IV. Environmental Impact Analysis

K.1 Utilities and Service Systems—Water Supply and Infrastructure

1. Introduction

This section of the Draft EIR provides an analysis of the Project's potential impacts to water supply and the water infrastructure system serving the Project Site. The analysis includes a description of regional water supplies and the existing water infrastructure serving the Project Site, estimates the water demand associated with the Project, and assesses whether there is sufficient water supply and infrastructure capacity to meet that demand. This analysis is based on the Water Supply Assessment (WSA) prepared for the Project by the Los Angeles Department of Water and Power (LADWP) and adopted by LADWP's Board of Water and Power Commissioners on February 26, 2019 and the *Onni Violet Street Project Utility Infrastructure Technical Report: Water, Wastewater, and Energy* (Utility Report), prepared for the Project by KPFF Consulting Engineers, February 27, 2018, included as Appendices P and E of this Draft EIR, respectively.

2. Environmental Setting

a. Regulatory Framework

(1) State

(a) California Urban Water Management Plan Act (California Water Code Sections 10610–10656)

The California Urban Water Management Planning Act (California Water Code, Sections 10610–10656) addresses several state policies regarding water conservation and development of water management plans to ensure that adequate supplies are available to meet existing and future demands. The California Urban Water Management Planning Act also requires water suppliers to develop water management plans every five years to identify short-term and long-term demand management measures to meet growing water demands during normal, single-dry, and multiple-dry years. Specifically, municipal water

suppliers that serve more than 3,000 customers or provide more than 3,000 acre-feet per year (AFY) of water must adopt an urban water management plan every five years.[1]

A number of recent requirements regarding preparation water management plans have been added to the Urban Water Management Planning Act. These additional requirements include: (i) a narrative description of water demand measures implemented over the past five years and future measures planned to meet 20 percent demand reduction targets by 2020; (ii) a standard methodology for calculating system water loss; (iii) a voluntary reporting of passive conservation savings, energy intensity, and climate change; and (iv) an analysis of water features that are artificially supplied with water.[2]

(b) Senate Bill X7-7 (California Water Code Section 10608)

Senate Bill (SB) X7-7 (Water Conservation Act of 2009), codified in California Water Code, Section 10608, requires all water suppliers to increase water use efficiency. Enacted in 2009, this legislation includes the setting of an overall goal of reducing per capita urban water use, compared to 2009 levels, by 20 percent by December 31, 2020. The state was required to make incremental progress towards this goal by reducing per capita water use by at least 10 percent on or before December 31, 2015. Monthly statewide potable water savings reached 7.8 percent in November 2018 as compared to production in November 2013.[3]

(c) Senate Bill 610 (California Water Code Sections 10910 et seq.)

SB 610, codified in the California Water Code Sections 10910 *et seq*., became effective January 1, 2002. SB 610 requires counties and cities to consider the availability of adequate water supplies for certain new large development projects as part of the California Environmental Quality Act (CEQA) process. Specifically, SB 610 requires that for certain projects subject to CEQA, the urban water supplier must prepare a WSA that determines whether the projected water demand associated with a project is included as part of the most recently adopted urban water management plan. The WSA shall identify existing water supply entitlements, water rights, or water service contracts held by the public water system, and prior years' water deliveries received by the public water system. In addition, it must address water supplies over a 20-year future period and consider average, single-dry, and multiple-dry years. In accordance with Water Code Section 10912, projects subject to CEQA requiring preparation of a WSA include the following:

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[1] *LADWP, 2015 Urban Water Management Plan, April 2016.*

[2] *LADWP, Water Supply Assessment—2143 Violet Street Project, February 26, 2019.*

[3] *SWRCB, Fact Sheet, November 2018 Statewide Conservation Data, updated January 8, 2019.*

- Residential developments of more than 500 dwelling units;
- Shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space;
- Commercial office buildings employing more than 1,000 persons or having more than 250,000 square feet of floor space;
- Hotels, motels, or both, having more than 500 rooms;
- Industrial, manufacturing, or processing plant, or industrial park of more than 40 acres of land, more than 650,000 square feet of floor area, or employing more than 1,000 persons;
- Mixed-use projects that include one or more of the above-identified categories; 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 WSA must be approved by the public water system at a regular or special meeting and must be incorporated into the CEQA document. The lead agency must then make certain findings related to water supply based on the WSA.

As described in Section II, Project Description, of this Draft EIR, the Project would include approximately 569,448 square feet of floor area, consisting of 347 new live-work units, approximately 187,374 square feet of new office space, 21,858 square feet of new retail/restaurant floor area, and a 926 square-foot community room that residents could use for art creation. Based on the proposed uses, the Project is anticipated to demand an amount of water equivalent to or greater than the amount of water required by a 500-dwelling unit project. Therefore, a WSA was required for the Project. The approved WSA and associated technical documents are provided in Appendix P of this Draft EIR.

(d) Senate Bill 606 and Assembly Bill 1668

On May 31, 2018, Governor Edmund G. "Jerry" Brown (Governor Brown) signed SB 606 and Assembly Bill (AB) 1668 into law.[4] The pair of bills sets permanent overall targets for indoor and outdoor water consumption. The bills set an initial limit for indoor water use of 55 gallons per person per day in 2022, dropping to 50 gallons per person per day by 2030. The Department of Water Resources (DWR) and the State Water Resources Control Board (SWRCB) will recommend standards for outdoor use by October 2021.

[4] *Office of Edmund G. Brown, Jr., "Governor Brown Signs Legislation Establishing Statewide Water Efficiency Goals," May 31, 2018.*

(d) California Plumbing Code

Title 24, Part 5 of the California Code of Regulations (CCR), establishes the California Plumbing Code. The California Plumbing Code sets forth efficiency standards (i.e., maximum flow rates) for all new federally regulated plumbing fittings and fixtures, including showerheads and lavatory faucets. The 2019 California Plumbing Code, which is based on the 2018 Uniform Plumbing Code, has been published by the California Building Standards Commission and went into effect on January 1, 2020.

(e) Sustainable Groundwater Management Act of 2014

The Sustainable Groundwater Management Act of 2014,[5,6] passed in September 2014, is a comprehensive three-bill package that provides a framework for the sustainable management of groundwater supplies by local authorities. The Sustainable Groundwater Management Act requires the formation of local groundwater sustainability agencies to assess local water basin conditions and adopt locally based management plans. Local groundwater sustainability agencies were required to be formed by June 30, 2017. The Sustainable Groundwater Management Act provides 20 years for groundwater sustainability agencies to implement plans and achieve long-term groundwater sustainability, and protect existing surface water and groundwater rights. The Sustainable Groundwater Management Act provides local groundwater sustainability agencies with the authority to require registration of groundwater wells, measure and manage extractions, require reports and assess fees, and request revisions of basin boundaries, including establishing new subbasins. As of March 2020, no groundwater sustainability agency has been formed for the Coastal Plain of Los Angeles Groundwater Basin, which includes the Project Site.[7]

As required by the Sustainable Groundwater Management Act, in December 2016, DWR published on its website the best management practices (BMPs) for sustainably managing groundwater.[8] Furthermore, under Section 10720.7 of the Sustainable Groundwater Management Act, groundwater sustainability agencies responsible for

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[5] *Sustainable Groundwater Management Act [And Related Statutory Provisions from SB 1168 (Pavley), AB 1739 (Dickinson), and SB 1319 (Pavley) as Chaptered], 2015 Amendments, effective January 1, 2016.*

[6] *California Department of Water Resources, SGM Sustainable Groundwater Management, www.water.ca.gov/Programs/Groundwater-Management/SGMA-Groundwater-Management, accessed March 18, 2020.*

[7] *California Department of Water Resources, SGMA Portal, All Posted GSA Notices, https://sgma.water.ca.gov/portal/gsa/all, accessed March 18, 2020.*

[8] *California Department of Water Resources, Best Management Practices, https://water.ca.gov/Programs/Groundwater-Management/SGMA-Groundwater-Management/Best-Management-Practices-and-Guidance-Documents, accessed March 18, 2020.*

high- and medium-priority basins must adopt groundwater sustainability plans by January 31, 2020 or January 31, 2022, depending on whether the basin is in critical overdraft.

(f) Article 22.5 Drought Emergency Water Conservation, California Code of Regulations (Emergency Declaration and Executive Orders)

In response to California's drought conditions, Governor Brown issued numerous Executive Orders regarding water conservation. Executive Order B-37-16, which was issued in May 2016, extended the mandatory water reduction measures outlined in a previous Executive Order B-29-15 and further directed DWR and the SWRCB to develop long term efficiency targets that go beyond the 20-percent reductions mandated by SB X7-7, discussed above. The executive order also established longer-term water conservation measures that include permanent monthly water use reporting, new urban water use targets, reducing system leaks and eliminating wasteful practices, strengthening urban drought contingency plans, and improving agricultural water management and drought plans.

On November 30, 2016, State agencies, including the SWRCB released a public draft of *Making Water Conservation A California Way of Life*, which addresses elements of Executive Order B-37-16 that require State agencies to develop a framework for using water more wisely, eliminating water waste, strengthening local drought resilience, and improving agricultural water use efficiency and drought planning.[9]

Due to improved hydrologic conditions statewide, on April 7, 2017, Governor Brown issued Executive Order B-40-17 lifting the drought emergency in all but four California counties.[10] Executive Order B-40-17 also rescinds the Drought Emergency Proclamations issued in January and April 2014, as well as four drought-related Executive Orders issued in 2014 and 2015. However, Executive Order B-40-17 also directs the SWRCB to maintain urban water use reporting requirements and prohibitions on wasteful practices. Water agencies will continue to strengthen drought readiness and water use efficiency.[11] The regulatory requirements resulting from the existing Executive Orders have been codified in Article 22.5, Drought Emergency Water Conservation, of the CCR.

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[9] *California State Water Resources Control Board, Water Conservation Portal—Emergency Conservation Regulation, State Plan Seeks to Make Water Conservation A Way of Life, November 30, 2016.*

[10] *The Counties of Fresno, Kings, Tulare, and Tuolumne remain under a drought state of emergency, per Executive Order B-40-17*

[11] *Governor Brown Lifts Drought Emergency, Retains Prohibition on Wasteful Practices, Executive Order B-40-17.*

(g) California Water Plan

The California Water Plan, updated every five years, presents the status and trends of California's water-dependent natural resources; water supplies; and agricultural, urban, and environmental water demands for a range of plausible future scenarios. The Water Plan also evaluates different combinations of regional and statewide resource management strategies to reduce water demand, increase water supply, reduce flood risk, improve water quality, and enhance environmental and resource stewardship. The evaluations and assessments performed for the plan help identify effective actions and policies for meeting California's resource management objectives in the near term and for several decades to come. California Water Plan Update 2018 represents the latest update to the Water Plan.

(h) California Water Action Plan

The first California Water Action Plan (Action Plan) was published in January 2014 to provide a roadmap for the State's path toward sustainable water management.[12] The Action Plan discusses the challenges for managing the State's water resources supply, scarcity, and quality, and also considers the effects of ecosystems, flooding, population growth, and climate change and floods. The following ten actions were presented:[13]

1. Make conservation a California way of life;
2. Increase regional self-reliance and integrated water management across all levels of government;
3. Achieve the co-equal goals for the Delta;
4. Protect and restore important ecosystems;
5. Manage and prepare for dry periods;
6. Expand water storage capacity and improve groundwater management;
7. Provide safe water for all communities;
8. Increase flood protection;
9. Increase operational and regulatory efficiency; and

[12] *California Department of Natural Resources, California Water Action Plan Implementation Report, 2014–2018 Summary of Accomplishments, January 2019.*

[13] *California Department of Natural Resources, California Water Action Plan Implementation Report, 2014–2018 Summary of Accomplishments, January 2019.*

10. Identify sustainable and integrated financing opportunities.

In complementing local efforts, the Action Plan emphasizes collaboration between different levels of government, water agencies, conservationists, tribes, farmers, and other stakeholders. Since the Action Plan Update for 2016 was released, its implementation progress has also been documented with focuses on policy, funding, and coordinated projects. The Action Plan will continue to be implemented simultaneously with the California Water Plan Update 2018.

(2) Regional

As discussed in detail below, the Metropolitan Water District of Southern California (MWD) is a primary source of water supply within Southern California. Based on the water supply planning requirements imposed on its member agencies and ultimate customers, MWD has adopted a series of official reports on the state of its water supplies. As described in further detail below, in response to recent developments in the Sacramento Delta, MWD has developed plans intended to provide solutions that, when combined with the rest of its supply portfolio, will ensure a reliable long-term water supply for its member agencies, including the LADWP.

(a) MWD's Integrated Water Resources Plan

MWD first adopted its Integrated Water Resources Plan (IRP) in 1996. The IRP is updated every five years. The goal of the IRP is for Southern California to have a reliable water system that extends to the future. The 2015 IRP Update, adopted in January 2016, provides MWD's strategy for water resource reliability through the year 2040. The 2015 IRP Update calls for stabilizing and maintaining imported water supplies, meeting future growth through increased water conservation and sustaining and developing new local supplies, pursuing a comprehensive transfers and exchanges strategy, building storage in wet and normal years to manage risks and drought, and preparing for uncertainty with Future Supply Actions. Overall, the strategies presented in the 2015 IRP Update include investments to maintain the reliability of imported water supplies, expansion of local water supplies, and reduction in water demand through a variety of conservation and water use efficiency initiatives.[14]

[14] *Metropolitan Water District of Southern California, Integrated Water Resources Plan Draft 2015 Update, January 12, 2016.*

(b) MWD's 2015 Regional Urban Water Management Plan

MWD's 2015 Urban Water Management Plan (UWMP) addresses the future of MWD's water supplies and demand through the year 2040.[15] Based on its 2015 UWMP, MWD has supply capabilities that would be sufficient to meet expected demands from 2020 through 2040 under single dry-year and multiple dry-year hydrologic conditions. MWD has comprehensive plans for stages of actions it would undertake to address up to a 50-percent reduction in its water supplies and a catastrophic interruption in water supplies through its Water Surplus and Drought Management and Water Supply Allocation Plans. MWD has also developed an Emergency Storage Requirement to mitigate against potential interruption in water supplies resulting from catastrophic occurrences within the Southern California region and is working with the State to implement a comprehensive improvement plan to address catastrophic occurrences that could occur outside of the Southern California region. MWD is also working with the State on the Delta Risk Management Strategy to reduce the impacts of a seismic event in the Delta that would cause levee failure and disruption of State Water Project deliveries. In addition, MWD has plans for supply implementation and continued development of a diversified resource mix including programs in the Colorado River Aqueduct, State Water Project (SWP), Central Valley transfers, local resource projects, and in-region storage that enables the region to meet its water supply needs. As set forth in its 2015 UWMP, MWD will also continue investments in water use efficiency measures to help the region achieve a 20-percent-per-person potable water use reduction by 2020.

(c) MWD's Water Surplus and Drought Management Plan

In 1999, MWD incorporated the water shortage contingency analysis that is required as part of any urban water management plan into a separate, more detailed plan, called the Water Surplus and Drought Management Plan. The overall objective of the Water Surplus and Drought Management Plan is to ensure that shortage allocation of MWD's imported water supplies is not required.[16] The Water Surplus and Drought Management Plan provides policy guidance to manage MWD's supplies and achieve the goals laid out in the agency's IRP. The Water Surplus and Drought Management Plan separates resource actions into two major categories: Surplus Actions and Shortage Actions. The Water Surplus and Drought Management Plan considers the region to be in surplus only after MWD has met all demands for water, including replenishment deliveries. The Surplus Actions store surplus water, first inside and then outside of the region. The Shortage Actions of the Water Surplus and Drought Management Plan are separated into three subcategories: Shortage, Severe Shortage, and Extreme Shortage. Each category has

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[15] *Metropolitan Water District of Southern California, 2015 Urban Water Management Plan, June 2016.*

[16] *Metropolitan Water District of Southern California, Water Surplus and Drought Management Plan: Report No. 1150, August, 1999.*

associated actions that could be taken as a part of the response to prevailing shortage conditions. Conservation and water efficiency programs are part of MWD's resource management strategy through all categories.

(d) MWD's Water Supply Allocation Plan

While the Water Surplus and Drought Management Plan included a set of general actions and considerations for MWD staff to address during shortage conditions, it did not include a detailed water supply allocation plan or implementation approach. Therefore, MWD adopted a water supply plan called the Water Supply Allocation Plan in February 2008, which has since been implemented three times, most recently in April 2015. The Water Supply Allocation Plan includes a formula for determining reductions of water deliveries to member agencies during extreme water shortages in MWD's service area conditions (i.e., drought conditions or unforeseen cuts in water supplies). The formula allocates shortages of MWD supplies and seeks to balance the impacts of a shortage at the retail level while maintaining equity on the wholesale level, and takes into account growth, local investments, changes in supply conditions and the demand hardening aspects of non-potable recycled water use and the implementation of conservation savings programs. The allocation period covers 12 consecutive months from July of a given year through the following June.

(3) Local

(a) Los Angeles Department of Water and Power's 2015 Urban Water Management Plan

In June 2016, LADWP adopted its 2015 Urban Water Management Plan (2015 LADWP UWMP), which addresses the future of LADWP's water supplies and demand through the year 2040. The 2015 LADWP UWMP serves two purposes: (i) achieve full compliance with the requirements of California's Urban Water Management Planning Act (described above); and (ii) serve as a master plan for water supply and resource management consistent with the City's goals and objectives.[17]

A number of important changes have occurred since the LADWP prepared its 2010 UWMP. The year 2012 marked the start of a multi-year drought in California, in response to which Governor Brown proclaimed a drought state of emergency in January 2014. In addition, as discussed above, in 2014, the SWRCB implemented its Drought Emergency Water Conservation Regulation, which mandates 25-percent reductions in water use statewide. In October 2014, City of Los Angeles Mayor Eric Garcetti (Mayor Garcetti)

[17] *LADWP, Water Supply Assessment—2143 Violet Street Project, February 26, 2019.*

issued Executive Directive No. 5 (ED 5), which set goals to reduce per capita water use, reduce purchases of imported potable water by 50 percent, and create an integrated water strategy to increase local supplies and improve water security considering climate change and seismic vulnerability. In addition, in April 2015, Mayor Garcetti's Sustainable City pLAn (discussed below) was released, establishing targets for the City over the next 20 years to strengthen and promote sustainability. The 2015 LADWP UWMP incorporates the objectives of these recent initiatives. Overall, the 2015 LADWP UWMP projects a 7-percent lower water demand trend than what was projected in LADWP's previous 2010 UWMP.[18] On February 2, 2017, Mayor Garcetti announced that the City's 20-percent water reduction target had been met.[19]

(b) Sustainable City pLAn/L.A.'s Green New Deal

In April 2015, Mayor Garcetti released the City's first Sustainable City pLAn (pLAn), a directive to address challenges of the environment, economy, and equity in the City of Los Angeles. Among its different focuses, the pLAn included a multi-faceted approach to developing a locally sustainable water supply to reduce reliance on imported water, reducing water use through conservation, and increasing local water supply and availability. The pLAn built on ED 5's goals and incorporates water savings goals of reduction in per capita potable water by 20 percent by 2017, by 22.5 percent by 2025, and by 25 percent by 2035, using a 2014 baseline of 131 gallons per capita per day. The pLAn also included targets to continue the remediation of the San Fernando Groundwater Basin aquifer, to reduce LADWP purchases of imported water by 50 percent by 2025, and to source 50 percent of water locally by 2035. As the pLAn presented specific strategies and desired outcomes for conservation, recycled water, and stormwater capture, proposed investments will also contribute to the progress and implementation of state-of-the art technology, rebates and incentives promoting water-efficient appliances, tiered water pricing, a technical assistance program for business and industry, and large landscaped irrigation and water-efficiency programs.[20] In March 2017, the Sustainable City pLAn's Second Annual Report for 2016–2017 was released. It reported that the City had reduced per capita water use by 20 percent to achieve both the City's and the pLAn's water use reduction goal.[21]

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[18] *LADWP, Water Supply Assessment—2143 Violet Street Project, February 26, 2019.*

[19] *City of Los Angeles, Mayor Eric Garcetti, Press Release, Los Angeles Achieves Mayor Garcetti's Goal of 20 Percent Water Savings, released February 2, 2017, https://www.lamayor.org/los-angeles-achieves-mayor-garcetti%E2%80%99s-goal-20-percent-water-savings, accessed March 18, 2020.*

[20] *Mayor's Office of Sustainability, Sustainable City pLAn, April 2015.*

[21] *Mayor's Office of Sustainability, Sustainable City pLAn, Second Annual Report for 2016–2017, March 2017.*

The pLAn's Third Annual Report was released in April 2018, noting that on January 17, 2018, Mayor Garcetti broke ground on the North Hollywood West Wellhead Remediation Project (NHWWRP), a project to clean up and restore the use of groundwater for safe, high-quality drinking water in the San Fernando Valley and in the City at large. LADWP was awarded a 44.5 million dollar Proposition 1 grant from the SWRCB in January 2018 to help fund the NHWWRP, which is slated to be complete by 2020. The NHWWRP, in combination with three other planned remediation projects in the San Fernando Valley, advances two key pLAn goals—reducing the purchase of imported water by 50 percent by 2025 and producing 50 percent of City's water locally by 2035. By facilitating the use of additional groundwater from the San Fernando Basin, this project also furthers the goals of increasing recycled water use and stormwater capture. [22]

The Sustainable City pLAn was updated in April 2019 and renamed L.A.'s Green New Deal. The 2019 Sustainable City pLAn/L.A.'s Green New Deal has established targets such as sourcing 70 percent of all water locally and recycling 100 percent of wastewater by 2035.[23]

(c) Los Angeles Municipal Code

The City has adopted several ordinances in the Los Angeles Municipal Code (LAMC) in an effort to reduce water consumption. A summary of the City's key regulations regarding water conservation is provided below.

- Ordinance Nos. 166,080, 181,288, 183,608, and 184,250—amending LAMC Chapter XII, Article 1 to clarify prohibited uses of water and modify certain water conservation requirements of the City's Emergency Water Conservation Plan. The City's Emergency Water Conservation Plan sets forth six different phases of water conservation, which shall be implemented based on water conditions. As part of these requirements, watering is limited to specific days and hours. In determining which phase of water conservation shall be implemented, LADWP monitors and evaluates the projected water supply and demand. In addition, the Emergency Water Conservation Plan includes penalties for those that violate its requirements.

- City Ordinance No. 180,822—amended LAMC Chapter XII, Article 5 to establish water efficiency requirements for new development and renovation of existing buildings, and mandate installation of high efficiency plumbing fixtures in residential and commercial buildings.

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[22] *Mayor's Office of Sustainability, Sustainable City pLAn, Third Annual Report for 2017–2018, April 2018.*

[23] *L.A.'s Green New Deal, Sustainability Plan 2019.*

- City Ordinance No. 181,480—amended LAMC Chapter IX by adding Article 9 (Green Building Code) to the LAMC to incorporate various provisions of the California Green Building Standards Code. This ordinance added mandatory measures for newly constructed low-rise residential and non-residential buildings to reduce indoor water use by at least 20 percent by: (1) using water saving fixtures or flow restrictions; and/or (2) demonstrating a 20-percent reduction in baseline water use.

- City Ordinance Nos. 181,899 and 183,833—amended LAMC Chapter VI, Article 4.4, Section 64.72 regarding stormwater and urban runoff to include new requirements, including Low Impact Development (LID) requirements that promote water conservation.

- Ordinance No. 182,849—amended LAMC Chapter IX, Article 9 (Green Building Code) to mandate that for new water service or for additions or alterations requiring upgraded water service for landscaped areas of at least 1,000 square feet, separate sub-meters or metering devices shall be installed for outdoor potable water use. This ordinance also required that for new non-residential construction with at least 1,000 square feet of cumulative landscaped area, weather- or soil moisture-based irrigation controllers and sensors be installed.

- City Ordinance No. 184,692—amended LAMC Chapter IX, Article 4 (Plumbing Code) by adopting by reference various sections of the California Plumbing Code. This ordinance also added requirements for plumbing fixtures and fixture fitting.

- Ordinance No. 184,248—amended LAMC Chapter IX, Article 4 (Plumbing Code) and Article 9 (Green Building Code) to establish citywide water efficiency standards and mandate a number of new fixture requirements and methods of construction for plumbing and irrigation systems.

The City of Los Angeles also has adopted numerous requirements related to the provision of water for purposes of fire protection. These requirements are set forth in the Fire Code (LAMC Chapter V, Article 7). LAMC Section 57.507.3.1 establishes fire water flow standards. Fire water flow requirements, as determined by the Los Angeles Fire Department (LAFD), vary by project site as they are dependent on land use (e.g., higher intensity land uses require higher flow from a greater number of hydrants), life hazard, occupancy, and fire hazard level. As set forth in LAMC Section 57.507.3.1, fire water flow requirements vary from 2,000 gpm in low density residential areas to 12,000 gpm in high density commercial or industrial areas. A minimum residual water pressure of 20 psi is to remain in the water system with the required gpm flowing. As set forth in LAMC Section 57.507.3.1, Industrial and Commercial land uses such as those of the Project have a required fire flow of 6,000 to 9,000 gpm from four adjacent hydrants flowing simultaneously with a residual pressure of 20 psi. LAMC Section 57.507.3.2 also addresses land use-based requirements for fire hydrant spacing and type. Land uses in the Industrial and

Commercial category require one hydrant per 80,000 square feet of land with 300-foot distances between hydrants, and 2.5-inch by 4-inch or 4-inch by 4-inch double fire hydrants. Regardless of land use, every first story of a residential, commercial, and industrial building must be within 300 feet of an approved hydrant.

(c) Los Angeles Water Rate Ordinance

The City's Water Rate Ordinance was adopted in June 1995 and last amended in 2016 by the City's Board of Water and Power Commissioners pursuant to Ordinance No. 184,130. Effective since April 15, 2016, this City Water Rate Ordinance restructured water rates to help further promote conservation. Specifically, the goal of the ordinance is to incentivize water conservation while recovering the higher costs of providing water to high volume users and accelerating development of sustainable local water supplies. Tiered water rate schedules were established for single-dwelling unit customers; multi-dwelling unit customers; commercial, industrial, and governmental customers and temporary construction; recycled water service; private water service; publicly sponsored irrigation, recreational; agricultural, horticultural, and floricultural uses; community gardens; and youth sports. The new water rate structure increases the number of tiers from two to four for single-dwelling unit customers. In addition, this ordinance intends to maintain cost-of-service principles, incremental tier pricing based on the cost of water supply, and added pumping and storage costs.

b. Existing Conditions

(1) Water Supply

LADWP is responsible for providing water within the City of Los Angeles limits and ensuring that the water quality meets applicable California health standards for drinking water. As the Project Site is located within the City, LADWP is the water provider for the Project Site. Water is supplied to the City from four primary sources: the Los Angeles Aqueducts (LAA), local groundwater, purchased water from MWD, and recycled water.[24] As shown in Table IV.K.1-1 on page IV.K.1-14, in 2017, the most recent year for which data are available, LADWP had an available water supply of 510,835 acre-feet. LADWP water sources are described in further detail below.

(a) Los Angeles Aqueducts

Snowmelt runoff from the Eastern Sierra Nevada Mountains is collected and conveyed to the City via the LAA. The LAA's supplies come primarily from snowmelt and

[24] *LADWP, Water Supply Assessment—2143 Violet Street Project, February 26, 2019.*

Table IV.K.1-1
Los Angeles Department of Water and Power 2007–2016 Water Supply

Calendar Year	Los Angeles Aqueducts	Local Groundwater	MWD	Recycled Water	Transfer, Spread, Spills, and Storage	Total
2007	127,392	88,041	439,353	3,595	**57**	**658,438**
2008	148,407	64,604	427,422	7,048	**(1,664)**	**645,817**
2009	137,261	66,998	351,959	7,570	**(554)**	**563,234**
2010	251,126	68,346	205,240	6,900	**938**	**532,550**
2011	357,752	49,915	119,481	7,708	**153**	**535,009**
2012	166,858	59,109	326,123	5,965	**(1,182)**	**556,873**
2013	64,690	66,272	438,534	9,253	**2,404**	**581,153**
2014	63,960	96,394	391,307	11,307	**(2,020)**	**560,948**
2015	33,244	80,155	378,539	9,829	**(430)**	**501,337**
2016	95,573	72,503	314,336	9,095	**981**	**492,487**
2017	380,329	14,695	113,033	8,509	**(5,730)**	**510,835**

Units are in acre-feet.
Source: LADWP, Water Supply Assessment—2143 Violet Street Project, February 26, 2019, Table III.

secondarily from groundwater pumping, and can fluctuate yearly due to the varying hydrological conditions.

The City holds water rights in the Eastern Sierra Nevada where the LAA's water supplies originate. These supplies originate from both streams and groundwater. As indicated in Table IV.K.1-1, approximately 380,329 acre-feet of LADWP's water supplies were from the LAA in 2017. Average deliveries from the LAA system from 2011 through 2016 were approximately 111,293 acre-feet of water annually. In recent years, LAA supplies have been less than the historical average due to environmental restoration obligations in Mono and Inyo Counties.

Various lawsuits and injunctions, and resulting agreements, affect water supplies from the LAA. These include an agreement with the County of Inyo regarding groundwater levels and enhancement and mitigation projects in the Owens Valley, and the imposition of new regulatory requirements by the SWRCB regarding export from Mono Lake and restoration and monitoring programs for the Mono Basin. In addition, in November 2014, an agreement between the City and the Great Basin Unified Air Pollution Control District was reached wherein LADWP will continue to implement measures to address dust

emissions at Owens Lake and implement additional water conservation through increasing use of water efficient and waterless dust control measures.

Based on modeling results provided in their 2015 UWMP, LADWP projects that the average annual long-term LAA delivery over the next 25 years is expected to be approximately 278,000 AFY and gradually decline to 267,000 AFY due to projected climate change impacts.[25] However, with completion of the Owens Lake improvements, the projected LAA delivery may increase to 286,000 AFY due to water conserved at Owens Lake, which would off-set most of the anticipated long-term losses.[26]

(b) Groundwater

LADWP owns water rights in the San Fernando, Sylmar, Eagle Rock, Central, and West Coast Basins.[27] All of these basins are adjudicated by judicial decisions of the Superior Court of the State of California.

LADWP currently has combined water rights of approximately 109,809 AFY, of which approximately 87,000 AFY are located in the San Fernando Basin, 500 AFY in the Eagle Rock Basin, 1,503 AFY in the West Coast Basin, 17,236 AFY in the Central Basin, and 3,570 AFY in Sylmar Basin.[28] LADWP has accumulated nearly 523,529 acre-feet of stored water credits in the San Fernando Basin as of October 1, 2016.[29] This water can be withdrawn from the basin during normal and dry years or in an emergency, in addition to LADWP's approximately 87,000 AFY entitlement in the basin.

As shown in Table IV.K.1-2 on page IV.K.1-16, during the 2017–2018 fiscal year (July through June), LADWP extracted 22,259 acre-feet from the San Fernando Basin and 0.77 acre-feet from the Central Basin.[30] LADWP plans to continue production from its groundwater basins in the coming years to offset reductions in imported water supplies. Extraction from the basins will, however, be limited by water quality and overdraft protection. Both LADWP and DWR have programs in place to monitor wells to prevent overdrafting. LADWP's groundwater pumping practice is based on a "safe yield" operation. Furthermore, basin management is achieved by collective efforts of a court-appointed Watermaster and the Upper Los Angeles River Area (ULARA) Administrative Committee of

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[25] *LADWP, Water Supply Assessment—2143 Violet Street Project, February 26, 2019.*

[26] *LADWP, Water Supply Assessment—2143 Violet Street Project, February 26, 2019.*

[27] *LADWP, 2015 Urban Water Management Plan, June 2016.*

[28] *LADWP, 2015 Urban Water Management Plan, June 2016.*

[29] *LADWP, Water Supply Assessment—2143 Violet Street Project, February 26, 2019.*

[30] *LADWP, Water Supply Assessment—2143 Violet Street Project, February 26, 2019.*

Table IV.K.1-2
Local Groundwater Basin Supply

Fiscal Year (Jul–Jun)	San Fernando Basin	Sylmar Basin	Central Basin
2012–2013	50,550	1,952	6,310
2013–2014	68,784	891	9,727
2014–2015	80,097	1	6,948
2015–2016	75,958	683	8,395
2016–2017	55,116	0	3,005
2017–2018	22,259	0	1
2019–2020*	90,000	4,170	18,500
2024–2025*	88,000	4,170	18,500
2029–2030*	84,000	4,170	18,500
2034–2035*	92,000	4,170	18,500
2039–2040*	92,000	3,570	18,500

Units are in acre-feet.
**Projected production from 2015 UWMP.*
Source: LADWP, Water Supply Assessment—2143 Violet Street Project, February 26, 2019.

representatives from five public water supply agencies overlying the ULARA Basins.[31] These efforts include operation of groundwater remediation systems, use of an extensive network of groundwater monitoring wells, routine reporting on groundwater elevation and water quality, management and mitigation of urban runoff water quality, and development of enhanced stormwater recharge and groundwater replenishment.

(c) Metropolitan Water District of Southern California

MWD is the largest water wholesaler for domestic and municipal uses in Southern California. MWD imports a portion of its water supplies from Northern California through the State Water Project's California Aqueduct and from the Colorado River through MWD's own Colorado River Aqueduct. As one of the 26 member agencies of MWD, LADWP purchases water from MWD to supplement LADWP water supplies from the LAA and local groundwater. As of June 30, 2017, LADWP has a preferential right to purchase 18.51 percent of MWD's total water supply.[32]

[31] *LADWP, 2015 Urban Water Management Plan, June 2016.*

[32] *LADWP, Water Supply Assessment—2143 Violet Street Project, February 26, 2019.*

The pLAn, discussed above, calls for a reduction in purchased imported water by 50 percent by 2025 from the Fiscal Year 2013–2014 level, which was approximately 441,870 acre-feet.[33] To meet these targets, LADWP plans to increase conservation, enhance the ability for groundwater pumping through increased stormwater capture projects and groundwater replenishment with highly treated recycled water, as well as remediation of contaminated groundwater supplies in the San Fernando Basin. LADWP also plans to increase recycled water use for non-potable purposes. With these initiatives and under average hydrologic conditions, LADWP's 2015 UWMP projects MWD purchases to be approximately 65,930 acre-feet per year in 2025.[34]

Over the next 25 years, through continued and additional local supply development and conservation savings, LADWP's reliance on MWD water supplies may be reduced significantly from the five-year average from Fiscal Years 2010–2011 through 2014–2015 of 57 percent of total demand to 11 percent under average weather conditions and to 44 percent under single-dry year conditions by fiscal year 2040.[35] As indicated in Table IV.K.1-1 on page IV.K.1-14, LADWP received approximately 113,033 acre-feet of water from MWD in 2017, which was a reduction from previous years. Summaries of MWD's individual supplies, along with each supply's challenges and specific responsive actions taken by MWD, are presented below.

(i) State Water Project

MWD imports water from the SWP, owned by the state of California and operated by DWR. The SWP is a water storage and delivery system of pump stations, reservoirs, aqueducts, tunnels, and power plants. The main purpose of the SWP is to divert and store surplus water during wet periods and distribute it to areas throughout the State. Other purposes of the SWP include flood control, power generation, recreation, fish and wildlife protection, and water quality management in the Sacramento–San Joaquin River Delta. The SWP transports Feather River water stored in and released from Oroville Dam and conveyed through the Bay-Delta, as well as unregulated flows diverted directly from the Bay-Delta south via the California Aqueduct to four delivery points near the northern and eastern boundaries of MWD's service area.

MWD is one of the 29 agencies that have long-term contracts for water service from DWR and is the largest agency in terms of the number of people it serves (approximately 18.8 million), the share of the SWP that it has contracted to receive (approximately

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[33] *LADWP, Water Supply Assessment—2143 Violet Street Project, February 26, 2019.*

[34] *LADWP, Water Supply Assessment—2143 Violet Street Project, February 26, 2019.*

[35] *LADWP, 2015 Urban Water Management Plan, April 2016.*

46 percent), and the percentage of total annual payments made to DWR by agencies with state water contracts (approximately 52 percent in 2016).[36]

The SWP, under the original contracted amount at 100 percent allocation, provides MWD with 1,911,500 acre-feet of water each calendar year.[37] However, due to water quality and supply reliability challenges and conflicts due to variable hydrology and environmental standards that limit pumping operations, SWP deliveries in the most critically dry years have varied. The initial allocation for 2018 was 15 percent,[38] but due to observed changes in hydrologic and water supply conditions, the allocation levels were subsequently increased to 20 percent[39] in January, 30 percent[40] in April, and 35 percent[41] in May.

For the 2019 calendar year, DWR allocation levels were initially further reduced to 15 percent in January, but levels were subsequently increased to 35 percent in February and 75 percent in June.[42] DWR approval of allocation levels are based on precipitation, runoff, and water conditions. Other considerations include the existing storage in SWP conservation reservoirs, State Water Project operational regulatory constraints (e.g., conditions of the Biological Opinions for Delta Smelt and Salmonids, and the Longfin Smelt incidental take permit), and 2019 contractor demands. Furthermore, DWR may revise the allocation and subsequent allocations if warranted by the year's developing hydrologic and water supply conditions.[43]

Litigation and various regulations have created challenges for the SWP.[44] In particular, the listing of several fish species in the Delta as threatened or endangered under the federal and/or California Endangered Species Acts (ESA/CESA) has constrained SWP operations and created more uncertainty in SWP supply reliability. Based on DWR's 2015 *State Water Project Delivery Capability Report*, future SWP deliveries will continue to be

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[36] *LADWP, Water Supply Assessment—2143 Violet Street Project, Appendix F, February 26, 2019.*

[37] *LADWP, Water Supply Assessment—2143 Violet Street Project, Appendix F, February 26, 2019.*

[38] *California Department of Water Resources, Notice to State Water Project Contractors, Number 17-10, 2018 State Water Project Initial Allocation—15 Percent.*

[39] *California Department of Water Resources, Notice to State Water Project Contractors, Number 18-02, 2018 State Water Project Allocation Increase—20 Percent.*

[40] *California Department of Water Resources, Notice to State Water Project Contractors, Number 18-03, 2018 State Water Project Allocation Increase—30 Percent.*

[41] *California Department of Water Resources, Notice to State Water Project Contractors, Number 18-05, 2018 State Water Project Allocation Increase—35 Percent.*

[42] *CA DWR, Notice to State Water Project Contractors, Nos. 19-03, 19-06, and 19-10.*

[43] *CA DWR, Notice to State Water Project Contractors, No. 19-10.*

[44] *Metropolitan Water District of Southern California, 2015 Urban Water Management Plan, June 2016.*

impacted by restrictions on SWP and Central Valley Project Delta pumping, and climate change, which is altering the hydrologic conditions in the State.

(ii) The Colorado River

MWD owns and operates the Colorado River Aqueduct, which has delivered water from the Colorado River to Southern California since 1942.[45] The Colorado River currently supplies approximately 17 percent of Southern California's water needs, and on average makes up about 15 percent of LADWP's purchases from MWD.[46] MWD has a legal entitlement to receive water from the Colorado River under a permanent service contract with the Secretary of the Interior. California is apportioned the use of 4.4 million acre-feet of water from the Colorado River each year plus one-half of any surplus that may be available for use collectively in Arizona, California, and Nevada.[47] In addition, California has historically been allowed to use Colorado River water apportioned to, but not used by, Arizona or Nevada. Since 2003, due to increased consumption, no such unused apportioned water has been available to California. Historically, MWD has been able to claim most of its legal entitlement of Colorado River water and could divert over 1.2 million acre-feet in any year, but persistent drought conditions have contributed to a decrease in these claims.[48] MWD's total supply from the Colorado River for Calendar Year 2016 was approximately 985,000 acre-feet.[49]

There are various agreements and guidelines that affect the management of Colorado River water supplies, and MWD has taken steps to augment its share of Colorado River water supplies by entering into agreements with other agencies that have rights to use such water. Specifically, under a 1988 water conservation agreement between MWD and the Imperial Irrigation District, MWD provided funding for the Imperial Irrigation District to construct and operate a number of conservation projects that are currently conserving up to 109,460 acre-feet of water per year that is provided to MWD.[50] In addition, in August 2004, MWD and the Palo Verde Irrigation District signed an agreement for a Land Management, Crop Rotation and Water Supply Program, which provides up to 133,000 acre-feet of water to be available to MWD in certain years. Furthermore, in May 2008, MWD joined the Central Arizona Water Conservation District and the Southern Nevada Water Authority in funding the Warren H. Brock Reservoir, which conserves approximately

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[45] *LADWP, Water Supply Assessment—2143 Violet Street Project, February 26, 2019.*

[46] *LADWP, Water Supply Assessment—2143 Violet Street Project, February 26, 2019.*

[47] *LADWP, Water Supply Assessment—2143 Violet Street Project, February 26, 2019.*

[48] *LADWP, Water Supply Assessment—2143 Violet Street Project, February 26, 2019.*

[49] *LADWP, Water Supply Assessment—2143 Violet Street Project, February 26, 2019.*

[50] *Metropolitan Water District of Southern California, 2015 Urban Water Management Plan, June 2016.*

70,000 AFY of water. MWD is also participating in numerous pilot programs to augment its water supplies. Other agreements and guidelines that continue to affect the management of water supplies from the Colorado River include the Quantification Settlement Agreement, executed in October 2003, and the Transfer Agreement executed in 1998. Additional guidelines and programs that influence management of the Colorado River water supplies include the Interim Surplus Guidelines, the Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead, the Intentionally Created Surplus Program, and the Quagga Mussel Control Program.

(iii) Additional MWD Actions to Address Supply

To improve water supply reliability for the entire Southern California region, MWD has also been pursuing voluntary water transfer and exchange programs with State, federal, public and private water districts, and individuals. Programs include the Arvin-Edison Storage Program; the Semitropic Storage Program; the San Bernardino Storage Program; the San Gabriel Valley MWD Exchange Program; the Antelope Valley–East Kern Water Agency Exchange and Storage Program; the Kern-Delta Water District Storage Program; the Mojave Storage Program; and the Central Valley Transfer Programs.[51]

In addition, MWD continues to develop plans and make efforts to provide additional water supply reliability for the entire Southern California region. LADWP coordinates closely with MWD to ensure implementation of these water resource development plans.[52] As discussed above, MWD's long-term plans to meet its member agencies reliability needs include improvements to the State Water Project as outlined in the California WaterFix and EcoRestore Plans, conjunctive management efforts on the Colorado River, water transfer programs and outdoor conservation measures, and development of additional local resources, such as recycling brackish water desalination and seawater desalination.[53]

Additionally, MWD and has more than 5 million acre-feet of storage capacity of available reservoirs and banking/transfer programs, with approximately 1.29 million acre-feet of water in Water Surplus Drought Management storage and an additional 626,000 acre-feet in emergency storage as of January 1, 2017.[54] With implementation of new and modified existing storage programs to manage the available surplus supplies, MWD was able to store approximately 1.18 million acre-feet of water in 2017 and began 2018 with approximately 2.46 million acre-feet of water in its dry-year storage portfolio. As

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[51] *Metropolitan Water District of Southern California, 2015 Urban Water Management Plan, June 2016.*

[52] *LADWP, Water Supply Assessment—2143 Violet Street Project, February 26, 2019.*

[53] *LADWP, Water Supply Assessment—2143 Violet Street Project, February 26, 2019.*

[54] *LADWP, Water Supply Assessment—2143 Violet Street Project, February 26, 2019.*

described in the MWD's 2015 UWMP, MWD has supply capabilities that would be sufficient to meet expected demands from 2020 through 2040 under average-year, single dry-year, and multiple dry-year hydrologic conditions.

(d) Precipitation Conditions

During the 2018 water year (i.e., October 1, 2017 through September 30, 2018), California experienced dry conditions statewide, with nearly all the state experiencing below precipitation and much of Southern California receiving half or less of its average annual precipitation. Water year 2018 followed California's second-wettest year of record as measured by statewide runoff, ending a historic five-year drought.[55] The City of Los Angeles receives an average of 14.77 inches of precipitation per year according to the National Weather Service.

The 2019 water year (i.e., October 1, 2018 to September 30, 2019) ended with significantly more water in storage than the previous year due to above-average snow and precipitation.[56] Nevertheless, according to the National Drought Mitigation Center, as of March 10, 2020, approximately 78.5 percent of the California was abnormally dry or experiencing drought conditions.[57]

California continues to experience variable weather and precipitation, as does the City of Los Angeles with its many periods of dry years and wet years. Therefore, the State continues to develop and implement necessary strategies and actions to address future drought conditions and account for year-to-year fluctuations in precipitation.

(e) Global Warming and Climate Change

As discussed in the LADWP's 2015 UWMP, generally speaking, any water supplies that are dependent on natural hydrology are vulnerable to climate change, especially if the water source originates from mountain snowpack. For LADWP, the most vulnerable water sources subject to climate change impacts are imported water supplies from MWD and the LAA, though local sources can also expect to see some changes in the future. In addition to water supply impacts, changes in local temperature and precipitation are expected to alter water demand patterns. However, there is still general uncertainty within the scientific

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[55] *California Department of Water Resources, Water Year 2018: Hot and Dry Conditions Return, October 1, 2018.*

[56] *DWR, Water Year 2020 Begins with Robust Reservoir Storage, October 1, 2019, https://water.ca.gov/News/News-Releases/2019/October-19/Water-Year-2020-Begins-with-Robust-Reservoir-Storage, accessed March 18, 2020.*

[57] *United States Drought Monitor, State Drought Monitor, California, March 10, 2020, https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?CA, accessed March 18, 2020.*

community regarding the potential impacts of climate change within the City. LADWP continues to monitor the latest developments in scientific knowledge and will continue to assess future research for the potential impacts of climate change on its water resources.[58]

MWD and DWR also continue to study climate change and address the implications of climate change on water supplies. MWD has established a technical process to identify key vulnerabilities from various sources, including climate change, in order to provide comprehensive analyses within its Integrated Water Resources Plans. In addition, DWR addresses climate change impacts on water supply in its California Water Plan Updates, which also account for uncertainty, risk, and sustainability in planning for the future.[59] As mentioned above, with updates published every five years, the recently released *California Water Plan Update 2018* built on its predecessor by identifying specific performance tracking metrics, recommending financing methods with stable revenues, and incorporating principles of sustainability.[60]

DWR has also been in the process of completing its Climate Action Plan since 2012. Phases I and II of the Climate Action Plan include the guidance of DWR in reducing greenhouse gas emission and the expertise of a climate change technical advisory group formed in 2012, respectively. Phase III of the plan was completed in 2017 with a vulnerability assessment and adaptation plan DWR assets and activities, as related to the projected changes in temperature, wildfire, sea level rise, hydrology, and water supply.[61] As such, climate change and its impacts on water supplies are key factors of new water supply regulations and urban water management plans.

(f) Water Conservation and Recycling

LADWP's 2015 UWMP details the City's efforts to promote the efficient use and management of its water resources and provides the basic policy principles that guide LADWP's decision-making process to secure a sustainable water supply for the City of Los Angeles in the next 25 years. To meet multiple water conservation goals established in ED 5, the pLAn[62], and the Water Conservation Act of 2009, LADWP's 2015 UWMP aims to

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[58] *Los Angeles Department of Water and Power, 2015 Urban Water Management Plan, June 2016, page 12-1.*

[59] *California Department of Water Resources, California Water Plan Update 2013, Investing in Innovation & Infrastructure, Highlights, October 2014.*

[60] *California Department of Water Resources, California Water Plan Update 2018, https://water.ca.gov/Programs/California-Water-Plan/Update-2018, accessed March 18, 2020.*

[61] *California Department of Water Resources, DWR Climate Action Plan, www.water.ca.gov/Programs/All-Programs/Climate-Change-Program/Climate-Action-Plan, accessed March 18, 2020.*

[62] *As noted above, the Sustainable City pLAn is now known as L.A.'s Green New Deal. However, this change occurred after adoption of the LADWP's 2015 UWMP.*

reduce per capita potable water use by 20 percent by 2017, by 22.5 percent by 2025, and by 25 percent by 2035.[63] As of February 2, 2017, the City has met its goal established by ED 5 and the pLAn to reduce the per capita water use by 20 percent by 2017. The City's potable water consumption has been reduced to 104 gallons per capita per day, which equates to a 20-percent reduction from the 131 gallons per capita per day baseline in Fiscal Year 2013–2014.[64] Further, based on LADWP's 2015 UWMP, recycled water use is projected to reach 59,000 AFY by 2025 and further increase to 75,400 AFY by 2040.[65]

Overall, the 2015 LADWP UWMP projects a seven-percent lower water demand trend than what was projected in the previous 2010 UWMP.[66] In addition, based on programs and improvements contemplated in the 2015 LADWP UWMP, locally developed water supplies will increase from the current 14 percent to 49 percent in dry years or to 47 percent in average years by 2040.[67]

(2) Water Demand

(a) Citywide Water Demand

LADWP's 2015 UWMP provides water supply and demand projections in five-year increments to 2040, based on projected population estimates provided by the Southern California Association of Governments (SCAG) in its 2012–2035 Regional Transportation Plan/Sustainable Communities Strategy (2012–2035 RTP/SCS).[68] Table IV.K.1-3 on page IV.K.1-24 shows the projected water demand from the year 2020 through 2040 for the City of Los Angeles.

As shown in Table IV.K.1-3, in 2040 during average year hydrological conditions, the City's water demand is forecasted to be approximately 675,700 AFY. Use of the current demand per capita within this demand forecast provides a conservative estimate of projected future water demand to ensure that water supplies are available to meet

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[63] *LADWP, 2015 Urban Water Management Plan, June 2016.*

[64] *City of Los Angeles, Mayor Eric Garcetti, Press Release, Los Angeles Achieves Mayor Garcetti's Goal of 20 Percent Water Savings, released February 2, 2017, https://www.lamayor.org/los-angeles-achieves-mayor-garcetti%E2%80%99s-goal-20-percent-water-savings, accessed March 18, 2020.*

[65] *LADWP, 2015 Urban Water Management Plan, June 2016.*

[66] *LADWP, 2015 Urban Water Management Plan, June 2016.*

[67] *LADWP, 2015 Urban Water Management Plan, June 2016.*

[68] *Since preparation of the 2015 UWMP, new growth forecasts have become available in SCAG's 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS). According to SCAG, the 2016 forecast is lower than the 2012 forecast in terms of current estimates and future projections. Therefore, LADWP's 2015 UWMP is based on a more conservative overall growth scenario.*

Table IV.K.1-3
City of Los Angeles Water Demand Projections Based on Hydrological Conditions
(thousand AFY)

Hydrological Conditions	Years				
	2020	2025	2030	2035	2040
Average Year	611.8	644.7	652.9	661.8	675.7
Single Dry Year (FY 2014–2015)	642.4	676.9	685.5	694.9	709.5
Multi-Dry Year (2011–2015)	642.4	676.9	685.5	694.9	709.5

AFY = acre-feet per year
Source: LADWP, 2015 Urban Water Management Plan, Exhibits 11F, 11G, and 11H.

projected demands. LADWP's 2015 UWMP anticipates adequate water supplies would be available to meet the projected demands of the service areas under normal, single-dry, and multi-dry year conditions through 2040.[69]

(b) On-Site Water Demand

As discussed in Section II, Project Description, of this Draft EIR, the Project Site is currently developed with seven buildings that comprise approximately 63,530 square feet of floor area with 6,983 square feet of office, 25,739 square feet of retail, 2,109 square of warehouse, and 10 live-work units comprising 28,699 square feet. The Project Site also includes two sheds and surface parking lots generally located on the southern half of the Project Site. Two buildings that comprise approximately 6,844 square feet and four live-work units, as well as two open sheds and surface parking spaces, would be removed. As provided in Table IV.K.1-4 on page IV.K.1-32 in the Project Impacts analysis below, the existing uses to be removed on the Project Site generate a water demand of 2,382 gallons per day (2.67 AFY).

(3) Water Infrastructure

Water infrastructure in the vicinity of the Project Site is maintained and operated by LADWP. LADWP ensures the reliability and quality of its water supply through an extensive distribution system that includes 118 storage tanks and reservoirs, 96 pump stations, 7,337 miles of distribution mains and trunk lines within the City, and a total storage capacity of 311,000 acre-feet according to the estimates for Fiscal Year 2017–2018.[70]

[69] *LADWP, 2015 Urban Water Management Plan, June 2016.*

[70] *LADWP, 2017–2018 Briefing Book, June 2016.*

Much of the water flows north to south, entering Los Angeles at the LAA Filtration Plant in Sylmar, which is owned and operated by LADWP. Water entering the LAA Filtration Plant undergoes treatment and disinfection before being distributed throughout the LADWP's water service area.[71]

Domestic water service is available to the Project Site via LADWP water lines within the adjacent streets. According to the Utility Report, included as Appendix E of this Draft EIR, there is a 6-inch water main in 7th Place and a 6-inch water main in Violet Street.

In addition to providing domestic water service, LADWP also provides water for fire protection services in accordance with the City's Fire Code (LAMC Chapter V, Article 7). As discussed in Section IV.H.1, Public Services—Fire Protection, of this Draft EIR, the Information of Fire Flow Availability Report (IFFAR) submitted to LADWP shows six nearby hydrants flowing simultaneously for a combined 7,000 gpm.

3. Project Impacts

a. Thresholds of Significance

In accordance with the State CEQA Guidelines Appendix G, the Project would have a significant impact related to water supply and infrastructure if it would:

Threshold (a): ***Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.***

Threshold (b): ***(Not) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.***

For this analysis, the Appendix G Thresholds listed above are relied upon. The analysis utilizes factors and considerations identified in the City's 2006 L.A. CEQA Thresholds Guide, as appropriate, to assist in answering the Appendix G Threshold questions. Refer to Section IV.K.2, Utilities and Service Systems—Wastewater, of this Draft EIR for a discussion of wastewater impacts; the Project's Initial Study included as Appendix A of this Draft EIR for a discussion of stormwater impacts; Section IV.K.3, Utilities and Service Systems—Energy Infrastructure, of this Draft EIR for a discussion of electric

[71] *LADWP, 2015 Urban Water Management Plan, June 2016.*

power and natural gas impacts; and Section VI, Other CEQA Considerations for a discussion of telecommunications facility impacts.

The *L.A. CEQA Thresholds Guide* identifies the following factors to evaluate water supply and infrastructure:

- The total estimated water demand for the project;
- Whether sufficient capacity exists in the water infrastructure that would serve the project, taking into account the anticipated conditions at project buildout;
- The amount by which the project would cause the projected growth in population, housing or employment for the Community Plan area to be exceeded in the year of project completion; and
- The degree to which scheduled water infrastructure or project design features would reduce or offset service impacts.

b. Methodology

The analysis of water supply is based on a calculation of the Project's anticipated net water demand. Consistent with LADWP's methodology, the estimated net water demand for the Project is calculated by applying the City of Los Angeles Bureau of Sanitation's (LASAN) sewer generation factors to the Project's proposed uses. The water demand of the existing uses to be removed was then subtracted from the Project's total water demand to determine the Project's net water demand. The resulting net demand for water associated with the Project is then analyzed to determine if LADWP would be able to accommodate the Project's water demands during average, single-dry, and multiple-dry years hydrologic conditions. The analysis with regard to water infrastructure is based on the Utility Report prepared for the Project by KPFF Consulting Engineers, which is included in Appendix E of this Draft EIR. The Utility Report includes a comparison of the estimated net water demand for the Project to the available capacity of the existing water infrastructure.

c. Project Design Features

The following Project Design Feature, based on the Project's WSA commitment letter, is applicable to the Project with regard to water supply and infrastructure:

Project Design Feature WAT-PDF-1: In addition to regulatory requirements, the Project design shall incorporate the following water conservation features to support water conservation in addition to those measures required by the City's current codes and ordinances:

- High-Efficiency Toilets with a flush volume of 1.0 gallon per flush;
- Showerheads with a flow rate of 1.5 gallons per minute, or less;
- Domestic Water Heating System located in close proximity of point(s) of use;
- Individual metering and billing for water use for commercial space;
- Drip/ Subsurface Irrigation (Micro-Irrigation);.
- Proper Hydro-Zoning/Zoned Irrigation (groups plants with similar water requirements together);.
- Drought-Tolerant Plants—60 percent of total landscaping; and
- Weather-based irrigation system and water efficient landscaping.

d. Analysis of Project Impacts

Threshold (a): Would the Project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?[72]

(1) Impact Analysis

(a) Construction

As discussed in the Utility Report included as Appendix E of this Draft EIR and as summarized below, the Project Site currently does not have adequate fire flow available to demonstrate compliance with LAMC standards. In order to provide for the necessary water demands, the Project would require construction of new public water mains within the public right-of-way. This work would include replacing the existing 6-inch mains in both 7th Place and Violet Street and may require supplementary water main construction in Santa Fe Avenue. Construction impacts associated with the installation of water mains would primarily involve trenching in order to place these lines. During the permit phase, LADWP would confirm precise water system upgrades within the affected streets. The Project would secure permits from the Department of Public Works and comply with all standard City requirements during construction.

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[72] *Refer to Section IV.K.2, Utilities and Service Systems—Wastewater, of this Draft EIR for a discussion of wastewater impacts; the Project's Initial Study included as Appendix A of this Draft EIR for a discussion of stormwater impacts; Section IV.K.3, Utilities and Service Systems—Energy Infrastructure, of this Draft EIR for a discussion of electric power and natural gas impacts; and Section VI, Other CEQA Considerations for a discussion of telecommunications facility impacts.*

The Project would also require construction of new, on-site water distribution lines to serve the new buildings included in the proposed Project. The design and installation of new service connections would be required to meet applicable City standards. Installation of the new water distribution lines would primarily involve on-site trenching to place the lines below the surface and minor off-site trenching to connect to the existing public water mains or meter lateral locations. Prior to ground disturbance, Project contractors would coordinate with LADWP to identify the locations and depths of all lines. Furthermore, LADWP would be notified in advance of proposed ground disturbance activities to avoid disruption of water service.

The limited off-site connection activities could also temporarily affect access in adjacent rights-of-way. However, as discussed Section IV.I, Transportation, of this Draft EIR, a Construction Traffic Management Plan would be included to ensure that adequate and safe access remains available within and near the Project Site during construction activities. The Construction Traffic Management Plan would identify the location of any temporary street parking or sidewalk closures, warning signs, and access to abutting properties. Appropriate construction traffic control measures (e.g., detour signage, delineators, etc.) would also be implemented, as necessary, to ensure emergency access to the Project Site and traffic flow is maintained on adjacent rights-of-way.

Overall, construction activities associated with the Project would not require or result in the relocation or construction of new or expanded water facilities, including infrastructure, the construction or relocation of which could cause significant environmental effects. **As such, construction-related impacts related to water infrastructure would be less than significant.**

(b) Operation

As discussed above beginning on page IV.I-26, water service to the Project Site would continue to be supplied by LADWP for domestic and fire protection uses. While domestic water demand is typically the main contributor to operational water consumption, fire flow demands have a much greater instantaneous impact on infrastructure and, therefore, are the primary means for analyzing infrastructure capacity.[73] Nevertheless, conservative analyses for both fire suppression and domestic water flows have been completed by LADWP for the Project. These analyses are summarized below beginning on page IV.I-31 and described in more detail in the Utility Report included as Appendix E of this Draft EIR.

[73] *Utility Infrastructure Technical Report: Water, Wastewater, and Energy, KPFF Consulting Engineers, February 27, 2018, p. 21 (included as Appendix E of this Draft EIR).*

Fire flow to the proposed buildings of the Project would be required to meet City fire flow requirements. Specifically, the Project would comply with LAMC Section 57.507.3.1, which establishes fire flow standards by development type. The Project falls within the Industrial and Commercial category, which has a required fire flow of 6,000 to 9,000 gpm from four adjacent hydrants flowing simultaneously with a residual pressure of 20 psi. This translates to a required flow of 1,500 gpm for each hydrant. As noted above, as part of the Utility Report included in Appendix E of this Draft EIR, an IFFAR was submitted to LADWP to determine available fire hydrant flow from six existing public fire hydrants. Based on the completed IFFAR (see Exhibit 1 of Appendix E of this Draft EIR), the six existing public fire hydrants flowing simultaneously can deliver combined flows of 7,000 gpm. Therefore, based on the IFFAR, the Project Site currently does not have adequate fire flow available to demonstrate compliance with the standards specified in LAMC Section 57.507.3.1. However, as discussed above, the Project would include necessary upgrades to improve the adjacent water mains that would facilitate the necessary flow and pressure requirements. Furthermore, LAMC Section 57.507.3.1 states that the installation of supplemental equipment or systems can be substituted in lieu of required fire flow standards. As such, in accordance with in accordance with LAFD Regulation No. 10 Option 2, the Project would incorporate a fire sprinkler suppression system to reduce or eliminate the public hydrant demands, which will be subject to LAFD review and approval during the design and permitting of the Project. In addition, based on the results of the Service Advisor Request (SAR) performed as part of the Utility Report, LADWP has outlined potential improvements to the water supply infrastructure. As any improvements would be completed to ensure that the system will be able to provide the necessary flow and pressure, and through compliance with LAFD and LADWP requirements, the Project's fire flow impacts to water infrastructure would be less than significant.

With respect to the distribution infrastructure, as discussed in greater detail below and stated in the WSA, LADWP concluded that the projected water supplies for normal, single-dry, and multiple-dry years reported in LADWP's 2015 UWMP would be sufficient to meet the Project's estimated water demand, in addition to the existing and planned future water demands within LADWP's service area through the year 2040. The distribution infrastructure in the service area can, therefore, be assumed to be adequate to meet the Project's demand. However, to ensure its infrastructure is sufficient to meet ongoing demand, LADWP will continue to implement its $6.3 billion five-year water system capital improvement plan, which includes replacement of distribution mainlines, trunk lines, large valves, and water meters, as well as ongoing maintenance and rehabilitation of facilities such as pump stations, pressure regulators, and in-city reservoirs and tanks.[74]

[74] *LADWP, 2017-18 Water Infrastructure Plan, revised June 2018.*

Based on the above, upon completion of the necessary upgrades to improve the surrounding adjacent water mains, the Project would not exceed the available capacity of existing water facilities, including the distribution infrastructure, that would serve the Project Site. Accordingly, the Project would not require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects. Therefore, the Project's operational impacts would be less than significant.

(2) Mitigation Measures

Project impacts with regard to water infrastructure would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Project impacts with regard to water infrastructure would be less than significant without mitigation.

Threshold (b): Would the Project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

(1) Impact Analysis

(a) Construction

Construction activities for the Project would result in a temporary demand for water associated with soil compaction and earthwork, dust control, mixing and placement of concrete, equipment and site cleanup, irrigation for plant and landscaping establishment, testing of water connections and flushing, and other short-term related activities. These activities would occur incrementally throughout construction of the Project (from the start of construction to project buildout). The amount of water used during construction would vary depending on soil conditions, weather, and the specific activities being performed. However, given the temporary nature of construction activities, the short-term and intermittent water use during construction of the Project would be less than the net new water consumption of the Project at buildout. As described on page 19 of the Utility Report included as Appendix E of this Draft EIR, based on a review of construction projects that are similar in size and duration to that of the Project, a conservative estimate of construction water use ranges from 1,000 to 2,000 gpd. This would be less than the estimated existing water consumption of the existing uses to be removed of 2,382 gpd. Furthermore, as concluded in LADWP's 2015 UWMP, projected water demand for the City would be met by the available supplies during an average year, single-dry year, and multiple-dry year in each year from 2015 through 2040. If approved, Project construction is

anticipated to be completed by 2024. Therefore, the Project's temporary and intermittent demand for water during construction could be met by the City's available supplies during each year of Project construction. As such, construction-related impacts to water supply would be less than significant.

Based on the above, LADWP would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, single-dry, and multiple-dry years. Therefore, the Project's construction-related impacts on water supply would be less than significant.

(b) Operation

As described in Section II, Project Description, of this Draft EIR, the Project would include approximately 569,448 square feet of floor area including up to 347 new live-work units, approximately 187,374 square feet of new office space, 21,858 square feet of new retail/restaurant floor area, and a 926 square-foot community room that residents could use for art creation. In addition, five existing buildings within the northern portion of the Project Site that comprise approximately 56,686 square feet would be retained. The existing uses to be retained would be retrofitted with the same water conservation measures as the new buildings, although this water savings is not included in the calculations below to present a conservative estimate of water demand. Development of the Project would result in an increase in long-term water demand for consumption, operational uses, maintenance, and other activities on the Project Site. Consistent with LADWP's methodology, the analysis of the Project's impacts relative to water supply is based on a calculation of the Project's water demand by applying the sewage generation rates established by LASAN, which also serve to estimate water demand, to the proposed uses.

Based on the proposed land uses and the Project's resulting estimated water demand, the Project is subject to the requirements of SB 610 (preparation of a WSA, as described above in Section 1.a.(1)c)). Specifically, the Project is anticipated to demand an amount of water equivalent to or greater than the amount of water required by a 500-dwelling unit project. Therefore, a WSA was prepared for the Project and is provided in Appendix P of the Draft EIR.

As shown in Table IV.K.1-4 on page IV.K.1-32, assuming constant water use throughout the year, it is estimated that the Project would result in a net increase in the Project Site's average daily water demand of approximately 109,015 gpd, or approximately 122.13 AFY, including water savings as required by the LAMC and additional water saving

Table IV.K.1-4
Estimated Project Water Demand

Land Use	No. of Units/ Floor Area	Water Demand Rate (gpd/unit)[c]	Demand (gpd)
EXISTING TO BE REMOVED[a]			
Existing Buildings	6,844 sf	N/A	2,382
Total Existing[b]			***2,382***
PROPOSED[a]			
Residential			
Live/Work 1-bd	144 du	185	26,640
Live/Work 2-bd, 1-bd + den, townhouse	149 du	225	33,525
Live/Work 3-bd, 2-bd + den	60 du	265	15,900
Base Demand Adjustment			6,428
Total Residential			***82,493***
Other			
Retail/Restaurant	1,077 seat	30	32,310
Office	187,374 sf	0.12	22,485
Artist Production Amenity Space	926 sf	0.03	28
Pool	1,800 sf		169
Spa	234 sf		22
Indoor Residential Amenities	9,601 sf	0.05	480
Base Demand Adjustment			3,308
Total Other			***58,802***
Landscaping	8,952 sf		836
Parking Structure	334,543 sf	0.02	220
Cooling Tower			
Cooling Tower: Residential	700 ton	36	24,948
Cooling Tower: Office	700 ton	18	12,285
Cooling Tower: Retail	100 ton	25	2,457
Total Cooling Tower			***39,690***
Subtotal Water Demand			**182,041**
Less Required Ordinances Water Savings[d]			(67,804)
Proposed Water Demand			**114,237**
Less Existing to be Removed			(2,382)
Less Additional Conservation[k]			(2,840)
Net Additional Water Demand (Proposed – Existing – Additional Conservation)			**109,015**

du = dwelling units

bd = bedroom

sf = square feet

gpd = gallons per day

[a] *Provided by City of Los Angeles Department of City Planning in the Request for Water Supply Assessment letter and Scope Confirmation e-mail. See Appendix A of WSA.*

Table IV.K.1-4 (Continued)
Estimated Project Water Demand

Land Use	No. of Units/ Floor Area	Water Demand Rate (gpd/unit)[c]	Demand (gpd)
[b] *The existing water demand is based on the LADWP billing data.*			
[c] *Proposed indoor water uses are based on 2012 LASAN Sewer Generation Rates.*			
[d] *The proposed development would conform to City of Los Angeles Ordinance No. 184248, 2013 California Plumbing Code, 2013 California Green Building Code (CALGreen) 2014 Los Angeles Plumbing Code, and 2014 Los Angeles Green Building Code.*			
[e] *Base Demand Adjustment is the estimated savings due to Ordinance No. 180822 accounted for in the current version of LASAN Sewer Generation Rates.*			
[f] *Includes 21,858 sf of new retail/restaurant use and conversion of 5,055 sf of existing retail/warehouse uses.*			
[g] *Landscaping water use is estimated per CCR Title 23, Division 2, Chapter 2.7, Model Water Efficient Landscape Ordinance.*			
[h] *Auto parking water uses are based on LASAN Generation Rates table, and 12 times/year cleaning assumption.*			
[i] *Residential is assumed to operate 24 hours/day, 7 days/week, and 55 percent of chiller capacity. Office is assumed to operate 14 hours/day, 5 days/week, and 65 percent of chiller capacity. Retail is assumed to operate 14 hours/day, 7 days/week, and 65 percent of chiller capacity.*			
[j] *Water conservation due to additional conservation commitments agreed to by the Applicant. Table II of the WSA provides a detailed breakdown of these conservation commitments and is included in Appendix P of this Draft EIR.*			
Source: LADWP, Water Supply Assessment—2143 Violet Street Project, February 26, 2019.			

features as set forth in Project Design Feature WAT-PDF-1, above.[75] As stated in the WSA, LADWP concluded that the projected water supplies for normal, single-dry, and multiple-dry years reported in LADWP's 2015 UWMP would be sufficient to meet the Project's estimated water demand, in addition to the existing and planned future water demands within LADWP's service area through the year 2040.

The 2015 UWMP utilized SCAG's 2012–2035 RTP data that provided for more reliable water demand forecasts, taking into account changes in population, housing units and employment. The Project would generate a net of approximately 830 new residents,[76]

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[75] *LASAN wastewater generation rates do not account for water conservation features and therefore, the Project's estimated water demand is conservative. With implementation of Project Design Feature WAT-PDF-1, the Project would incorporate sustainability features such as efficient plumbing features, drought-tolerant landscaping, and modern irrigation, that would reduce the Project's net increase in water demand by at least 20 percent pursuant to the City's Green Building Code.*

[76] *Based on a rate of 2.42 persons per multi-family unit based on the 2017 American Community Survey 5-Year Average Estimates per correspondence with Jack Tsao, Data Analyst II, Los Angeles Department of City Planning, July 31, 2019.*

347 new households, and up to 961 new employees. The Project would be consistent with growth projections anticipated by the SCAG and the demographic projection for the City in both the 2012–2035 RTP/SCS and 2016–2040 RTP/SCS. Specifically, based on SCAG's projections for the City of Los Angeles Subregion between 2018 and 2024 (buildout year), the estimated 830 residents generated by the Project would represent approximately 0.55 percent of the projected population growth, the estimated 347 households would represent approximately 0.44 percent of the projected household growth, and the estimated 961 employees would represent approximately 0.95 percent of the projected employment growth.[77] Therefore, the Project would be well within SCAG's projections for the City of Los Angeles Subregion.

Based on the above, LADWP determined that the Project's net water demand of 109,015 gpd (approximately 122.13 AFY) has been accounted for in the City's overall total demand projections set forth in its 2015 UWMP. Specifically, the 2015 LADWP UWMP forecasts adequate water supplies to meet all projected water demands in the City through the year 2040 during average years, single-dry years, and multiple-dry years. LADWP, therefore, concluded that the increase in water demand for the Project falls within the available and projected water supplies during an average year, single-dry year, and multiple-dry year through the year 2040, as well as the intervening years (i.e., 2024), as described in its 2015 UWMP. As outlined in its 2015 UWMP, LADWP is committed to providing a reliable water supply for the City. The 2015 LADWP UWMP takes into account the realities of climate change and the concerns of drought and dry weather and notes that the City of Los Angeles will meet all new demand for water due to projected population growth through a combination of water conservation and water recycling. The 2015 LADWP UWMP also furthers the goals of the City's ED 5 and Sustainable City pLAn, addresses the current and future SWP supply shortages, and concludes that MWD's actions in response to the threats to the SWP will ensure continued reliability of its water deliveries. By focusing on demand reduction and alternative sources of water supplies, LADWP will further ensure that long-term dependence on MWD supplies will not be

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[77] *Based on a linear interpolation of SCAG's 2012–2040 data, the 2018 values for population, housing, and employment are calculated using SCAG's 2012 and 2040 values to find the average increase between years and then applying that annual increase to each year until 2024.*

Population growth between 2018 (4,009,193 persons) and 2024 (4,172,886 persons) is approximately 163,693 persons. The Project's 830 net new residents would represent approximately 0.3 percent of this growth ((830 ÷ 163,693) x 100 = 0.51).

Household growth between 2018 (1,403,671 households) and 2024 (1,481,843 households) is approximately 78,171 households. The Project's 347 net new households would represent approximately 0.26 percent of this growth ((347 ÷ 78,171) x 100 = 0.44).

Employment growth between 2018 (1,797,693 employees) and 2024 (1,898,986 employees) is approximately 101,293 employees. The Project's 961 net new employees would represent approximately 0.69 percent of this growth ((961 ÷ 101,293) x 100 = 0.95).

exacerbated by potential future shortages. Additionally, water conservation and recycling will play an increasing role in meeting future water demands in the City.

Based on the above, LADWP would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, single-dry, and multiple-dry years. Therefore, the Project's operation-related impacts on water supply would be less than significant.

(2) Mitigation Measures

Project impacts with regard to water supply would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Project impacts with regard to water supply would be less than significant without mitigation.

e. Cumulative Impacts

(1) Impact Analysis

(a) Water Infrastructure

The geographic context for the cumulative impact analysis on water infrastructure is the vicinity of the Project Site (i.e., the water infrastructure that would serve both the Project and related projects). Development of the Project and future new development in the vicinity of the Project Site would cumulatively increase demands on the existing water infrastructure system. However, as with the Project, other new development projects would be subject to LADWP review to assure that the existing public infrastructure would be adequate to meet the domestic and fire water demands of each project, and individual projects would be subject to LADWP and City requirements regarding infrastructure improvements needed to meet respective water demands, flow and pressure requirements, etc. As noted in the Utility Report and discussed above, the fire hydrants that serve the Project Site do not meet the fire flow requirement of 6,000 to 9,000 combined gpm per the LAMC. In order to supply sufficient flow and pressure to satisfy the needs of fire suppression, the Project would include construction of new public water mains within the public right of way. Furthermore, to ensure its infrastructure is sufficient to meet ongoing demand, LADWP will continue to implement its $6.3 billion five-year water system capital improvement plan, which includes replacement of distribution mainlines, trunk lines, large valves, and water meters, as well as ongoing maintenance and rehabilitation of facilities

such as pump stations, pressure regulators, and in-city reservoirs and tanks.[78] **Therefore, Project impacts on water facilities, including infrastructure, would not be cumulatively considerable, and cumulative impacts would be less than significant**.

(b) Water Supply

The geographic context for the cumulative impact analysis on water supply is the LADWP service area (i.e., the City and portions of the cities of West Hollywood, Culver City, South Pasadena, and the Owens Valley). As discussed above, LADWP, as a public water service provider, is required to prepare and periodically update its urban water management plan to plan and provide for water supplies to serve existing and projected demands. LADWP's 2015 UWMP accounts for existing development within the City, as well as projected growth through the year 2040.

As identified in Section III, Environmental Setting, of this Draft EIR, there are 73 related projects located in the Project vicinity. The estimated water demand of the related projects is shown in Table IV.K.1-5 on page IV.K.1-37. As shown therein, the related projects would generate a total average water demand of approximately 5,178,367 gpd (or approximately 5,801 AFY). The estimate of the related projects' water demand is conservative as it does not account for water conservation measures, such as the mandatory indoor water reduction rates required by the City of Los Angeles Green Building Code. Combined with the Project's net increase in water demand of 109,015 gpd (approximately 122 AFY), this equates to a cumulative increase in average daily water use of approximately 5,287,382 gpd (approximately 5,923 AFY), or 1.12 percent of LADWP's water supply in 2017.

As previously stated, based on water demand projections through 2040 in its 2015 UWMP, LADWP determined that it will be able to reliably provide water to its customers through the year 2040, as well as the intervening years (i.e., 2024, the project buildout year) based on demographic growth projections in SCAG's 2012–2035 RTP/SCS, which includes the Project and related projects. The WSA prepared for the Project and included as Appendix P of this Draft EIR also concluded that LADWP will be able to meet proposed water demand of the Project together with the existing and planned future water demands of the City. In addition, compliance of the Project and other future development projects with the numerous regulatory requirements that promote water conservation described above would also reduce water demand on a cumulative basis. For example, certain related projects would be subject to the Los Angeles Green Building Code requirement to reduce indoor water use by at least 20 percent and all projects would be required to use fixtures that conserve water. In addition, as with the Project, certain large related projects

[78] *LADWP, 2017-18 Water Infrastructure Plan, revised June 2018.*

Table IV.K.1-5
Cumulative Water Demand

No.	Project	Land Use	Size	Generation Factor[a,b]	Total Daily Water Demand (gpd)
1	540 S. Santa Fe Ave.	Office	65,800 sf	0.120 gpd/sf	7,896
2	601 S. Main St.	Apartment	452 du	190 gpd/du	85,880
		Retail	25,000 sf	0.025 gpd/sf	625
3	150 N. Los Angeles St.	Office	713,000 sf	0.120 gpd/sf	85,560
		Retail	35,000 sf	0.025 gpd/sf	875
		Child Care (2,500 sf)[c]	34 ch	9 gpd/ch	306
4	534 S. Main St.	Apartment	160 du	190 gpd/du	30,400
		Retail	18,000 sf	0.025 gpd/sf	450
		Restaurant (3,500 sf)	140 seats	30 gpd/seat	4,200
		Fast-Food Restaurant	3,500 sf	25 gpd/seat	87,500
5	1057 S. San Pedro St.	Office	294,600 sf	0.120 gpd/sf	35,352
		Retail	224,900 sf	0.050 gpd/sf	11,245
		Cinema	744 seats	3 gpd/seat	2,232
		Apartment	877 du	190 gpd/du	166,630
		Condominium	68 du	190 gpd/du	12,920
		Hotel	210 rm	120 gpd/rm	25,200
		Medical Office	77,300 sf	0.25 gpd/sf	19,325
6	1525 E. Industrial St.	Apartment	328 du	190 gpd/du	62,320
		Office	27,300 sf	0.120 gpd/sf	3,276
		Retail	6,400 sf	0.025 gpd/sf	160
		Restaurant (5,700 sf)	228 seats	30 gpd/seat	6,840
7	950 E. 3rd St.	School	532 stu	11 gpd/stu	5,852
		Retail	30,100 sf	0.050 gpd/sf	1,505
		Apartment	635 du	190 gpd/du	120,650
8	2051 E. 7th St.	Apartment	320 du	190 gpd/du	60,800
		Retail	15,000 sf	0.025 gpd/sf	375
		Restaurant (5,000 sf)	200 seats	30 gpd/seat	6,000

Table IV.K.1-5 (Continued)
Cumulative Water Demand

No.	Project	Land Use	Size	Generation Factor[a,b]	Total Daily Water Demand (gpd)
9	963 E. 4th St.	Office	79,000 sf	0.120 gpd/sf	9,480
		Retail	25,000 sf	0.025 gpd/sf	625
		Restaurant (20,000 sf)	800 seats	30 gpd/seat	24,000
10	826 S. Mateo St.	Condominium	90 du	190 gpd/du	17,100
		Retail	11,000 sf	0.025 gpd/sf	275
		Restaurant (5,600 sf)	224 seats	30 gpd/seat	6,720
11	2030 E. 7th St.	Office	243,600 sf	0.120 gpd/sf	29,232
		Retail	40,000 sf	0.025 gpd/sf	1,000
12	360 S. Alameda St.	Apartment	55 du	190 gpd/du	10,450
		Retail	2,500 sf	0.025 gpd/sf	63
		Creative Office	6,300 sf	0.120 gpd/sf	756
13	649 S. Wall St.	Assisted Living[d]	55 beds	70 gpd/bed	3,850
		Office (55 emp)[e]	8,800 sf	0.120 gpd/sf	1,056
14	410 Center St.	Office	110,000 sf	0.120 gpd/sf	13,200
15	500 S. Mateo St.	Restaurant (12,820 sf)	513 seats	30 gpd/seat	15,390
16	400 S. Alameda St.	Hotel	66 rm	120 gpd/rm	7,920
		Retail	840 sf	0.025 gpd/sf	21
		Restaurant (2,130 sf)	85 seats	30 gpd/seat	2,550
17	719 E. 5th St.	Apartment	160 du	190 gpd/du	30,400
		Retail	7,500 sf	0.025 gpd/sf	188
18	2130 E. Violet St.	Office	94,000 sf	0.120 gpd/sf	11,280
		Retail	7,450 sf	0.025 gpd/sf	186
19	929 E. 2nd St.	Mixed Use Private Club[f]	48,900 sf	0.350 gpd/sf	17,115
20	1800 E. 7th St.	Apartment	122 du	190 gpd/du	23,180
		Office	13,600 sf	0.120 gpd/sf	1,632
21	1722 E. 16th St.	Restaurant (8,151 sf)	326 seats	30 gpd/seat	9,780

Table IV.K.1-5 (Continued)
Cumulative Water Demand

No.	Project	Land Use	Size	Generation Factor[a,b]	Total Daily Water Demand (gpd)
22	454 E. Commercial St.	LADOT Bus Facility[g]	87,120 sf	0.020 gpd/sf	1,742
23	118 S. Astronaut E.S. Onizuka St.	Apartment	77 du	190 gpd/du	14,630
24	555 S. Mateo St.	Retail	153,000 sf	0.050 gpd/sf	7,650
25	1000 S. Santa Fe. Ave.	Private Club[f]	59,000 sf	0.350 gpd/sf	20,650
		Guest Rooms	48 rm	120 gpd/rm	5,760
26	2110 Bay St.	Apartment	110 du	190 gpd/du	20,900
		Office	113,000 sf	0.120 gpd/sf	13,560
		Retail	43,700 sf	0.025 gpd/sf	1,093
27	330 S. Alameda St.	Apartment	186 du	190 gpd/du	35,340
		Commercial	22,000 sf	0.050 gpd/sf	1,100
28	668 S. Alameda St.	Apartment	475 du	190 gpd/du	90,250
		Commercial	84,000 sf	0.050 gpd/sf	4,200
29	520 Mateo St.	Live/Work	475 units	190 gpd/du	90,250
		Office	105,000 sf	0.120 gpd/sf	12,600
		Retail	10,000 sf	0.025 gpd/sf	250
		Restaurant (10,000 sf)	400 sf	30 gpd/seat	12,000
30	717 Maple Ave.	Apartment	452 du	190 gpd/du	85,880
		Retail	14,000 sf	0.025 gpd/sf	350
31	433 S. Main St.	Condominium	191 du	190 gpd/du	36,290
		Retail	5,300 sf	0.025 gpd/sf	133
		Coffee Shop	900 sf	0.720 gpd/sf	648
32	676 Mateo St.	Apartment	185 du	190 gpd/du	35,150
		Commercial	27,000 sf	0.050 gpd/sf	1,350

Table IV.K.1-5 (Continued)
Cumulative Water Demand

No.	Project	Land Use	Size	Generation Factor[a,b]	Total Daily Water Demand (gpd)
33	732 Wall St.	Apartment	323 du	190 gpd/du	61,370
		Office	53,200 sf	0.120 gpd/sf	6,384
		Retail	4,400 sf	0.025 gpd/sf	110
		Wholesale/Storage	63,600 sf	0.030 gpd/sf	1,908
		Restaurant (4,420 sf)	177 seats	30 gpd/seat	5,310
		Event Space[h]	9,200 sf	0.350 gpd/sf	3,220
34	333 S. Alameda St.	Apartment	994 du	190 gpd/du	188,860
		Retail	993,000 sf	0.050 gpd/sf	49,650
35	1129 E. 5th St.	Retail	27,000 sf	0.025 gpd/sf	675
		Restaurant (31,700 sf)	1,268 seats	30 gpd/seat	38,040
		Hotel	113 rm	120 gpd/rm	13,560
		Apartment	129 du	190 gpd/du	24,510
		Art School (3,430 sf)[i]	36 stu	11 gpd/stu	396
		Art Space[j]	10,340 sf	0.030 gpd/sf	310
36	2650 E. Olympic Blvd.	Apartment	1,000 du	190 gpd/du	190,000
		Restaurant (46,000 sf)	1,840 seats	30 gpd/seat	55,200
		Office	230,000 sf	0.120 gpd/sf	27,600
37	670 Mesquit St.	Hotel	236 rm	120 gpd/rm	28,320
		Apartment	308 du	190 gpd/du	58,520
		Retail	79,200 sf	0.025 gpd/sf	1,980
		Restaurant (89,600 sf)	3,584 seats	30 gpd/seat	107,520
		Event Space[h]	93,600 sf	0.350 gpd/sf	32,760
		Gym[k]	62,200 sf	0.650 gpd/sf	40,430
		Grocery/Food Hall[l]	56,900 sf	0.050 gpd/sf	2,845
		Office	944,100 sf	0.120 gpd/sf	113,292
38	237 S. Los Angeles St.	Sports Complex[m]	43,000 sf	0.200 gpd/sf	8,600

Table IV.K.1-5 (Continued)
Cumulative Water Demand

No.	Project	Land Use	Size	Generation Factor[a,b]	Total Daily Water Demand (gpd)
39	640 S. Santa Fe Ave.	Office	91,200 sf	0.120 gpd/sf	10,944
		Retail	9,400 sf	0.025 gpd/sf	235
		Restaurant (6,600 sf)	264 seats	30 gpd/seat	7,920
40	1745 E. 7th St.	Apartment	57 du	190 gpd/du	10,830
		Commercial	6,000 sf	0.050 gpd/sf	300
41	940 E. 4th St.	Apartment	93 du	190 gpd/du	17,670
		Office	6,000 sf	0.120 gpd/sf	720
		Retail	12,300 sf	0.025 gpd/sf	308
42	609 E. 5th St.	Apartment	151 du	190 gpd/du	28,690
43	713 E. 5th St.	Apartment	51 du	190 gpd/du	9,690
44	1000 S. Mateo St.	Apartment	113 du	190 gpd/du	21,470
		Commercial	134,000 sf	0.050 gpd/sf	6,700
45	2159 E. Bay St.	Creative Office	202,954 sf	0.120 gpd/sf	24,354
		Retail/Restaurant (16,000 sf)	640 seats	30 gpd/seat	19,200
		Event/Meeting Space[n]	3,235 sf	0.120 gpd/sf	388
46	401 S. Hewitt St.	Office	255,500 sf	0.120 gpd/sf	30,660
		Retail	4,970 sf	0.025 gpd/sf	124
47	552 S. San Pedro St.	Affordable Housing	407 du	190 gpd/du	77,330
		Retail	12,300 sf	0.050 gpd/sf	615
48	1005 S. Mateo St.	Industrial Park	94,800 sf	0.050 gpd/sf	4,740
49	1800 E. 1st St.	Apartment	65 du	190 gpd/du	12,350
		Retail	5,000 sf	0.025 gpd/sf	125
50	755 S. Los Angeles St.	Retail	16,700 sf	0.025 gpd/sf	418
		Office	60,200 sf	0.120 gpd/sf	7,224
		Restaurant (27,000 sf)	1,080 seats	30 gpd/seat	32,400
51	601 S. Central Ave.	Apartment	236 du	190 gpd/du	44,840
		Retail	12,000 sf	0.025 gpd/sf	300

Table IV.K.1-5 (Continued)
Cumulative Water Demand

No.	Project	Land Use	Size	Generation Factor[a,b]	Total Daily Water Demand (gpd)
52	527 Colyton St.	Condominium	310 du	190 gpd/du	58,900
		Retail	11,400 sf	0.050 gpd/sf	570
		Production Space[o]	11,700 sf	0.050 gpd/sf	585
53	1100 E. 5th St.	Apartment (Live/Work)	220 du	190 gpd/du	41,800
		Commercial	49,000 sf	0.050 gpd/sf	2,450
54	600 S. San Pedro St.	Apartment	303 du	190 gpd/du	57,570
		Retail	20,000 sf	0.025 gpd/sf	500
55	655 S. San Pedro St.	Apartment	81 du	190 gpd/du	15,390
56	656 S. Stanford Ave.	Apartment	82 du	190 gpd/du	15,580
57	641 Imperial St.	Residential	140 du	190 gpd/du	26,600
		Office	14,700 sf	0.120 gpd/sf	1,764
58	2901 E. Olympic Blvd.	Apartment	4,400 du	190 gpd/du	836,000
		Retail	185,000 sf	0.050 gpd/sf	9,250
		Office	125,000 sf	0.120 gpd/sf	15,000
		Medical Office	25,000 sf	0.250 gpd/sf	6,250
		Daycare (15,000 sf)[c]	205 ch	9 gpd/ch	1,845
		Library	15,000 sf	0.050 gpd/sf	750
59	2407 E. 1st St.	Apartment	50 du	190 gpd/du	9,500
		Office	8,500 sf	0.120 gpd/sf	1,020
		Retail	3,400 sf	0.025 gpd/sf	85
60	810 E. 3rd St.	Apartment	4 du	190 gpd/du	760
		Restaurant (3,500 sf)	140 seats	30 gpd/seat	4,200
		Retail	6,200 sf	0.025 gpd/sf	155

Table IV.K.1-5 (Continued)
Cumulative Water Demand

No.	Project	Land Use	Size	Generation Factor[a,b]	Total Daily Water Demand (gpd)
61	1206 E. 6th St.	Apartment	1,305 du	190 gpd/du	247,950
		Condominium	431 du	190 gpd/du	81,890
		Hotel	510 rm	120 gpd/rm	61,200
		Office	253,514 sf	0.120 gpd/sf	30,422
		School (29,316 sf)	300 stu	11 gpd/stu	3,300
		Commercial	127,609 sf	0.050 gpd/sf	6,380
		Live Theater	400 seats	3 gpd/seat	1,200
62	554 S. San Pedro St.	Apartment	303 du	190 gpd/du	57,570
		Commercial	19,900 sf	0.050 gpd/sf	995
63	443 S. Soto St.	School	625 stu	11 gpd/stu	6,875
64	1024 S. Mateo St.	Apartment	104 du	190 gpd/du	19,760
		Office	102,000 sf	0.120 gpd/sf	12,240
		Restaurant (16,300 sf)	652 seats	30 gpd/seat	19,560
		Retail	5,830 sf	0.025 gpd/sf	146
		Industrial	5,500 sf	0.050 gpd/sf	275
65	755 S. Wall St.	Office	53,200 sf	0.120 gpd/sf	6,384
		Apartment	323 du	190 gpd/du	61,370
		Retail	4,400 sf	0.025 gpd/sf	110
66	508 E. 4th St.	Apartment	41 du	190 gpd/du	7,790
67	2001 E. Washington Blvd.	Industrial	187,000 sf	0.050 gpd/sf	9,350
68	300 S. Main St.	Apartment	471 du	190 gpd/du	89,490
		Retail	5,190 sf	0.050 gpd/sf	260
		Restaurant (27,800 sf)	1,112 seats	30 gpd/seat	33,360
69	100 S. Boyle Ave.	Affordable Housing	44 du	190 gpd/du	8,360
		Retail	8,000 sf	0.025 gpd/sf	200
70	2053 E. 7th St.	Hotel (53,400 sf)[p]	82 rm	120 gpd/rm	9,840

Table IV.K.1-5 (Continued)
Cumulative Water Demand

No.	Project	Land Use	Size	Generation Factor[a,b]	Total Daily Water Demand (gpd)
71	401 E. 7th St.	Affordable Housing	99 du	190 gpd/du	18,810
72	443 S. Soto St.	Elementary School	625 stu	9 gpd/stu	5,625
73	777 S. Alameda St.	Restaurant (117,375 sf)	4,695 seats	30 gpd/seat	140,850
		Retail	66,155 sf	0.025 gpd/sf	1,654
		Office	850,444 sf	0.120 gpd/sf	102,053
		Hotel	125 rm	120 gpd/rm	15,000
74	2124–2132 E. 7th Pl.	Retail/Waterhouse-Restaurant Conversion (5,055 sf)	202 seats	30 gpd/seat	6,060
Related Projects					**5,178,367**
Project					**109,015**
Related + Project					**5,287,382**

ch = children

du = dwelling units

emp = employees

rm = rooms

sf = square feet

stu = students

[a] *This analysis is based on sewage generation rates provided by LASAN's Sewerage Facilities Charge, Sewage Generation Factor for Residential and Commercial Categories, effective April 6, 2012.*

[b] *This analysis conservatively assumes that all dwelling units are 3-bedroom units. In addition, the seat count for restaurant uses assumes 1 seat per 25 square feet.*

[c] *The Elementary School rate of 73 square feet per student or child is used to calculate the number of students/children generated by this use. The rate is provided by the California Department of Education, Report on Complete Schools, May 23, 2007. Report is available for download at www.cde.ca.gov/ls/fa/sf/completesch.asp.*

[d] *Sewage generation rates provided by LASAN do not include a rate for "Assisted Living" uses. Therefore, the most comparable land use rate of 70 gallons per day per bed for "Rest Home" is applied.*

Table IV.K.1-5 (Continued)
Cumulative Water Demand

No.	Project	Land Use	Size	Generation Factor[a,b]	Total Daily Water Demand (gpd)

[e] The rate of 160 square feet per employee for the Los Angeles market is used to calculate the square footage of the proposed office space. This rate is provided in Cushman & Wakefied's Space Matters—Occupancy Report, published on May 9, 2018. The report is accessible and available for download at https://www.cushmanwakefield.com/en/united-states/insights/space-matters.

[f] Sewage generation rates provided by LASAN do not include a rate for "Private Club" uses. Therefore, the most comparable land use rate of 350 gallons per 1,000 square feet for "Dancing Area (of Bars or Nightclub)" is applied.

[g] Sewage generation rates provided by LASAN do not include a rate for "Bus Facility" uses. Therefore, the most comparable land use rate of 20 gallons per 1,000 square feet for "Auto Parking" is applied.

[h] Sewage generation rates provided by LASAN do not include a rate for "Event Space" uses. Therefore, the most comparable land use rate of 350 gallons per 1,000 square feet for "Banquet Room" is applied.

[i] The High School rate of 95 square feet per student is used to calculate the number of students generated by this use. The rate is provided by the California Department of Education, Report on Complete Schools, May 23, 2007. Report is available for download at www.cde.ca.gov/ls/fa/sf/completesch.asp.

[j] Sewage generation rates provided by LASAN do not include a rate for "Art Space" uses. Therefore, the most comparable land use rate of 30 gallons per 1,000 square feet for "Museum: All Area" is applied.

[k] The rate of 650 gallons per 1,000 square feet for "Health Club/Spa" is applied.

[l] Sewage generation rates provided by LASAN do not include a rate for "Grocery/Food Hall" uses. Therefore, the most comparable land use rate of 50 gallons per 1,000 square feet for "Store: Retail" is applied.

[m] Sewage generation rates provided by LASAN do not include a rate for "Sports Complex" uses. Therefore, the most comparable land use rate of 200 gallons per 1,000 square feet for "Gymnasium: Basketball, Volleyball" is applied.

[n] Sewage generation rates provided by LASAN do not include a rate for "Event/Meeting Space" uses. Therefore, the most comparable land use rate of 120 gallons per 1,000 square feet for "Conference Room of Office Bldg." is applied.

[o] Sewage generation rates provided by LASAN do not include a rate for "Production Space" uses. Therefore, the most comparable land use rate of 50 gallons per 1,000 square feet for "Mfg or Industrial Facility (No IW Permit Required)" is applied.

[p] To calculate the number of hotel rooms, a square footage rate of 650 square feet per room is applied. Source: Jan A. deRoos, Cornell University School of Hotel Administration, The Scholarly Commons, Planning and Programming a Hotel, 2011. Document is available for download at http://scholarship.sha.cornell.edu/articles/310.

Source: Eyestone Environmental, 2020.

meeting the thresholds under SB 610 would be required to prepare and receive LADWP approval of a WSA that demonstrates how the project's water demand will be met.

Overall, as discussed above, the 2015 LADWP UWMP demonstrates that the City will meet all new water demands from projected population growth, through a combination of water conservation and water recycling. LADWP's 2015 UWMP specifically outlined the creation of sustainable sources of water for the City to reduce dependence on imported supplies. LADWP's 2015 UWMP also incorporates the goals of ED 5 and the City's Sustainability pLAn. LADWP is planning to achieve these goals by expanding its water conservation efforts through public education, installing high-efficiency water fixtures, providing incentives, and expanding the City's outdoor water conservation program.[79] To increase recycled water use, LADWP is expanding the recycled water distribution system to provide water for irrigation, industrial use, and groundwater recharge.[80] Furthermore, LADWP will continue to update its UWMP every five years to ensure that water supply continues to be available.

Based on the related project list and projections provided in adopted plans (e.g., MWD's 2015 UWMP, LADWP's 2015 UWMP, and Sustainable City pLAn), it is anticipated that LADWP would be able to meet the water demands of the Project (109,015 gpd or approximately 122 AFY) and future growth through 2024 and beyond. The 2015 UWMP forecasts adequate water supplies to meet all projected water demands in the City through the year 2040 during average years, single-dry years, and multiple-dry years. Therefore, significant cumulative impacts with respect to water supply are not anticipated from the development of the Project and the related projects. Project impacts to water supply would not be cumulatively considerable and would be less than significant.

(2) Mitigation Measures

Cumulative impacts with regard to water supply and infrastructure would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Cumulative impacts related to water supply and infrastructure would be less than significant without mitigation.

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[79] *LADWP, 2015 Urban Water Management Plan, June 2016.*

[80] *LADWP, 2015 Urban Water Management Plan, June 2016.*