1 to 19 stories. The mixed-use commercial/residential buildings would range from 8 to 25 stories. The Project will include approximately 339,177 ft² (7.8 acres) of publicly accessible open space and common areas.

A central commercial area will include a variety of commercial uses, such as restaurants, grocery, brewery, and retail uses, with additional commercial uses extending through the ground floor of adjacent residential buildings. The residential towers and podium buildings will provide housing opportunities for residents in the City's South Bristol Street Focus Area. Approximately 3,278 parking spaces will be provided in tower and podium buildings and underground building levels with up to four levels below grade. A conceptual site plan is shown in **Figure 3**.

Figure 1: Regional Location Map

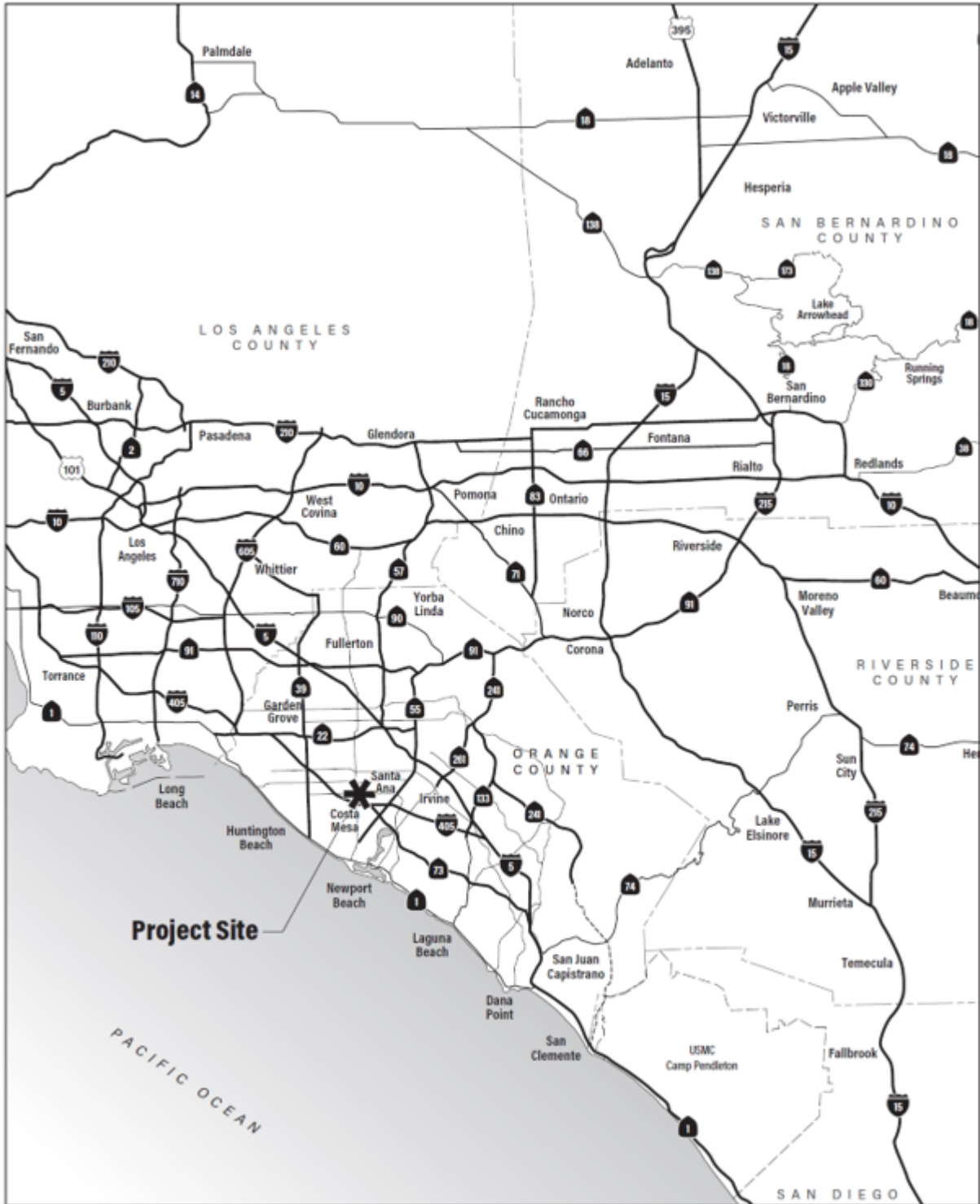


Figure 2: Project Site Vicinity Map



Source: Google Earth Pro, June 2024

Figure 3: Conceptual Site Plan



Source: RIOS

Note: Conceptual site plan for illustrative purposes, subject to change through the Development Project Plan Approval process.

LEGEND

- | | | |
|--------------------|----------------------|-------------------|
| 01 Promenade | 06 Restaurant Patios | --- Site Boundary |
| 02 Village Square | 07 Grand Stairs | — Fitness Loop |
| 03 Garden Paseo | 08 Gateway Art | |
| 04 Garden Strolls | 09 Water Feature | |
| 05 Recreation Lawn | | |

3 WSA SUBJECT TO SENATE BILL 610

SB 610 seeks to improve the link between water supply availability and land use planning for large development projects. If the project is subject to CEQA, and if it is defined as a “project” under CWC Section 10912, a WSA must be prepared.

The following sections address the questions that must be answered by a WSA under SB 610:

- Is the Project subject to CEQA?
- Is it a “project” as defined by CWC Section 10912?
- Is there a public water system to serve the Project?
- Is there a current Urban Water Management Plan (UWMP) that accounts for the Project demand?
- Is the projected water supply sufficient for the Project?

3.1 Is the Project Subject to CEQA?

CWC Section 10910 states:

- (a) Any city or county that determines that a project, as defined in Section 10912, is subject to the California Environmental Quality Act Division 13 (commencing with Section 21000) of the Public Resources Code, under Section 21080 of the Public Resources Code shall comply with this part.*

The Project will undergo environmental review pursuant to the requirements of CEQA.

3.2 Is it a “Project” as Defined by CWC Section 10912?

CWC Section 10912 states:

For the purposes of this part, the following terms have the following meanings:

- (a) “Project” means any of the following:*
- (1) A proposed residential development of more than 500 dwelling units.*
 - (2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.*
 - (3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.*
 - (4) A proposed hotel or motel, or both, having more than 500 rooms.*
 - (5) A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.*
 - (6) A mixed-use project that includes one or more of the projects specified in this subdivision.*
 - (7) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.*
- (b) If a public water system has fewer than 5,000 service connections, then “project” means*

any proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of the public water system's existing service connections, or a mixed-use project that would demand an amount of water equivalent to, or greater than, the amount of water required by residential development that would represent an increase of 10 percent or more in the number of the public water system's existing service connections.

The Project is a proposed residential development of more than 500 dwelling units. Therefore, it is considered a "project" under CWC Section 10912.

3.3 Is There a Public Water System to Serve the Project?

CWC Section 10912 states:

- (c) *"Public water system" means a system for the provision of piped water to the public for human consumption that has 3,000 or more service connections. A public water system includes all of the following:*
- (1) Any collection, treatment, storage, and distribution facility under control of the operator of the system which is used primarily in connection with the system.*
 - (2) Any collection or pretreatment storage facility not under the control of the operator that is used primarily in connection with the system.*
 - (3) Any person who treats water on behalf of one or more public water systems for the purpose of rendering it safe for human consumption.*

The Project is located within the City's water service area. Therefore, it can be served by a new City service connection.

3.4 Is There a Current UWMP that Accounts for the Project Demand?

CWC Section 10910 states:

- (c)
- (1) The city or county, at the time it makes the determination required under Section 21080.1 of the Public Resources Code, shall request each public water system identified pursuant to subdivision (b) to determine whether the projected water demand associated with a proposed project was included as part of the most recently adopted urban water management plan adopted pursuant to Part 2.6 (commencing with Section 10610).*
 - (2) If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f), and (g).*
 - (3) If the projected water demand associated with the proposed project was not accounted for in the most recently adopted urban water management plan, or the public water system has no urban water management plan, the water assessment for the project shall include a discussion with regard to whether the public water system's total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection will meet the*

projected water demand associated with the proposed project, in addition to the public water system's existing and planned future uses, including agricultural and manufacturing uses.

- (4) *If the city or county is required to comply with this part pursuant to subdivision (b), the water assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry, and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses.*

The Project area is within the South Bristol Street Focus Area per the 2020 UWMP, the City's most recent update to the 2015 UWMP. As shown in Table 3-4, Buildout Potential of the City the 2040 buildout of the South Bristol Street Focus Area accounts for 5,492 dwelling units and 5,082,641 ft² of nonresidential use. The Project proposes 1,583 residential units and approximately 380,000 ft² of nonresidential uses. Therefore, the City's current 2020 UWMP accounts for the projected water demand associated with the Project.

3.5 Is the Projected Water Supply Sufficient for the Project?

The main question to answer in a WSA under SB 610 is:

Will the water supplier's total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection meet the projected water demand of the proposed project, in addition to the water supplier's existing and planned future uses, including agricultural and manufacturing uses?

Section 6 provides an assessment of City's water supply to see if it can meet the projected water demand associated with the project during normal, single-dry, and multiple-dry water years.

4 WATER DEMAND

4.1 Project Demand

The Project’s water demand includes multi-family residential, commercial, and open space/landscape uses. The Project’s water demand was calculated using demand factors described herein.

To forecast water demand in its 2020 UWMP, the City used the demand forecast methodology described in the *Orange County Water Demand Forecast for MWDOC and OCWD* (Forecast Memorandum) (CDM Smith, 2021). The purpose of the memorandum was to develop a consistent forecast methodology for all retail water agencies within MWDOC and OCWD’s service area, which includes the City. This methodology was used to calculate the Project’s proposed water use.

For residential, a demand factor of 190 gallons per day (gpd)/dwelling unit (DU) was taken the Municipal Water District of Orange County (CDM Smith, 2016). For commercial and other demand categories, the City expects a steady trend with little change to demand since the City is practically at its buildout condition (Arcadis, 2021). For this reason, demand factors other than residential were taken from the City’s *Design Guidelines and Standards Drawings for Water and Sewer Facilities* (City of Santa Ana, 2020). For commercial, a demand factor of 2,500 gpd/ac was used and for open space/landscape areas, a demand factor of 3,000 gpd/ac was used. Demand factors were multiplied by the total DUs or area to calculate the Project’s water demand. The existing water demand is subtracted from the proposed water demand. The calculated Project water demand is presented in **Table 1**.

Table 1. Proposed Water Demand

Land Use	DU	Area (ac)	Demand Factor (gpd/DU, gpd/ac)	Water Demand (gpd)	Water Demand (AFY)
Residential	1,583	-	190	300,770	337
Commercial	-	8.72	2,500	21,800	24
Open Space/ Landscape	-	7.8	3,000	23,400	26
Existing Commercial		17.2	2,500	- 43,000	- 48
			Total	302,970	339

4.1.1 Project Future Water Demand

The projected water demand associated with the Project follows the forecasting methodology described in the City’s 2020 UWMP and the Forecast Memorandum. Multiplying percentages for multi-family, commercial and landscape uses were derived from the data presented in Table 4-3 of the City’s UWMP and multiplied by the Project’s current water demand to achieve the projected water demand. The calculated projected water demand associated with the Project is summarized in **Table 2**.

Table 2. Project Future Water Demand (AFY)

Land Use	2025	2030	2035	2040	2045
Residential	297	291	285	278	278
Commercial	25	28	29	30	30
Open Space/Landscape	26	26	26	26	26
Existing Commercial	- 48	- 48	- 48	- 48	- 48
Total	300	297	292	286	286

4.2 City Demand

The City’s water demand is categorized by sectors and includes residential, commercial, industrial, institutional/governmental, and landscape uses, with the most being residential uses at 66%. Approximately 6% accounts for non-revenue water and other uses. The City’s water use decreased below the 10-year average in the last 5 years as a result of Governor Jerry Brown’s mandate for water conservation in 2014. (Arcadis, 2021). A summary of the City’s current water demand is shown in **Table 3**.

Table 3. City Current Water Demand (2020)

Use Type	Water Volume (AFY)
Single-Family	11,916
Multi-Family	9,872
Commercial	5,364
Industrial	987
Institutional/Governmental	1,788
Landscape	1,349
Losses	1,940
Other	24
Total	33,240

Source: City’s 2020 UWMP.

4.2.1 City Projected Water Demand

The City’s future water use projection is presented in the City’s 2020 UWMP. The City projects the total water demand to increase approximately 1.0% through 2045, increasing by approximately 1.2% between 2020 and 2025, and decreasing by approximately 0.2% from 2025 through 2045. Multi-family residential and commercial uses are projected to increase, while single-family residential use is projected to decrease. Commercial, industrial, and institutional/governmental uses are projected to increase. The City’s future demand projection accounts for passive savings in the future. Passive savings are water savings as a result of codes, standards, ordinances, and public outreach on water conservation and higher efficiency fixtures (Arcadis, 2021). The City’s projected water demand through 2045 is summarized in **Table 4**.

Table 4. City Projected Water Demand (AFY)

Land Use	2025	2030	2035	2040	2045
Single-Family	11,961	11,675	11,390	11,105	11,101
Multi-Family	10,648	10,415	10,211	9,976	9,967
Commercial	5,486	6,155	6,309	6,466	6,466
Industrial	1,009	1,132	1,161	1,190	1,190
Institutional/Governmental	1,828	2,051	2,102	2,155	2,155
Landscape	1,501	1,501	1,501	1,501	1,501
Losses	1,198	1,217	1,207	1,197	1,196
Total	33,633	34,146	33,881	33,589	33,578

Source: City's 2020 UWMP.

5 WATER SUPPLY

5.1 City Supply

CWC Section 10910 states:

- (d)
- (1) *The assessment required by this section shall include an identification of any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, and a description of the quantities of water received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts.*
 - (2) *An identification of existing water supply entitlements, water rights, or water service contracts held by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall be demonstrated by providing information related to all of the following:*
 - (A) *Written contracts or other proof of entitlement to an identified water supply.*
 - (B) *Copies of a capital outlay program for financing the delivery of a water supply that has been adopted by the public water system.*
 - (C) *Federal, state, and local permits for construction of necessary infrastructure associated with delivering the water supply.*
 - (D) *Any necessary regulatory approvals that are required in order to be able to convey or deliver the water supply.*

5.1.1 City Current Water Supply

The City of Santa Ana's Water Resources Division provides potable water service in the project area. The City owns and maintains water infrastructure, including 480 miles of transmission and distribution mains, 10 reservoirs with a storage capacity of 49.3 million gallons, 7 pumping stations, 20 wells, and 7 import water connections. The City's water supply is sourced from a combination of groundwater and purchased imported water. Groundwater, the City's primary source, accounts for 76% of the supply during fiscal year 2019 to 2020. The City draws its groundwater from the Orange County Groundwater Basin (Orange County Basin) (Arcadis, 2021). The Orange County Basin is described in detail in Section 5.2.

Following groundwater supply, any additional demand is met by purchased imported water and recycled water from OCWD, which accounts for the remaining 23% and 1%, respectively, of the City's water supply. The City currently has a purchase agreement with the Metropolitan Water District of Southern California (MWD) to purchase imported water. The purchase agreement, which has a 10-year term, requires the City to purchase a minimum quantity of water annually, as well as a minimum quantity of water over the course of 10 years. In exchange, the City is able to purchase additional water beyond its annual purchase commitment, should the need arise. The City's average annual purchase commitment is 8,086 AFY, while its maximum annual value is 19,617 AFY.

MWD’s primary water supply is sourced from the Colorado River via the Colorado River Aqueduct and the Lake Oroville watershed in Northern California via the State Water Project (SWP). For Orange County, the water obtained from these sources is treated at the Robert B. Diemer Filtration Plant located in the City of Yorba Linda. Supply from the Colorado River is enabled through the Quantification Settlement Agreement and its related agreements. MWD has a basic entitlement of 550,000 AFY of Colorado River water, plus surplus water up to an additional 662,000 AFY when certain conditions exist. Supply from the SWP has a maximum amount, referred to as “Table A” amount, for each water contracting agency. On average, deliveries from the SWP are approximately 60% of the maximum Table A amount (Arcadis, 2021). A summary of the City’s existing water supply in 2020 is provided in **Table 5**.

Table 5. City Current Water Supply (2020)

Water Supply	Supply Source	Water Volume (AFY)
Groundwater	Orange County Basin	25,591
Purchased Imported Water	MWD	7,649
	Total	33,240

Source: City’s 2020 UWMP.

5.1.2 City Projected Water Supply

By 2045, the City plans to increase its groundwater production to 84% of its total water supply, just below the maximum amount of 85%. This maximum amount is set by OCWD and is discussed further in Section 5.2.1. The remaining demand will be met by purchased imported water from MWD and recycled water from OCWD. The City of Santa Ana is one of only three retail member agencies of MWD in Orange County. The main sources of imported water MWD provides to the City include water from northern California delivered via the State Water Project (SWP) and water from the Colorado River Basin delivered via the Colorado River Aqueduct. The City will continue to purchase imported water under its 10-year purchase agreement with MWD. Recycled water is primarily used for parks, medians, and trails, and is available adjacent to the Specific Plan area. The Village has an existing OCWD 2-inch recycled water service on Bear Street, which is part of OCWD’s Green Acres Project and is proposed to remain available for irrigation. OCWD has indicated that no new recycled water services connections are available, however the existing 2-inch service will remain available for the maximum extent possible for irrigation. Any new irrigation connections needed would come from the City’s domestic water system from pipes along the eastern portion of the Village unless in the future, OCWD allows additional recycled metering. Final layout, location, and number of proposed recycled water and irrigation laterals and meters would be developed during the design permitting phase based on the results of final studies and City and County input. The project would use a variety of native trees, drought-tolerant plants, and shrubs to minimize irrigation needs for landscaping. The City’s projected water supply is summarized in **Table 6**.

Table 6. City Projected Water Supply (AFY)

Water Supply	Supply Source	2025	2030	2035	2040	2045
Groundwater	OCWD	28,588	29,024	28,799	28,551	28,541
Purchase Imported Water	MWD	5,045	5,122	5,082	5,038	5,037
Recycled Water	OCWD	249	249	249	249	249
	Total	33,882	34,395	34,130	33,838	33,827

Source: City's 2020 UWMP.

5.2 Groundwater Supply

CWC Section 10910 states:

- (f) *If a water supply for a proposed project includes groundwater, the following additional information shall be included in the water assessment:*
- (1) *A review of any information contained in the urban water management plan relevant to the identified water supply for the proposed project.*
 - (2) *A description of any groundwater basin or basins from which the proposed project will be supplied. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current bulletin of the department that characterizes the condition of the groundwater basin, and a detailed description by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), of the efforts being undertaken in the basin or basins to eliminate the long-term overdraft condition.*
 - (3) *A detailed description and analysis of the amount and location of groundwater pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), for the past five years from any groundwater basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.*
 - (4) *A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), from any basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.*
 - (5) *An analysis of the sufficiency of the groundwater from the basin or basins from which the proposed project will be supplied to meet the projected water demand associated with the proposed project. A water assessment shall not be required*

to include the information required by this paragraph if the public water system determines, as part of the review required by paragraph (1), that the sufficiency of groundwater necessary to meet the initial and projected water demand associated with the project was addressed in the description and analysis required by paragraph (4) of subdivision (b) of Section 10631

5.2.1 Orange County Groundwater Basin

The Orange County Basin is an alluvial basin located in the northwestern portion of Orange County. It covers a surface area of 224,000 and underlies the lower Santa Ana River watershed. The basin is bounded by consolidated rocks in the Puente and Chino Hills to the north, the Santa Ana Mountains to the east, San Joaquin Hills to the south, the Pacific Ocean southwest, and low topographic divide approximated by the Orange County/Los Angeles County line northwest. The total capacity of the basin is 38 million acre feet (MAF). The basin is divided into 3 major aquifer systems including the Upper Aquifer System, the Middle Aquifer System, and the Lower Aquifer System. The Middle Aquifer System provides 90 to 95% of the groundwater for the basin. The Upper Aquifer System provides most of the irrigation water for the basin, while the Lower Aquifer System is not utilized for groundwater production (California Department of Water Resources, 2004).

In 2014, the State of California adopted the Sustainable Groundwater Management Act (SGMA) to help manage its groundwater sustainability and limit adverse groundwater-related effects. SGMA requires all “high” and “medium” priority basins, as designated by DWR, be sustainably managed. The Orange County Basin is classified as a “medium” priority basin by DWR primarily due to heavy reliance on the basin’s groundwater as a source of water supply. Compliance with SGMA can be achieved by either a Groundwater Sustainability Agency (GSA) adopting a Groundwater Sustainability Plan (GSP), or a Special Act District created by statute, such as OCWD, preparing and submitting an Alternative to a GSP. Groundwater management of the basin is led by OCWD and the current Alternative to a GSP was submitted in 2017 (Arcadis, 2021).

The Orange County Basin is not an adjudicated basin. In an adjudicated area, the groundwater rights of all overlying parties and appropriators are determined by the court. Rather, pumping within the basin is managed by offering financial incentives for pumping within limits. The framework for the financial incentives is based on the basin production percentage (BPP). The BPP is the percentage of the producer’s groundwater pumped within the basin to their total water supply. The BPP is set on an annual basis and is determined by OCWD. Agencies that pump above the BPP are charged a rate equivalent to the cost of purchasing imported water. The BPP is set based on groundwater conditions, availability of imported water supplies, and basin management objectives (Arcadis, 2021). The City’s groundwater pumping over the last five years is presented in **Table 7**.

Table 7. City’s Groundwater Pumping Volumes (AFY)

Basin	2016	2017	2018	2019	2020
Orange County Basin	24,722	24,357	21,327	25,505	25,591
Total	24,722	24,357	21,327	25,505	25,591

Source: City’s 2020 UWMP.

6 WATER SUPPLY RELIABILITY

The main question to answer in a WSA is:

Will the water supplier’s total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection meet the projected water demand of the proposed project, in addition to the water supplier’s existing and planned future uses, including agricultural and manufacturing uses?

Water supply reliability reflects the City’s ability to meet the water needs of its customers under varying conditions. The City depends on a combination of imported and local supplies to meet its water demand and has taken numerous steps to ensure it has adequate supplies. The development of local supplies augments the reliability of the water system. The City projects to fully meet its customers’ demands through 2045 due to a diversified supply and conservation measures (Arcadis, 2021).

SB 610 requires the consideration of supply availability under normal, single-dry, and multiple-dry water years. The following sections provide a comparison of normal, single-dry, and multiple dry year demand and supply for the City, including water demand associated with the Project.

6.1 Normal Year Supply and Demand

The demand during a normal water year is based on the Forecast Memorandum and is represented by the average of fiscal year (FY) 2017-18 and FY 2018-19. The City has documented that it has sufficient supply to meet its customers’ needs during normal water years through 2045 (Arcadis, 2021). The City’s current and projected water supply and demand comparison is presented in **Table 8**. Based on the purchase agreement with MWD, the City is contractually able to purchase more water from MWD, well beyond its annual purchase commitment, should the need arise. Even with the maximum amount of water that could be purchased for the Project, the City is still well within the limit.

Table 8. Water Supply and Demand Comparison – Normal Year (AFY)

Supply/Demand	2025	2030	2035	2040	2045
Supply (City)	33,633	34,146	33,881	33,589	33,578
Demand (City)	33,633	34,146	33,881	33,589	33,578
Difference (Supply Minus Demand)	0	0	0	0	0

Note: The City’s water supply includes groundwater (77% to 84% by 2045), purchased imported water (23% to 15% by 2045), and recycled water (1%). The City purchases a minimum quantity of water annually from MWD and is able to purchase additional water beyond its annual purchase commitment should the need arise. Source: City’s 2020 UWMP.

6.2 Single-Dry Year Supply and Demand

The demand during a single-dry water year is based on the Forecast Memorandum and is represented by FY 2013-14, which was the City’s driest year on record. During a single-dry water year, the City estimates that demand will increase 6% above the normal water year. The

City has documented that it has sufficient supply to meet its customers' needs during single-dry water years through 2045 (Arcadis, 2021). The City's current and projected water supply and demand comparison during a single-dry water year is presented in **Table 9**. Based on the purchase agreement with MWD, the City is contractually able to purchase more water from MWD, should the need arise.

Table 9. Water Supply and Demand Comparison – Single-Dry Year (AFY)

Supply/Demand	2025	2030	2035	2040	2045
Supply (City)	35,651	36,195	35,914	35,604	35,793
Demand (City)	35,651	36,195	35,914	35,604	35,793
Difference (Supply Minus Demand)	0	0	0	0	0

Source: City's 2020 UWMP.

6.3 Multiple-Dry Years Supply and Demand

The demand during multiple-dry water years is based on the Forecast Memorandum and is represented by assuming the driest year on record, FY 2013-14, repeats for 5 consecutive years. During multiple-dry water years, the City estimates that demand will increase 6% above the normal water year for 5 consecutive years. The City has documented that it has sufficient supply to meet its customers' needs during multiple-dry water years through 2045 (Arcadis, 2021). The City's current and projected water supply and demand comparison during multiple-dry years is presented in **Table 10**. Based on the purchase agreement with MWD, the City is contractually able to purchase more water from MWD, should the need arise.

Table 10. Water Supply and Demand Comparison – Multiple-Dry Years (AFY)

	Supply/Demand	2025	2030	2035	2040	2045
First Year	Supply (City)	35,581	36,024	36,403	36,116	35,866
	Demand (City)	35,581	36,024	36,403	36,116	35,866
	Difference (Supply Minus Demand)	0	0	0	0	0
Second Year	Supply (City)	35,665	36,133	36,347	36,054	35,864
	Demand (City)	35,665	36,133	36,347	36,054	35,864
	Difference (Supply Minus Demand)	0	0	0	0	0
Third Year	Supply (City)	35,748	36,241	36,290	35,992	35,861
	Demand (City)	35,748	36,241	36,290	35,992	35,861
	Difference (Supply Minus Demand)	0	0	0	0	0
Fourth Year	Supply (City)	35,831	36,350	36,234	35,930	35,859
	Demand (City)	35,831	36,350	36,234	35,930	35,859
	Difference (Supply Minus Demand)	0	0	0	0	0
Fifth Year	Supply (City)	35,915	36,459	36,178	35,868	35,857
	Demand (City)	35,915	36,459	36,178	35,868	35,857
	Difference (Supply Minus Demand)	0	0	0	0	0

Source: City's 2020 UWMP.

7 CONCLUSIONS

This WSA assessed water supplies available to the Project during normal, single-dry, multiple-dry years to see if supplies can meet the projected water demand for the Project, in addition to existing and planned future uses. The City's water supply is sourced mainly from local groundwater from the Lower Santa Ana River Groundwater Basin, also known as the Orange County Groundwater Basin (OC Basin) managed by the Orange County Water District (OCWD), imported water from the Metropolitan Water District of Southern California (Metropolitan), and recycled water from OCWD. The Project will add a projected 339 AFY of water demand in the current year, which is approximately 1% of overall City water demand (339 AFY/33,240 AFY). The Project is located within the City's service area and can be served by new service connections to the City's water system.

The City has sufficient supply to meet the current and projected demand during normal, single-dry, and multiple-dry years. MWD supply is an option for reliability, but additional purchases are not necessarily anticipated through 2045.

8 REFERENCES

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