5.14 WATER

This section analyzes projected impacts to water supplies and distribution systems that may result from the implementation of the proposed amended Duarte Station Specific Plan. The purpose of this analysis is to document and describe the existing water supply, water consumption, and distribution infrastructure in the project vicinity, and to evaluate impacts associated with buildout of the amended Specific Plan. Information for this section is based on the *Draft Water Supply Assessment* (contained in Appendix C2) prepared by Water Systems Consulting, Inc. (WSC 2019) for the project and California American Water's (CAW) *2015 Urban Water Management Plan for the Southern Division–Los Angeles County District* (CAW 2016). The 2015 Urban Water Management Plans (UWMPs) for the Upper San Gabriel Valley Municipal Water District (USGVMWD or Upper District) (Stetson Engineers 2016) and Metropolitan Water District (MWD or Metropolitan) (MWD 2016) were also used for the analysis.

5.14.1 REGULATORY SETTING

STATE

Urban Water Management Plan Act

The Urban Water Management Plan Act was passed in 1983 and codified as *California Water Code* Sections 10610 through 10656. Since its passage in 1983, the Act has been amended on several occasions. The UWMP Act requires "every urban water supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually, to prepare and adopt, in accordance with prescribed requirements, an urban water management plan." Urban water suppliers must file these plans with the California Department of Water Resources every five years, describing and evaluating reasonable and practical efficient water uses, reclamation, and conservation activities. Noncompliant urban water suppliers are ineligible to receive funding pursuant to Division 24 or Division 26 of the California Water Code, or receive drought assistance from the State, until the UWMP is submitted and deemed complete pursuant to the Act.

Water Conservation Act of 2009

Senate Bill X7-7, the Water Conservation Act of 2009 (WCA) creates a framework for future planning and actions by urban (and agricultural) water suppliers to reduce California's water use. The law requires urban water suppliers to reduce statewide per capita water consumption by 20 percent by 2020. Additionally, the State is required to make incremental progress towards this goal by reducing per capita water use by at least 10 percent by 2015. The legislation requires urban water users to develop consistent water use targets and to use those targets in their UWMPs.

Senate Bill 610

Senate Bill 610 (SB 610) requires preparation of a Water Supply Assessment (WSA) for certain projects.[1] The *Water Code* requires that a WSA be prepared for any "project" which would consist of one or more of the following:[2]

[1] Water Code Sections 10910–10915.

- A proposed residential development of more than 500 dwelling units;
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space;
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space;
- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space;
- A mixed-use project that includes one or more of the projects specified above; or
- 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.

The project proposes development of approximately 19.08 acres in Duarte with up to 1,400 residential dwelling units, up to 100,00 square feet of office space, and up to 12,500 square feet of retail/restaurant space. As a result, the combination of uses proposed by the project meets criteria set forth in *Water Code* Section 10912(a)(6) for a mixed-use project. Therefore, a WSA has been prepared for the amended Duarte Station Specific Plan (refer to Appendix C2, Water Supply Assessment).

Senate Bill 221

Senate Bill 221 (SB 221)[3] amended State law to improve the link between information on water supply availability and land use at the tentative map preparation phase of a project. SB 610 and SB 221 are companion measures which seek to:

- Promote more collaborative planning between local water suppliers and cities and counties
- Require that detailed information regarding water availability be provided to city and county decision-makers prior to approval of specific large development projects
- Require that this detailed information be included in the administrative record that serves as the evidentiary basis for an approval action by the city or county on such projects
- Recognize local control and decision making regarding the availability of water for projects and the approval of projects

SB 221 pertains only to residential projects and establishes the relationship between the WSA prepared for a project and the project approval under the Subdivision Map Act.

[2] Water Code Section 10910(b).
[3] Business and Professions Code Section 11010 and Government Code Section 66473.4.

Sustainable Groundwater Management Act (SGMA)

On September 16, 2014, Governor Jerry Brown signed into law a three-bill legislative package composed of Assembly Bill (AB) 1739 (Dickinson), SB 1168 (Pavley), and SB 1319 (Pavley), collectively known as the Sustainable Groundwater Management Act (SGMA) that requires "management and use of groundwater in a manner that can be maintained during the planning and implementation horizon without causing undesirable results."

SGMA requires governments and water agencies of high and medium priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans. For critically over-drafted basins, that will be 2040. For the remaining high and medium priority basins, 2042 is the deadline. SGMA requires local agencies to adopt Groundwater Sustainability Plans (GSPs) for crucial groundwater basins in California.

When water users within a basin are in dispute over legal rights to the water, a court can issue a ruling known as an adjudication. Adjudications can cover an entire basin, a portion of a basin, or a group of basins and all non-basin locations between. The court decree defines the area of adjudication as well as who the extractors (owners) are, how much groundwater those well owners can extract, and identifies a "Watermaster" who will ensure that the basin or portion of the basin is managed in accordance with the court's decree. Under SGMA, the Watermaster must report periodically to the court.

Efficiency Standards

Title 24 of the *California Administrative Code* contains the California Building Standards, including the *California Plumbing Code* (Part 5), which promotes water conservation. Title 20 addresses public utilities and energy and includes appliance efficiency standards that promote water conservation. In addition, a number of State laws listed below require water-efficient plumbing fixtures in structures:

- Title 20, *California Administrative Code* Section 1604(g), establishes efficiency standards that give the maximum flow rate of all new showerheads, lavatory faucets, sink faucets, and tub spout diverters.

- Title 20, *California Administrative Code* Section 1606, prohibits the sale of fixtures that do not comply with established efficiency regulations.

- Title 24, *California Administrative Code* Sections 25352(i) and (j), address pipe insulation requirements, which can reduce water used before hot water reaches equipment or fixtures. Insulation of water-heating systems is also required.

- *Health and Safety Code* Section 17921.3 requires low-flush toilets and urinals in virtually all buildings.

REGIONAL

2015 Urban Water Management Plan for California-American Water's Southern Division – Los Angeles County District

The City of Duarte receives water service from California American Water (CAW). CAW operates three division offices. Duarte is located under the Southern Division, which incorporates the Los Angeles County District. This district consists of Baldwin Hills, Duarte, and San Marino service areas. In compliance with the Urban Water Management Planning Act, CAW prepared the *2015 Urban Water Management Plan for the Southern Division – Los Angeles County District* (*2015 UWMP*) dated June 2016.

CITY OF DUARTE

Duarte Municipal Code

Duarte Municipal Code Chapter 19.40, Landscaping, requires water conservation measures be addressed through landscape and irrigation design. Projects are required to comply with applicable provisions of the Water-Efficient Landscape Worksheet and Landscape Irrigation and Maintenance.

5.14.2 ENVIRONMENTAL SETTING

URBAN WATER MANAGEMENT PLAN

The project site is located within the water service area of the CAW's Los Angeles County District. The Los Angeles County District has three service areas: the Baldwin Hills, Duarte, and San Marino water service areas. The water systems within these three service areas are not interconnected with each other and have independent water supplies (WSC 2019). In 2018, the Los Angeles County District of CAW provided water to approximately 28,112 connections and served a population of approximately 102,759. In 2018, this population represented one percent of the population of Los Angeles County (WSC 2019).

The Duarte water service area encompasses approximately 6,459 acres. The Duarte water service area spans both sides of I-210 immediately west of the I-210/I-605 interchange. The San Gabriel River runs along the eastern border of the Duarte water service area. In 2018, CAW's Duarte water service area provided water to approximately 7,500 connections and 29,500 customers in the cities of Azusa, Bradbury, Duarte, Irwindale, and Monrovia.

According to the Southern California Association of Governments' 2016 growth projections (SCAG 2016), CAW's Duarte water service area is expected to serve a population of 29,625 in 2020 and 32,024 by the year 2040.

Water Sources

CAW obtains its water supply for the Duarte water service area within the Los Angeles County District from: 1) imported water from the Upper San Gabriel Valley Municipal Water District (USGVMWD), 2) groundwater from the Main San Gabriel Basin (MSGB), and 3) surface water from the MSGB obtained from the San Gabriel River. USGVMWD obtains its water supply from

the Metropolitan Water District of Southern California (MWD). The amount of demand not supplied by groundwater allocations is met by purchasing supplemental water from a wholesaler for direct potable use or untreated raw water as replacement water for the groundwater basin due to over-pumping. Untreated raw surface water is used to meet irrigation demands or to replenish the groundwater basin. *Table 5.14-1*, *Duarte System Water Supplies (Acre-Feet Per Year)*, shows the current and projected supplies for the Duarte system (WSC 2019).

Table 5.14-1
Duarte System Water Supplies (Acre-Feet Per Year)

Source	2015	2020	2025	2030	2035	2040
Groundwater - MSGB	2,770	2,622	2,622	2,622	2,622	2,622
Surface Water Recharged to MSGB	1,246	1,672	1,672	1,672	1,672	1,672
Surface Water for Irrigation	426	0	0	0	0	0
Upper District Replacement Water	987	2,805	3,048	3,242	3,450	3,592
Total	**5,429**	**7,099**	**7,342**	**7,536**	**7,744**	**7,886**

Source: WSC 2019 (see Appendix C2)

Groundwater. CAW has adjudicated rights to the MSGB. The MSGB is managed by the MSGB Watermaster. Management includes regulating the amount of water pumped from the Basin for all pumpers while responsibly managing the groundwater supply. MSGB sets limits on surface water allocation from the San Gabriel River. Groundwater producers in the MSGB are allowed to exceed their safe yield allocation, provided they pay an assessed replenishment fee to the MSGB Watermaster. Most years, the MSGB is over pumped because total demand from the various producers, including CAW, exceeds the available safe yield established by the Watermaster. The Watermaster uses the funds generated from the replenishment fees to purchase replacement water from wholesale agencies that have access to imported water. The authorized wholesaler of imported water for CAW's Duarte system is the USGVMWD.

The Duarte water service area is classified as an "integrated producer," which includes an adjudicated right to 1.84634 percent of the operating safe yield (OSY) of the MSGB, which is determined on an annual basis. The MSGB Watermaster's *Five-Year Water Quality and Supply Plan 2018-2019 to 2022-2023* serves as the groundwater management plan for the MSGB (WSC 2019). According to the *Five-Year Water Quality and Supply Plan 2018-2019 to 2022-2023*, in 2019, the OSY of the MSGB is projected as 150,000 acre-feet per year (AFY) (WSC 2019). In 2020, the OSY is projected to be 140,000 AFY, followed by 130,000 AFY in following years. The 10-year average OSY is 142,000 AFY. The Duarte water service area's allocation is calculated as 2,400 AFY starting in 2019.

The amount of water that parties of the MSGB adjudication judgement may extract from the MSGB is not restricted; however, the MSGB judgement provides a means for replacing all annual extractions in excess of a party's annual right with supplemental water (WSC 2019). If a producer extracts water in excess of its portion of the annual OSY, it must pay a replacement water assessment, which is used by the Watermaster to purchase supplemental water through the USGVMWD, as well as the San Gabriel Valley Municipal Water District and Three Valleys Municipal Water District (WSC 2019).

From 2011 to 2018, groundwater has accounted for 86 to 96 percent of total water supply for the Duarte water service area, with the remainder supplied by surface water and imported water (WSC 2019). CAW's active wells serving the Duarte water service area pumped from 5,002 to 6,475 AFY between 2011 and 2018; production averaged 5,778 AFY (WSC 2019). From 2020 to 2040, 7,099 to 7,886 AFY are projected to be pumped for the Duarte water service area (WSC 2019).

Surface Water. CAW has surface water diversion rights from the San Gabriel River that are fixed at an annual allocation of 1,672 AFY (WSC 2019).

Supplemental Water. CAW obtains wholesale water from the USGVMWD, a member agency of the MWD. MWD acquires water from the Colorado River Aqueduct and the California State Water Project (SWP) and distributes treated and untreated water to its member agencies. Untreated water is used for groundwater replenishment. In 2015, the total amount of supplemental water obtained by CAW was 987 AFY. Between 2,805 and 3,592 AFY of supplemental water is projected to be used between 2020 and 2040 (WSC 2019). While imported water has historically been available for parties that exceed their portion of the OSY, drought-mandated cutbacks from the SWP and Colorado River Aqueduct have limited to availability of imported water (WSC 2019).

Future Water Supply Projects/Programs

Other than rehabilitation and replacement of existing infrastructure, there are currently no planned future projects to bring new supply sources to the Duarte water service area.

The USGVMWD, in coordination with MWD, is working to expand its existing recycled water program to include the South El Monte Recycled Water Expansion Project and the La Puente Valley County Water District Recycled Water Project, as well as the Indirect Reuse Replenishment Project (IRRP). The IRRP will replenish the Main San Gabriel Groundwater Basin with up to 10,000 acre-feet annually with highly treated recycled water. The project is currently in the permitting phase. It is anticipated that the IRRP will help the USGVMWD to improve supply reliability within the MSGB.

Opportunities for use of recycled water also exist for the Duarte service area through the County Sanitation Districts of Los Angeles County (LACSD). MWD and LACSD are developing a multi-phased program called the Regional Recycled Water Program to explore the potential of a water purification project to beneficially reuse water currently discharged to the Pacific Ocean for recharge of regional groundwater basins (WSC 2019). The program could generate up to 150 million gallons per day of purified water for groundwater replenishment in several basins, including the MSGB (WSC 2019)

Transfer Opportunities

CAW leases unused portions of other purveyor's allocations in the MSGB when available. Typically, these opportunities are available when other purveyors experience well contamination or other production interruptions. While this supply is available sometimes, it is not considered a reliable source and is not quantifiable as a projected future supply source (WSC 2019).

WATER FACILITIES

According to CAW, 12-inch water mains are located in Evergreen Street and Highland Avenue. A 12-inch water main is also located in Business Center Drive west of Highland Avenue. Smaller diameter lines (4-inch) are located in Denning Avenue and Glenford Avenue; refer to *Exhibit 5.14-1*, *Water Infrastructure Plan*.

The project area is located within the Scott Pressure Zone, which has a hydraulic gradient line (HGL) of 691 feet given the pad elevation of the water reservoir that supplies water to this pressure zone. The HGL at the project area is approximately 684 feet due to pressure losses within the piping distribution system from the reservoir or booster pump station to the project area. The elevations of the site range from 496 to 479 feet. Therefore, pressure ranges between 81 to 88 pounds per square inch (psi).

5.14.3 SIGNIFICANCE THRESHOLD CRITERIA

The issues presented in the Initial Study Environmental Checklist (*CEQA Guidelines* Appendix G) have been utilized as thresholds of significance in this Section. Accordingly, a project may create a significant environmental impact if it causes one or more of the following to occur:

- Require or result in the relocation or construction of new or expanded water facilities, the construction of which would cause significant environmental effects;
- Not have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years;
- Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin; or
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Based on these significance thresholds and criteria, the proposed project's effects have been categorized as either "no impact," a "less than significant impact," or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable impact.

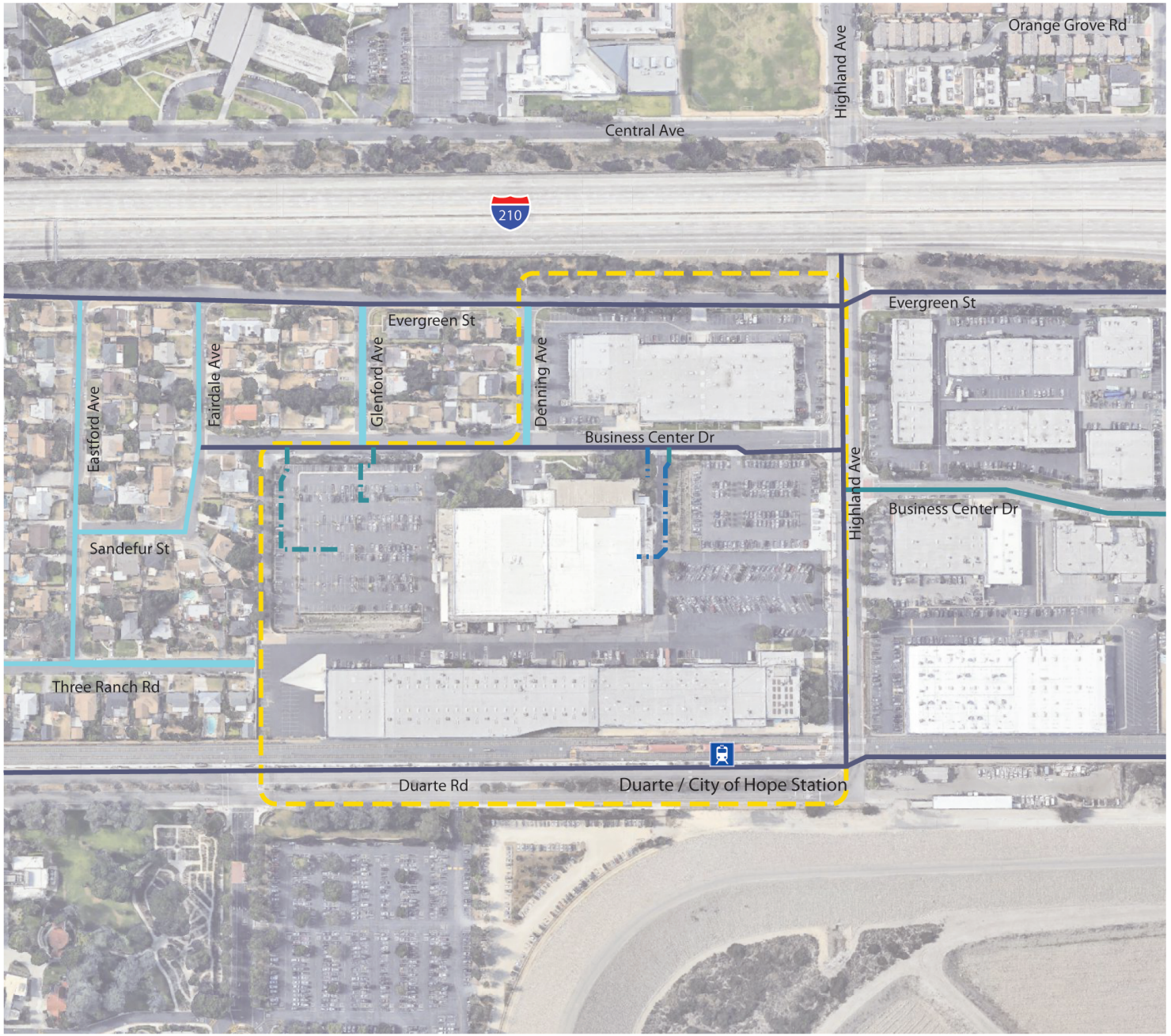

Figure 5.14-1 Water Infrastructure Plan

Duarte Station Specific Plan Subsequent EIR

MIG

5.14.4 PROJECT IMPACTS AND MITIGATION MEASURES

WATER FACILITIES

IMPLEMENTATION OF THE PROPOSED PROJECT COULD REQUIRE OR RESULT IN THE CONSTRUCTION OF NEW WATER FACILITIES OR EXPANSION OF EXISTING FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL EFFECTS.

Impact Analysis: Implementation of the proposed project would result in increased water demand compared to existing conditions and compared with the previously approved Duarte Station Specific Plan, as discussed in more detail below under impacts on water supply.

New proposed water supply infrastructure within the Specific Plan area is anticipated to include water line connections to the existing off-site system, as shown in *Exhibit 5.14-1,* to support The Residences at Duarte Station development.

For future proposed developments in the Specific Plan area, additional site-specific hydraulic analysis would be required to determine water flow capacity and storage requirements to serve the future proposed development (Mitigation Measure WAT-1). For example, the existing pipe within Denning Avenue may require upsizing depending on the usage and fire flow requirements of the adjacent parcel. Private meters and backflow devices would also be required for domestic water service and/or separate fire lines. Current fire regulations require all buildings to be equipped with a fire sprinkler system, including residential homes. Fire flow requirements are based upon building size and building construction type. Future site plans would be required to be reviewed by the Los Angeles County Fire Department to obtain fire flow and storage volume requirements based upon the tenant type, building size, and building type. Once the flows and durations are determined, verification from CAW would be required to ensure adequate pumping or storage capacity is available to achieve the CAW's requirements for individual developments. If fire flow and storage capacity are inadequate, the project applicant would be required to implement additional improvements or pay a fair share in-lieu fee for such improvements (Mitigation Measure WAT-2). Any improvements to flow capacity and storage, however, would be expected to occur in previously disturbed areas and would not be expected to be significant such that they would result in a substantial adverse effect on the environment. Therefore, with implementation of mitigation measures WAT-1 and WAT-2, potential impacts would be reduced to a less than significant level.

As noted above, CAW has issued a can and will serve letter for The Residences at Duarte Station project, shown in Appendix C1. The letter indicates that additional improvements may be required to CAW's water supply infrastructure to provide water service for the project. The last infrastructure capacity study was completed by CAW in 2012. Therefore, an updated capacity study should be prepared by CAW to determine what infrastructure improvements would be required to serve the entire Duarte water service area and should determine fair share costs that should be allocated to each of CAW's constituents for those infrastructure improvements. Mitigation measure WAT-3 requires project applicants for development in the Duarte Station Specific Plan to pay their fair share of in-lieu fees for water supply infrastructure improvements identified in CAW's updated capacity study for the Duarte water service area. With implementation of mitigation measure WAT-3, project impacts on CAW's water supply infrastructure would be less than significant.

Mitigation Measures:

WAT-1 Prior to approval of building permits, individual project applicants shall conduct a hydraulic analysis in coordination with CAW to determine flow capacity, pumping, and storage requirements to provide water service to the proposed development. The project applicant shall implement the improvements or pay a fair share of an in-lieu fee for those improvements in accordance with CAW requirements. Such payment shall be made prior to issuance of occupancy permits.

WAT-2 Prior to approval of building permits, individual project applicants shall submit site plans to the Los Angeles County Fire Department to obtain fire flow and storage volume requirements for the proposed development. The project applicant shall submit the fire flow and storage volume requirements to the CAW to determine if adequate fire flow and storage capacity exists to serve the proposed development. If fire flow and storage capacity is found to be inadequate, the project applicant shall design and bond for necessary improvements prior to the issuance of building permits and complete all necessary improvements or pay a fair share of an in-lieu fee for those improvements prior to issuance of occupancy permits.

WAT-3 Prior to issuance of occupancy permits, individual project applicants shall pay their fair share of an in-lieu fee by CAW to implement water supply infrastructure improvements determined to be necessary in a capacity study for projected buildout within CAW's Duarte water service area.

Level of Significance: Less Than Significant Impact with Mitigation Incorporated.

WATER SUPPLIES

IMPLEMENTATION OF THE PROPOSED PROJECT COULD CREATE DEMAND FOR WATER THAT EXCEEDS AVAILABLE WATER SUPPLIES FROM EXISTING ENTITLEMENTS AND RESOURCES, COULD SUBSTANTIALLY DECREASE GROUNDWATER SUPPLIES OR INTERFERE SUBSTANTIALLY WITH GROUNDWATER RECHARGE SUCH THAT THE PROJECT MAY IMPEDE SUSTAINABLE GROUNDWATER MANAGEMENT OF THE BASIN, OR CONFLICT WITH OR OBSTRUCT IMPLEMENTATION OF A SUSTAINABLE GROUNDWATER MANAGEMENT PLAN

Impact Analysis: In compliance with SB 610 and SB 221, a WSA has been conducted to verify that sufficient water supply is available from the water provider for the Duarte Station Specific Plan area during normal, single dry, and multiple dry years that will meet the project's projected demand, in addition to existing and planned future uses within the service area.

CAW's 2015 UWMP is assumed to account for the 2013 Duarte Station Specific Plan since the plan was in place at the time of UWMP preparation. Projected water demand from buildout of the 2013 Duarte Station Specific Plan was estimated at 236 AFY (WSC 2019).

Implementation of the amended Duarte Station Specific Plan is estimated to result in an increased water demand of 266 AFY compared to existing conditions, which is 30 AFY greater than originally projected under the 2013 Duarte Station Specific Plan. *Table 5.14-2*, *Estimated Project Water Demand*, quantifies the proposed project's estimated water demand. As indicated

in *Table 5.14-2*, the proposed project is anticipated to demand 237,725 gallons per day (gpd) or 266 AFY, or 30 AFY more than the current approved Duarte Station Specific Plan.

Table 5.14-2
Estimated Project Water Demand

Use	Building (SF)	Dwelling Units	Factor	GPD	AFY
Proposed Project					
Retail/Restaurant	12,500		642 gpd/ksf	8,025	8.99
Office	100,000		113 gpd/ksf	11,300	12.66
Residential		1,400	156 gpd/unit	218,400	244.64
Proposed Total				***237,725***	***266.29***

Notes:
gpd gallons per day
ksf thousand square feet

As shown in Table 5.14-1, *Duarte System Water Supplies*, above, the water supply needs for CAW's Duarte water service area required 5,429 AF in 2015 and are projected to increase to 7,099 AF in 2020, 7,342 AF in 2025, and 7,886 AF in 2040, or increase by 2,457 AF by 2040. The estimated annual demand of the proposed project is 266 AFY, which represents between 3.4 and 3.7 percent of the projected water supply for the Duarte water service area after the year 2020.

Water Supply Reliability During Normal, Single Dry, and Multiple Dry Years

Primary factors that affect water supply reliability of the Los Angeles County District include legal, environmental, water quality, and climatic factors. The legal factors affecting supply include groundwater adjudications and replacement water purchases for excess pumping. Environmental factors related to wholesale supply reliability are reduced deliveries of water from the SWP due to reduced pumping in the Sacramento Delta. Water quality factors influence groundwater production capacity and efficiency, and supplies are always subject to reduction given climatic factors.

The water supply availability in the Duarte water service area was calculated for an average water year based upon historical and projected production between 2014-2023. Drought conditions from 2013 through 2015 reduced the OSY in the MSGB to the lowest it has been since 1973/1974 (WSC 2019). Therefore, production in 2013/2014 was used to calculate a projected single dry year, and production from 2011-2014 was used to calculate a projected water supply for multiple dry years (WSC 2019).

The MSGB has legal factors affecting its reliability due to its adjudication and pumpers excessively pumping requiring replacement water purchases. Some areas of the MSGB have water quality issues limiting production. However, the Duarte system has treated groundwater supplies and thus is not affected by groundwater quality. Climatic factors, such as drought, may reduce available groundwater supplies. In turn, the USGVMWD, as wholesaler, faces the same legal limits as the basin pumpers. As an ultimate user of MWD imported water, the Duarte system can sustain reduced imported water supplies. Climatic factors, such as extended regional drought conditions, may also limit USGVMWD's ability to deliver imported water to the Duarte service area.

Table 5.14-3, *Los Angeles County District Supply Reliability – Duarte Service Area*, shows the Duarte service area's supply reliability in an average, single dry year, and multiple dry years.

Table 5.14-3
Los Angeles County District Supply Reliability – Duarte Service Area

Water Supply Sources	Average/ Normal Water Year	Single Dry Water Year (2021)	Multiple Dry Water Years		
			Year 1 (2021)	Year 2 (2022)	Year 3 (2023)
MSGB[1]	2,668	2,400	2,400	2,400	2,400
Surface Water Recharged to MSGB	1,672	1,672	1,672	1,672	1,672
Surface Water for Irrigation	0	0	0	0	0
Upper District Replacement Water[2]	2,117	2,474	2,474	3,027	3,114
Total Water Supply	*6,457*	*6,546*	*6,546*	*7,099*	*7,186*
% of Normal	100%	101%	101%	110%	111%

Source: WSC 2019
Notes:
[1]The multiple dry years are based on projected safe yield for 2021, 2022, and 2023. The single dry year is based on the 1.84634% of the 2021 MSGB safe yield and the average year is based on 1.84634% of the 2014-2023 MSGB safe yield.
[2]It is assumed that all demand not met by the allocations in the MSGB will be met by purchasing replacement water from the Upper District.

Table 5.14-4, *USGVMWD Wholesale Supply Reliability*, shows the USGVMWD wholesale water supply reliability over a single dry and multiple dry years according to the USGVMWD's UWMP (Stetson Engineers 2016).

Table 5.14-4
USGVMWD Wholesale Water Supply Reliability

Water Supply Sources	2020	2025	2030	2035	2040
Supply totals (AFY)	73,121	72,933	72,440	72,683	72,675
Demand totals (AFY)	63,121	62,933	62,444	62,683	62,675
Difference (AFY)	10,000	10,000	10,000	10,000	10,000
Source: WSP 2019					

In response to multiple group affiliations, statutory requirements, and concern for the region's water supply sustainability, CAW employs multiple tactics to conserve water and reduce groundwater production. The major tactics currently being implemented by CAW include: 1) metering, 2) tiered water rates, 3) plumbing retrofits, 4) public education, 5) large landscape conservation incentives, 6) high-efficiency washing machine rebates, 7) high-efficiency toilet replacement rebates, and 8) implementation of California Urban Water Conservation Council Best Management Practices (BMPs). All of these tactics are currently being implemented or are in the process of being implemented in the near future.

Additionally, the MSGB Watermaster and USGVMWD have multiple ongoing initiatives designed to manage and enhance supply reliability to continue to provide sufficient supply even in dry years. Based on the USGVMWD's 2015 UWMP and the following supply reliability

management plans and actions, it is anticipated that MSGB replacement water will be available from USGVMWD to meet CAW's total projected demands.

The following ongoing water management actions are identified in the MSGB's Annual Report (WSC 2019):

- Establish financial incentives to encourage pre-purchase of supplemental water.
- Proactively purchase replacement water through a cyclic storage mechanism identified in the MSGB judgment.
- Implement the Water Resource Development Assessment by levying a $20 per acre-foot assessment on all production beginning in 2014-15; funds will then be available to purchase supplemental water to store for future shortages, reaching a planned 100,000 acre-feet of imported water in storage over 10 years.
- Increase flexibility for an in-lieu assessment of $10 an acre-foot on all water produced commensurate with groundwater levels. This program pays a water producer the difference in cost to purchase treated surface water in-lieu of purchasing untreated imported water for Basin replenishment after over pumping in order to keep water in groundwater storage.
- Continue coordination on flood control to plan stormwater capture projects.

The following ongoing water management actions are identified in the USGVMWD's 2015 UWMP (WSC 2019):

- Implement the USGVMWD's Water Use Efficiency Plan (WUE Plan) to provide adaptive strategies to meet water demand, reliability, and efficiency goals.
- Implement the Integrated Resources Plan (IRP) to incorporate and enhance demand and supply reliability analyses from the 2010 UWMP and WUE Plan. The IRP also includes an adaptive management strategy that involves implementation of a suite of projects, such as direct and indirect recycled water reuse, stormwater capture, water transfers, and conservation measures, that can be phased over time.
- Develop and implement recycled water programs such as those programs discussed above.

According to their 2015 UWMP, USGVMWD will meet projected water demands under all anticipated hydrologic conditions in the Duarte service area (WSC 2019; Stetson Engineers 2016). Under their 2015 UWMP, MWD also plans on 100 percent supply reliability to USGVMWD, providing the same supply reliability to the Los Angeles County District Duarte service area (WSC 2019, MWD 2016). During single-dry and multiple-dry years, USGVMWD MSGB Replacement purchases are expected to increase to use more imported water to make up for the decrease in local supplies. Metropolitan, USGVMWD, and the MSGB Watermaster have implemented, and will continue to implement, projects to ensure that imported water and groundwater demands can be met under normal, single-dry year, and multiple-dry years (WSC 2019, MWD 2016, Stetson Engineers 2016).

The water demand under the proposed project comprises 3.4 to 3.7 percent of the projected water supply of the Duarte water service area, and 3.7 to 4.1 percent of the water supply over an average year, single dry year, and multiple dry years (see Tables 5.14-1 and 5.14-3). Therefore, the WSA concludes that CAW has sufficient water supply now and through 2040 for the proposed project, based upon the following assessments and conclusions:

- CAW has been identified as the public water supplier for the proposed project.

- The proposed amended Duarte Station Specific Plan is not specifically identified in the 2015 UWMP; however, the original 2013 Duarte Station Specific Plan is and the estimated increased water demand of 30 AFY under the amended Duarte Station Specific Plan is planned to be met through additional imported water and increased groundwater extraction.

- The estimated average annual water demand of the proposed project is approximately 266 AFY, which is equivalent to approximately 3.7 to 4.1 percent of the expected water supply for the Duarte service area through Year 2040 over an average year, single dry year, and multiple dry years.

- In general, CAW's supply is expected to be 100 percent reliable through 2040. MWD plans on 100 percent supply reliability to USGVMWD as a result of initiatives MWD has undertaken in recent years on behalf of its member agencies.

- The MSGB Watermaster continues to coordinate and manage the Main San Gabriel Basin to provide adequate groundwater supply to meet individual and cumulative development within respective service areas and demonstrate a shared responsibility to maintaining groundwater basin balance.

In conclusion, CAW has sufficient supply now and those supplies would be available for the proposed project through 2040; resulting in less than significant impacts.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

5.14.5 CUMULATIVE IMPACTS AND MITIGATION MEASURES

DEVELOPMENT ASSOCIATED WITH THE PROPOSED PROJECT AND OTHER RELATED CUMULATIVE PROJECTS COULD RESULT IN CUMULATIVELY CONSIDERABLE IMPACTS TO WATER SUPPLIES AND FACILITIES.

Impact Analysis: Increased water demand associated with the proposed project and other related cumulative projects could result in significant cumulative impacts to water supplies and facilities.

As discussed above, implementation of the proposed project would likely require new water service facilities to serve the proposed development. Mitigation has been identified that would reduce these impacts to a less than significant level. The proposed project and cumulative projects would be reviewed on a project-by-project basis to determine if adequate facilities are available within the area to serve the proposed development. Individual development projects would be required to make necessary improvements or make a fair share contribution toward the improvements prior to development. Therefore, cumulative impacts to water facilities would be less than significant in this regard.

Development of the proposed project could result in impacts to fire flow and water storage. Mitigation has been identified that would reduce these impacts to a less than significant level.

The proposed project and cumulative projects served by the Los Angeles County Fire Department would be reviewed on a project-by-project basis to determine the fire flow and storage capacity requirements of the proposed development. Individual development projects would be required to make necessary improvements or make a fair share contribution toward the improvements prior to development. Therefore, cumulative impacts to fire flow and storage capacity would be less than significant in this regard.

CAW's 2015 UWMP assesses water supply taking into consideration groundwater, imported, and surface water supplies. The water supply needs for CAW's Duarte service area required 5,429 AF in 2015 and are projected to increase to 7,099 AF in 2020, 7,342 AF in 2025, and 7,886 AF in 2040, or increase by 2,457 AF by 2040. The estimated annual demand of the proposed project is 266 AFY, which represents approximately 10.8 percent of this total growth.

Future development projects in Duarte and the surrounding cities would be evaluated by the applicable City and CAW on a project-by-project basis to determine impacts to water supplies and infrastructure. The continued assessment of individual projects for impacts to the water supply system would assure projects would only be approved if adequate water supplies exist at the time of their implementation. New development would be required to pay its share of the costs of infrastructure improvements necessary to accommodate the project. CAW would need to ensure their water reclamation facilities and pipeline infrastructure are planned and installed according to their UWMP projections. Additionally, coordination between the cities and CAW would be essential as further development is planned. Therefore, implementation of the proposed project would not result in cumulatively considerable water supply impacts.

Mitigation Measures: Refer to Mitigation Measures WAT-1, WAT-2, and WAT-3. No additional mitigation measures are required.

Level of Significance: Less Than Significant Impact with Mitigation Incorporated.

5.14.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Implementation of the proposed project would result in less than significant project and cumulative impacts related to water demand and facilities, and water supply. As such, no significant unavoidable impacts would result from implementation of the Duarte Station Specific Plan.

5.14.7 SOURCES CITED

California-American Water (CAW), 2016, 2015 Urban Water Management Plan for the Southern Division – Los Angeles County District, June.

Metropolitan Water District of Southern California (MWD), 2016, *2015 Urban Water Management Plan, Draft*. March.

Southern California Association of Governments (SCAG), 2016, Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), Demographics and Growth Forecast Appendix.

Stetson Engineers, Inc. (Stetson Engineers), 2016, *Upper San Gabriel Valley Municipal Water District 2015 Urban Water Management Plan*, June.

Water Systems Consulting, Inc. (WSC), 2019, *Draft Water Supply Assessment for the Duarte Station Specific Plan*, August 13.