

## **IV. Environmental Impact Analysis**

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### **L.1 Utilities and Service Systems—Water Supply and Infrastructure**

#### **1. Introduction**

This section of the Draft EIR analyzes the Project's potential impacts to water supply and the water infrastructure system serving the Project Site. The analysis describes regional water supplies and 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. The analysis is based on the *Water Supply Assessment for the 222 West 2nd Project* (WSA), adopted by the Los Angeles Department of Water and Power's (LADWP) Board of Water and Power Commissioners (LADWP Board) on January 9, 2018, and included as Appendix N.1 of this Draft EIR. The analysis of water infrastructure is based, in part, on the *222 West 2nd Street Project Utilities Technical Memorandum* (Utilities Report), prepared by Psomas, dated November 30, 2018, and included in Appendix N.2 of this Draft EIR.

#### **2. Environmental Setting**

##### **a. Regulatory Framework**

###### **(1) State**

###### *(a) Senate Bill 610 (California Water Code Sections 10910 et seq.)*

Senate Bill (SB) 610, codified in the California Water Code (CWC), Sections 10910 et seq., became effective January 1, 2002. SB 610 requires counties and cities to consider the availability of water supplies for certain major development projects as part of the California Environmental Quality Act (CEQA) process. Counties and cities must obtain, at the outset of the CEQA process, a water supply assessment from the applicable public water system for projects that meet certain thresholds. The public water purveyor must determine whether the projected water demand associated with a project is included as part of the most recently adopted urban water management plan. If it was not accounted for in the urban water management plan, the water supply assessment prepared for the project must discuss whether the public water system's supplies are sufficient to meet the project's anticipated water demand in addition to the public water system's existing and

planned future uses. Specifically, a water supply assessment 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, for projects whose projected water demand was not accounted for in the most recently adopted urban water management plan, the water supply assessment must address water supplies over a 20-year future period and consider average, single-dry, and multiple-dry years. In accordance with California Water Code Section 10912, projects subject to CEQA requiring submittal of a water supply assessment include the following:

- 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 housing 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 water supply assessment 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 water supply assessment.

As discussed in Section II, Project Description, of this Draft EIR, the Project involves the development of a 30-story mixed-use building consisting of 107 residential units (comprising an estimated 137,347 square feet), 7,200 square feet of ground level commercial retail uses, and 534,044 square feet of office uses in Downtown Los Angeles. Thus, as the Project includes more than 250,000 square feet of office floor area, a water supply assessment is required for the Project. Refer to the WSA provided in Appendix N.1 of this Draft EIR.

*(b) Senate Bill X7-7 (Water Conservation Act of 2009)*

Senate Bill X7-7 (Water Conservation Act of 2009), codified in California Water Code Section 10608 et seq., requires all water suppliers to increase water use efficiency. Enacted in 2009, this legislation sets an overall goal of reducing per capita urban water use, compared to 2009 use, by 20 percent by December 31, 2020. The State was required to make incremental progress toward 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 25.1 percent in February 2017 as compared to that in February 2013.<sup>1</sup> Cumulative statewide savings from June 2015 through February 2017 were estimated at 22.5 percent.<sup>2</sup> Following a multi-year drought and improvements to hydrologic conditions, statewide potable water savings reached 14.9 percent in September 2017 as compared to September 2013 potable water production.<sup>3</sup>

*(c) California Urban Water Management Planning Act (California Water Code Sections 10610–10656)*

The California Urban Water Management Planning Act of 1983 (California Water Code Sections 10610–10656) requires water suppliers to develop urban 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.

Assembly Bill (AB) 2409 (2010), SB 1036 (2014), AB 2067 (2014), and SB 1420 (2014) made a number of changes to the Urban Water Management Planning Act regarding the preparation of water management plans. These changes 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.

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<sup>1</sup> State Water Resources Control Board, *Fact Sheet, February 2017 Statewide Conservation Data*, updated April 4, 2017.

<sup>2</sup> State Water Resources Control Board, *Media Release, “Statewide Water Savings Exceed 25 Percent in February; Conservation to Remain a California Way of Life,” April 4, 2017*, [www.drought.ca.gov/topstory/top-story-71.html](http://www.drought.ca.gov/topstory/top-story-71.html), accessed March 27, 2018.

<sup>3</sup> State Water Resources Control Board, *Fact Sheet, September 2017 Statewide Conservation Data*, updated November 6, 2017.

*(d) California Plumbing Code*

Title 24, Part 5 of the California Code of Regulations 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 current 2016 California Plumbing Code, which is based on the 2015 Uniform Plumbing Code, has been published by the California Building Standards Commission and went into effect on January 1, 2017. In addition, the California Building Standards Commission approved a Supplement to the 2016 California Plumbing Code in 2017 that went into effect on July 1, 2018.<sup>4</sup>

*(e) Sustainable Groundwater Management Act of 2014*

The Sustainable Groundwater Management Act of 2014 (SGMA), passed in September 2014, is a comprehensive three-bill package that provides a framework for the sustainable management of groundwater supplies by local authorities.<sup>5,6</sup> 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. Under Water Code Section 10720.7, groundwater sustainability agencies responsible for high- and medium-priority basins that are subject to critical conditions of overdraft must adopt groundwater sustainability plans by January 31, 2020, while plans for high- and medium-priority basins that are not in critical overdraft must be adopted by January 31, 2022. SGMA provides 20 years from the implementation of groundwater sustainability plans for groundwater sustainability agencies to achieve the groundwater sustainability goal in the basin. SGMA also 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 required by SGMA, in December 2016, the California Department of Water Resources published on its website the best management practices (BMPs): BMP 1, Monitoring Protocols, Standards, and Sites; BMP 2, Monitoring Networks and Identification of Data Gaps; BMP 3, Hydrogeologic Conceptual

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<sup>4</sup> California Building Standards Commission, *Revision Record for the State of California, Supplement, 2016, Title 24, Part 5 California Plumbing Code*.

<sup>5</sup> *Sustainable Groundwater Management Act [And Related Statutory Provisions from SB1168 (Pavley), AB1739 (Dickinson), and SB1319 (Pavley) as Chaptered], 2015 Amendments, effective January 1, 2016*.

<sup>6</sup> California Department of Water Resources, *SGM Sustainable Groundwater Management*, <http://wdl.water.ca.gov/groundwater/sgm/http://www.water.ca.gov/groundwater/sgm/gsa.cfm>, accessed March 27, 2018.

Model; BMP 4, Water Budget; and BMP 5, Modeling.<sup>7</sup> In November 2017, BMP 6, Sustainable Management Criteria, was released for public comments through January 8, 2018. BMP 6 is still considered in draft form and has not yet been adopted.<sup>8</sup>

(f) *California Code of Regulations Title 23, Article 22.5, Drought Emergency Water Conservation (Emergency Declarations and Executive Orders)*

In response to California’s drought conditions, Governor Edmund G. “Jerry” Brown, Jr. (Governor Brown) issued numerous Executive Orders regarding water conservation. Executive Order B-37-16, which was issued in May 2016, extends the mandatory water reduction measures outlined in previous Executive Order B-29-15 and further directs 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 establishes longer-term water conservation measures that include permanent monthly water use reporting, new urban water use targets, reducing system leaks, eliminating wasteful practices, strengthening urban drought contingency plans, and improving agricultural water management and drought plans.

On November 30, 2016, several 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 requires 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.<sup>9</sup>

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.<sup>10</sup> Additionally, Executive Order B-40-17 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

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<sup>7</sup> California Department of Water Resources, *Best Management Practices and Guidance Documents*, [www.water.ca.gov/Programs/Groundwater-Management/SGMA-Groundwater-Management/Best-Management-Practices-and-Guidance-Documents](http://www.water.ca.gov/Programs/Groundwater-Management/SGMA-Groundwater-Management/Best-Management-Practices-and-Guidance-Documents), accessed March 27, 2018.

<sup>8</sup> California Department of Water Resources, *Best Management Practices and Guidance Documents*, [www.water.ca.gov/Programs/Groundwater-Management/SGMA-Groundwater-Management/Best-Management-Practices-and-Guidance-Documents](http://www.water.ca.gov/Programs/Groundwater-Management/SGMA-Groundwater-Management/Best-Management-Practices-and-Guidance-Documents), accessed October 10, 2018.

<sup>9</sup> 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.

<sup>10</sup> *The Counties of Fresno, Kings, Tulare, and Tuolumne remain under a drought state of emergency, per Executive Order B-40-17.*

practices. Water agencies will continue to strengthen drought readiness and water use efficiency.<sup>11</sup> The regulatory requirements resulting from the existing Executive Orders have been codified in Title 23, Article 22.5, Drought Emergency Water Conservation, of the California Code of Regulations.<sup>12</sup>

*(g) California Water Plan*

Required by the California Water Code Section 10005(a), the California Water Plan (Water Plan) is the State's strategic plan for managing and developing water resources statewide for current and future generations. It provides a collaborative planning framework for elected officials, agencies, tribes, water and resource managers, businesses, academia, stakeholders, and the public to develop findings and recommendations and make informed decisions for California's water future.<sup>13</sup>

The 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 Water Plan help identify effective actions and policies for meeting California's resource management objectives in the near term and for several decades to come. While the Water Plan cannot mandate actions or authorize itemized spending, policy-makers and lawmakers have the ability to authorize specific actions and appropriate necessary funding. In addition, while the California Water Plan Update 2013 represents the latest complete update, the California Water Plan Update 2018 is in development.<sup>14</sup> The California Water Plan Update 2018 will work in tandem with Governor Brown's California Water Action Plan, discussed further below.

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<sup>11</sup> *Governor Brown Lifts Drought Emergency, Retains Prohibition on Wasteful Practices, Executive Order B-40-17.*

<sup>12</sup> *California Department of Water Resources, State Water Resources Control Board, California Public Utilities Commission, California Department of Food and Agriculture, and California Energy Commission, Making Water Conservation a California Way of Life Final Report, April 2017.*

<sup>13</sup> *California Department of Water Resources, California Water Plan, [www.water.ca.gov/Programs/California-Water-Plan](http://www.water.ca.gov/Programs/California-Water-Plan), accessed April 18, 2018.*

<sup>14</sup> *California Department of Water Resources, California Water Plan, [www.water.ca.gov/Programs/California-Water-Plan](http://www.water.ca.gov/Programs/California-Water-Plan), accessed April 18, 2018.*

*(h) California Water Action Plan*

The first California Water Action Plan (Action Plan) was published in January 2014 and most recently updated in January 2016 to provide a roadmap for the State's path toward sustainable water management.<sup>15</sup> 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:<sup>16</sup>

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
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 release of the 2016 Water Action Plan Update, its implementation progress has also been documented with focuses on policy, funding, and coordinated projects.<sup>17</sup> The Action Plan will continue to be implemented simultaneously with the California Water Plan Update 2018 (discussed above) as it is completed.

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<sup>15</sup> *California Department of Natural Resources, California Water Action Plan, [http://resources.ca.gov/california\\_water\\_action\\_plan/](http://resources.ca.gov/california_water_action_plan/), accessed March 27, 2018.*

<sup>16</sup> *California Department of Natural Resources, California Water Action Plan 2014.*

<sup>17</sup> *California Department of Natural Resources, California Water Action Plan Implementation Report*

## (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–San Joaquin River Delta (Delta), the 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.

### *(a) MWD’s Integrated Water Resources Plan*

The Integrated Water Resources Plan (IRP) is the long-term water resources strategy for the MWD in Southern California. First adopted in 1996, the goal of the IRP is to ensure a reliable water system will extend into the future. The 2015 IRP Update, adopted in January 2016, provides MWD’s strategy for water resource reliability through the year 2040 and establishes targets for a diversified portfolio of water supply investments. 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.<sup>18</sup>

### *(b) MWD’s 2015 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.<sup>19</sup> 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, as well as average 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

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<sup>18</sup> *Metropolitan Water District of Southern California, Integrated Water Resources Plan 2015 Update, January 2016.*

<sup>19</sup> *Metropolitan Water District of Southern California, 2015 Urban Water Management Plan, June 2016.*



Storage Requirement to mitigate against potential interruption in water supplies resulting from catastrophic occurrences within the Southern California region, including seismic events along the San Andreas fault. 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, Central Valley transfers, local resource projects, and in-region storage that enables the region to meet its water supply needs. As set forth in their 2015 UWMP, MWD will also continue investments in water use efficiency measures to help the region achieve the 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.<sup>20</sup> 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 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 includes a set of general actions and considerations for MWD staff to address during shortage conditions, it does not include a detailed water supply allocation plan or implementation approach. Therefore, MWD adopted the Water Supply Allocation Plan (WSAP) in February 2008 to encourage proactive steps to reduce the region's water demand to mitigate the need for more severe

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<sup>20</sup> *Metropolitan Water District of Southern California, Water Surplus and Drought Management Plan: Report No. 1150, August 1999.*

actions, up to and including the implementation of the plan to allocate water supply shortages to member agencies.<sup>21</sup> The MWD Board adopted adjustments to the WSAP most recently in December 2014.<sup>22</sup> The WSAP 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 months from July of a given year through the following June.

The WSAP identifies four conditions, each calling for an increasingly heightened level of conservation response:<sup>23</sup>

- Baseline Water Use Efficiency;
- Condition 1: Water Supply Watch;
- Condition 2: Water Supply Alert;
- Condition 3: Water Supply Allocation.

The record dry and hot conditions of 2014 significantly impacted the water resources of both the State and MWD. The WSAP has been implemented three times, most recently in April 2015. The DWR limited supplies from State Water Project to only five percent of the contractors' allocated amounts in 2014. This allocation was the lowest ever in the history of State Water Project. The MWD was able to meet demands in 2014 by relying heavily on storage reserves to make up for the historically low allocation. MWD's dry-year storage reserves ended 2014 at approximately 1.2 million acre-feet (AF). In April 2015, to support Governor Brown's Executive Order B-29-15 and to reduce withdrawals from MWD's dry-year storage reserves, the MWD implemented the WSAP at a Level 3 Regional Shortage Level through June 2016. The MWD dry-year storage reserves ended 2015 at approximately 0.87 million AF. Following improved water supply conditions and reduced water use due to conservation, in May 2016, the MWD voted to end the current WSAP allocation, rescind WSAP Regional Shortage Level 3, and declare a Condition 2 Water

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<sup>21</sup> *Metropolitan Water District of Southern California, 2015 Urban Water Management Plan, June 2016.*

<sup>22</sup> *Metropolitan Water District of Southern California, Board of Directors Water Planning and Stewardship Committee, Board Action, 5/10/2016 Board Meeting.*

<sup>23</sup> *Metropolitan Water District of Southern California, 2015 Urban Water Management Plan, June 2016.*

Supply Alert for allocation year 2016–2017. Nonetheless, the MWD called for member agencies to continue with conservation efforts to safeguard against future dry years. On May 9, 2017, in response to continued and significantly improved statewide hydrologic conditions, MWD moved from the Water Supply Alert implemented in the previous fiscal year to a Water Supply Watch.<sup>24</sup>

### (3) Local

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

The 2015 UWMP, adopted in June 2016 by the LADWP, serves two purposes: (i) to achieve full compliance with the requirements of California's Urban Water Management Planning Act (described above); and (ii) to serve as a master plan for water supply and resource management consistent with the City's goals and objectives.<sup>25</sup>

A number of important changes have occurred since the LADWP prepared its prior 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 mandated 25-percent reductions in water use statewide. In October 2014, City of Los Angeles (City) Mayor Eric Garcetti issued Executive Directive No. 5 (ED 5), which set goals to reduce per capita water use by 20 percent by 2017, to reduce purchases of imported potable water by 50 percent by 2024, and to create an integrated water strategy to increase local supplies and improve water security in the context of 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. LADWP's 2015 UWMP incorporates the objectives of these initiatives. Overall, LADWP's 2015 UWMP projects a 7-percent lower water demand trend than what was projected in the 2010 UWMP.<sup>26</sup> On February 2, 2017, the Mayor announced that the City's 20 percent water reduction target had been met.<sup>27</sup>

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<sup>24</sup> *Metropolitan Water District of Southern California, News Release, "Metropolitan Takes Region Off Water Alert, But Maintains Call for Voluntary Water Saving," May 9, 2017.*

<sup>25</sup> *Los Angeles Department of Water and Power, 2015 Urban Water Management Plan, June 2016.*

<sup>26</sup> *Los Angeles Department of Water and Power, Water Supply Assessment for the 222 West 2nd Project, January 9, 2018.*

<sup>27</sup> *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, [www.lamayor.org/los-angeles-achieves-mayor-garcetti%E2%80%99s-goal-20-percent-water-savings](http://www.lamayor.org/los-angeles-achieves-mayor-garcetti%E2%80%99s-goal-20-percent-water-savings), accessed March 27, 2018.*

*(b) Sustainable City pLAN<sup>28</sup>*

In April 2015, the City's first Sustainable City pLAN (pLAN) was released. The pLAN includes 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 builds 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 from Fiscal Year 2013–2014 levels. The pLAN also includes a reduction in imported water purchases from MWD by 50 percent of the total supply by 2025 and a goal to expand local sources of water to 50 percent of the total water supply by 2035. Specific strategies and desired outcomes for conservation, recycled water, and stormwater capture are included in the pLAN. These include investments in 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 efficiency programs.

In April 2016, the Sustainable City pLAN's First Annual Report for 2015–2016 was released. The report indicated the City reduced water use by 19 percent to nearly achieve the 20 percent water reduction goal and concluded that rebates for water-efficient appliances contributed to conservation.<sup>29</sup> As discussed above, as of February 2017, the City met its 20 percent water reduction target, which also met the Sustainable City pLAN's goal. The Sustainable City pLAN's Second Annual Report for 2016–2017 was released in March 2017, and the City has begun working toward its next goal of reducing municipal water use by 22.5 percent by 2025.

*(c) Los Angeles Municipal Code*

The City has adopted several ordinances, codified 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—These ordinances amended 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. As part of these requirements, watering is limited to specific days and hours. The City's Emergency Water Conservation Plan sets forth six different phases of water conservation, which are implemented based on water conditions. In determining which phase of water conservation is implemented,

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<sup>28</sup> *Mayor's Office of Sustainability, Sustainable City pLAN, April 2015.*

<sup>29</sup> *Mayor's Office of Sustainability, Sustainable City pLAN, First Annual Report for 2015–2016, April 2016.*

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—This ordinance 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.
- City Ordinance No. 181,480—This ordinance amended LAMC Chapter IX by adding Article 9 (Green Building Code) 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—These ordinances 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—This ordinance 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 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—This ordinance 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—This ordinance 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). In particular, 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 (which the LAFD has classified the Project as) have a minimum required fire flow of 6,000 gpm to 9,000 gpm from four to six adjacent hydrants flowing simultaneously with a residual pressure of 20 psi unless otherwise determined by LAFD. 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 double fire hydrants 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.

*(d) Los Angeles Water Rate Ordinance*

The City's Water Rate Ordinance was adopted in June 1995 and last amended by the LADWP Board 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 supply. 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. Past and current implementation of water rate price signals and higher ordinance phases have resulted in reducing the total customer water usage, on average, by approximately 20.1 percent over the period from June 2009 to September 2017.<sup>30</sup>

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<sup>30</sup> *Los Angeles Department of Water and Power, Water Supply Assessment for the 222 West 2nd Project, January 9, 2018.*

## b. Existing Conditions

### (1) Water Supply

LADWP is responsible for providing water within the City 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, local groundwater, purchased water from MWD, and recycled water.<sup>31</sup> As shown in Table IV.L.1-1 on page IV.L.1-16, in 2016, the LADWP had an available water supply of 492,447 acre-feet, of which approximately 19 percent was from the Los Angeles Aqueducts, approximately 15 percent from local groundwater, approximately 64 percent from the MWD, and approximately 2 percent from recycled water. These 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 Los Angeles Aqueducts (LAA). The LAA's supplies come primarily from snowmelt and secondarily from groundwater pumping, and can fluctuate yearly due to the varying hydrologic 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.L.1-1, approximately 95,566 acre-feet of LADWP's water supplies were from the LAA in 2016. Average deliveries from the LAA system from 2011 through 2016 were approximately 130,344 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 affecting 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 must continue to implement measures to address dust emissions at Owens Lake and implement additional

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<sup>31</sup> Los Angeles Department of Water and Power, *Water Supply Assessment for the 222 West 2nd Project*, January 9, 2018.

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

<b>Calendar Year</b>	<b>Los Angeles Aqueducts</b>	<b>Local Groundwater</b>	<b>MWD</b>	<b>Recycled Water</b>	<b>Total<sup>a</sup></b>
2007	127,392	88,041	439,353	3,595	<b>658,438</b>
2008	148,407	64,604	427,422	7,048	<b>645,817</b>
2009	137,261	66,998	351,959	7,570	<b>563,234</b>
2010	251,126	68,346	205,240	6,900	<b>532,550</b>
2011	357,752	49,915	119,481	7,708	<b>535,009</b>
2012	166,858	59,109	326,122	5,965	<b>556,873</b>
2013	64,690	66,272	438,534	9,253	<b>581,153</b>
2014	63,960	94,394	391,325	11,307	<b>561,153</b>
2015	33,236	80,155	378,439	9,829	<b>500,432</b>
2016	95,566	72,503	314,301	9,095	<b>492,447</b>

*Units are in acre-feet.*

<sup>a</sup> *The figures presented account for the transfer, spread, spill, and storage of the water supply as determined by LADWP.*

*Source: Los Angeles Department of Water and Power, Water Supply Assessment for the 222 West 2nd Project, January 9, 2018.*

water conservation through increased use of water-efficient and waterless dust measures.<sup>32</sup>

Based on modeling results provided in LADWP’s 2015 UWMP, LADWP projects an average annual long-term LAA delivery between 2015 and 2040 of approximately 278,000 AFY, gradually declining to 267,000 AFY due to anticipated climate change impacts.<sup>33</sup> However, with completion of the Owens Lake Master Project by 2024, the projected LAA delivery may increase to 286,000 AFY due to water conserved at Owens Lake, which would offset most of the anticipated long-term losses.<sup>34</sup>

<sup>32</sup> *Los Angeles Department of Water and Power, LADWP Newsroom, 2014 Archive, City of Los Angeles and Great Basin Unified Air Pollution Control District Reach Historic Comprehensive Agreement on Owens Lake Dust Mitigation, released November 14, 2014, [www.ladwpnews.com/city-of-los-angeles-and-great-basin-unified-air-pollution-control-district-reach-historic-comprehensive-agreement-on-owens-lake-dust-mitigation/](http://www.ladwpnews.com/city-of-los-angeles-and-great-basin-unified-air-pollution-control-district-reach-historic-comprehensive-agreement-on-owens-lake-dust-mitigation/), accessed March 27, 2018.*

<sup>33</sup> *Los Angeles Department of Water and Power, 2015 Urban Water Management Plan, June 2016.*

<sup>34</sup> *Los Angeles Department of Water and Power, Water Supply Assessment for the 222 West 2nd Project, January 9, 2018.*



(b) *Groundwater*

LADWP owns water rights in the San Fernando, Sylmar, Eagle Rock, Central, and West Coast Basins.<sup>35</sup> 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.<sup>36</sup> LADWP has accumulated nearly 537,622 acre-feet of stored water credits in the San Fernando Basin as of October 2014.<sup>37</sup> 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. With remediation facilities in operation at the San Fernando Basin by end of Fiscal Year 2022, groundwater storage credit will be used to maximize pumping in the future above City's annual entitlement of the San Fernando Basin, from which the City extracts the majority of groundwater.

As shown in Table IV.L.1-2 on page IV.L.1-18, during Fiscal Year 2014–2015, LADWP extracted 80,097 acre-feet from the San Fernando Basin and 6,948 acre-feet from the Central Basin.<sup>38</sup> 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 the DWR have programs in place to monitor wells to prevent overdrafting. LADWP's groundwater pumping practice is based on a "safe yield" operation, which is defined as the attainment and maintenance of a long-term balance between the annual amount of groundwater withdrawn by pumping and the annual amount of recharge. Furthermore, basin management is achieved by collective efforts of a court-appointed Watermaster and the Upper Los Angeles River Area (ULARA) Administrative Committee of representatives from five public water supply agencies overlying the ULARA Basins.<sup>39</sup> 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.

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<sup>35</sup> *Los Angeles Department of Water and Power, 2015 Urban Water Management Plan, June 2016.*

<sup>36</sup> *Los Angeles Department of Water and Power, 2015 Urban Water Management Plan, June 2016.*

<sup>37</sup> *Los Angeles Department of Water and Power, Water Supply Assessment for the 222 West 2nd Project, January 9, 2018.*

<sup>38</sup> *Los Angeles Department of Water and Power, Water Supply Assessment for the 222 West 2nd Project, January 9, 2018.*

<sup>39</sup> *Los Angeles Department of Water and Power, 2015 Urban Water Management Plan, June 2016.*

**Table IV.L.1-2  
Local Groundwater Basin Supply**

<b>Fiscal Year (July-June)</b>	<b>San Fernando</b>	<b>Sylmar</b>	<b>Central</b>
2010–2011	44,029	225	5,099
2011–2012	50,244	1,330	9,486
2012–2013	50,550	1,952	6,310
2013–2014	68,784	891	9,727
2014–2015	80,097	0	6,948
2019–2020 <sup>a</sup>	90,000	4,170	18,500
2024–2025 <sup>a</sup>	88,000	4,170	18,500
2029–2030 <sup>a</sup>	84,000	4,170	18,500
2034–2035 <sup>a</sup>	92,000	4,170	18,500
2039–2040 <sup>a</sup>	92,000	3,570	18,500

*Units are in acre-feet.*

<sup>a</sup> *Projected groundwater production.*

*Source: Los Angeles Department of Water and Power, Water Supply Assessment for the 222 West 2nd Project, January 9, 2018.*

*(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, 2016, LADWP has a preferential right to purchase 18.51 percent of MWD's total water supply.<sup>40</sup>

Purchases from MWD have comprised on average 64 percent of the City's water supply over a five-year period from Fiscal Years 2011–2012 to 2015–2016.<sup>41</sup> The Sustainable pLAN calls for a reduction in purchased imported water by 50 percent by 2025

<sup>40</sup> *Los Angeles Department of Water and Power, Water Supply Assessment for the 222 West 2nd Project, January 9, 2018.*

<sup>41</sup> *Los Angeles Department of Water and Power, Water Supply Assessment for the 222 West 2nd Project, January 9, 2018.*

from the Fiscal Year 2013–2014 level, which was approximately 441,870 acre-feet.<sup>42</sup> To meet these targets, LADWP plans to reduce water demand through increased conservation as well as increased local supply development. Local supply development includes enhancing the ability of 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 AFY in 2025.<sup>43</sup>

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 44 percent under single-dry year conditions by Fiscal Year 2040–2041.<sup>44</sup> As indicated in Table IV.L.1-1 on page IV.L.1-16, in 2016, LADWP received approximately 314,301 acre-feet of water from MWD. LADWP will continue to rely on MWD to meet its current and future supplemental water needs. Summaries of MWD’s individual supplies, along with the challenges facing each supply and specific actions that MWD is taking to meet each of the challenges facing its water supplies, are presented below.

*(i) The Colorado River*

MWD owns and operates the Colorado River Aqueduct, which has delivered water from the Colorado River to Southern California since 1942.<sup>45</sup> 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.<sup>46</sup> 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 half of any surplus that may be available

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<sup>42</sup> Los Angeles Department of Water and Power, *Water Supply Assessment for the 222 West 2nd Project*, January 9, 2018.

<sup>43</sup> Los Angeles Department of Water and Power, *Water Supply Assessment for the 222 West 2nd Project*, January 9, 2018.

<sup>44</sup> Los Angeles Department of Water and Power, *2015 Urban Water Management Plan*, April 2016.

<sup>45</sup> Los Angeles Department of Water and Power, *Water Supply Assessment for the 222 West 2nd Project*, January 9, 2018.

<sup>46</sup> Los Angeles Department of Water and Power, *Water Supply Assessment for the 222 West 2nd Project*, January 9, 2018.

for use collectively in Arizona, California, and Nevada.<sup>47</sup> 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.<sup>48</sup> MWD's total supply from the Colorado River for Calendar Year 2016 was approximately 985,000 acre-feet, comprised of a base supply of 935,000 acre-feet and water management actions of 50,000 acre-feet.<sup>49</sup>

### Challenges to Colorado River Supply

As the Colorado River water supplies come from watersheds of the Upper Colorado River Basin, snowpack and runoff can impact storage levels at Lake Powell and Lake Mead, which then affect the likelihood of surplus or shortage conditions in the future. Although the MWD has two principal sources of water supply and is able to utilize supplies from the Colorado River to offset reductions in SWP supplies and buffer impacts from drought in California, the MWD also has been developing plans and making efforts to provide additional water supply reliability for the Southern California region.<sup>50</sup> The Colorado River Basin also has experienced a prolonged drought, with runoff in 2012 being among the four driest in history.<sup>51</sup> During these drought conditions, Colorado River system storage decreased to 50 percent of capacity.<sup>52</sup>

MWD has developed a number of supply and conservation programs to increase the amount of supply available from the Colorado River. However, other users along the Colorado River have rights that will allow their water use to increase as their water demands increase. The Colorado River faces long-term challenges of water demands exceeding available supply with additional uncertainties due to climate change. Because

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<sup>47</sup> Los Angeles Department of Water and Power, *Water Supply Assessment for the 222 West 2nd Project*, January 9, 2018.

<sup>48</sup> Los Angeles Department of Water and Power, *Water Supply Assessment for the 222 West 2nd Project*, January 9, 2018.

<sup>49</sup> Los Angeles Department of Water and Power, *Water Supply Assessment for the 222 West 2nd Project*, January 9, 2018.

<sup>50</sup> Los Angeles Department of Water and Power, *Water Supply Assessment for the 222 West 2nd Project*, January 9, 2018.

<sup>51</sup> Metropolitan Water District of Southern California, *2015 Urban Water Management Plan*, June 2016.

<sup>52</sup> Metropolitan Water District of Southern California, *2015 Urban Water Management Plan*, June 2016.

MWD holds the lowest priority rights in California during a normal Lake Mead storage condition, the available future supply could decrease.<sup>53</sup>

Federal and state environmental laws protecting fish species and other wildlife species also have the potential to affect Colorado River operations. A number of species that are either endangered or threatened are present in the Lower Colorado River. To address this issue, a state/federal/tribal/private regional partnership comprised of water, hydroelectric power, and wildlife management agencies in Arizona, California, and Nevada developed the Lower Colorado River Multi-Species Conservation Program. The program allows MWD to obtain federal and state permits for any incidental take of protected species resulting from current and future water and power operations of its Colorado River facilities and to minimize any uncertainty from additional listings of endangered species. The Lower Colorado River Multi-Species Conservation Program also covers operations of federal dams and power plants on the river that deliver water and hydroelectric power for use by MWD and other agencies.<sup>54</sup>

#### Management of Colorado River Supply

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.<sup>55</sup> 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.<sup>56</sup> Furthermore, in May 2008, MWD joined the Central Arizona Water Conservation District and the Southern Nevada Water Authority in funding of the Warren H. Brock Reservoir, which conserves approximately 70,000 AFY of water by capturing and storing water that would otherwise be lost from the system. In return for its funding, MWD received 100,000 acre-feet of water stored in Lake Mead for future use and has the ability to receive up to 25,000 acre-feet of

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<sup>53</sup> *Metropolitan Water District of Southern California, 2015 Urban Water Management Plan, June 2016.*

<sup>54</sup> *Los Angeles Department of Water and Power, Water Supply Assessment for the 222 West 2nd Project, Appendix N, January 9, 2018.*

<sup>55</sup> *Los Angeles Department of Water and Power, Water Supply Assessment for the 222 West 2nd Project, Appendix N, January 9, 2018.*

<sup>56</sup> *Los Angeles Department of Water and Power, Water Supply Assessment for the 222 West 2nd Project, Appendix N, January 9, 2018.*

water in any single year. As of January 1, 2016, MWD had taken delivery of 43,992 acre-feet of the water and had 56,008 acre-feet of water remaining in storage.<sup>57</sup>

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 2003 Quantification Settlement Agreement, which amended the 1998 Water Conservation and Transfer Agreement. The Quantification Settlement Agreement, executed by MWD, Coachella Valley Water District, and Imperial Irrigation District in 2003, establishes Colorado River water use limits for the Coachella and Imperial districts and provides for specific acquisitions of conserved water and water supply arrangements for up to 75 years. With full implementation of the programs identified in the agreement, at times when California is limited to its basic apportionment of 4.4 million acre-feet per year, MWD expects to be able to annually divert to its service area approximately 850,000 acre-feet of Colorado River water plus water from other water augmentation programs it develops. The agreement called for the delivery of flows to the Salton Sea until the end of 2017, while further mitigation measures will continue to be funded by other agencies and the State of California. The MWD has no obligation to pay any costs associated with the restoration of the Salton Sea.

Additional guidelines and programs that influence management of the Colorado River water supplies include, but are not limited to the Interim Surplus Guidelines, the Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead, and Intentionally Created Surplus Program, and the Quagga Mussel Control Program. Specifically, the Interim Surplus Guidelines are used to determine the conditions under which certain availability of surplus water can be used within the lower basin states of Arizona, California, and Nevada. Such guidelines were amended in 2007 and extend through 2026. The Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead provide federal guidelines that concern the operation of the Colorado River system, particularly during drought and low reservoir conditions, and the delivery of water for Lower Basin states such as Arizona, California, and Nevada. These guidelines include, but are not limited to: water release criteria from Lake Powell; water storage and water release criteria from Lake Mead during shortage and surplus conditions in the Lower Basin; and a mechanism for the storage and delivery of conserved system and non-system water in Lake Mead. The Intentionally Created Surplus (ICS) program allows Lower Basin States to store conserved water in Lake Mead. ICS water is water that has been conserved through a variety of programs using extraordinary conservation measures, such as land fallowing.

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<sup>57</sup> *Los Angeles Department of Water and Power, Water Supply Assessment for the 222 West 2nd Project, Appendix N, January 9, 2018.*

As of January 1, 2017, MWD had an estimated 71,000 acre-feet of ICS water. The Quagga Mussel Control Program was developed by MWD in 2007 to control the spreading of the invasive quagga mussels in the Colorado River's canals and reservoirs.

*(ii) State Water Project*

MWD imports water from the State Water Project, owned by the State of California and operated by the DWR. The State Water Project is a water storage and delivery system of pump stations, reservoirs, aqueducts, tunnels, and power plants. The main purpose of the State Water Project is to divert and store surplus water during wet periods and distribute it to areas throughout the State. Other purposes of the State Water Project include flood control, power generation, recreation, fish and wildlife protection, and water quality management in the Delta. The State Water Project transports Feather River water stored in and released from Oroville Dam and conveyed through the Delta, as well as unregulated flows diverted directly from the 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 the DWR and is the largest agency in terms of the number of people it serves (approximately 18.8 million), the share of the State Water Project that it has contracted to receive (approximately 46 percent), and the percentage of total annual payments made to the DWR by agencies with state water contracts (approximately 52 percent for 2016).<sup>58</sup>

The State Water Project, under the original contracted amount at 100 percent allocation, provides MWD with 1,911,500 acre-feet of water each calendar year through December 31, 2035.<sup>59</sup> However, due to water quality and supply reliability challenges and conflicts due to variable hydrology and environmental standards that limit pumping operations, State Water Project deliveries in the most critically dry years have varied. Contractual amounts were 5 percent in 2014 and 20 percent in 2015.<sup>60</sup> For 2016, the DWR had estimated an initial allocation of 10 percent but increased the allocation to 60 percent by April 2016, primarily due to changes in hydrologic conditions.<sup>61,62</sup> In November 2016,

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<sup>58</sup> Los Angeles Department of Water and Power, *Water Supply Assessment for the 222 West 2nd Project, Appendix N, January 9, 2018.*

<sup>59</sup> Los Angeles Department of Water and Power, *Water Supply Assessment for the 222 West 2nd Project, Appendix N, January 9, 2018.*

<sup>60</sup> Metropolitan Water District of Southern California, *2015 Urban Water Management Plan, June 2016.*

<sup>61</sup> California Department of Water Resources, *Notice to State Water Project Contractors, Number 15-07, 2016 State Water Project Initial Allocation—10 Percent.*

<sup>62</sup> California Department of Water Resources, *Notice to State Water Project Contractors, Number 16-06, 2016 State Water Project Allocation—60 Percent.*

the DWR had estimated an initial allocation of 20 percent for 2017, due to factors including, but not limited to: existing storage in State Water Project conservation reservoirs, conservation constraints for the delta smelt, and contractor demands.<sup>63,64</sup> Due to the observed changes in hydrologic conditions, the DWR subsequently increased 2017 allocation levels to 45 percent in December 2016,<sup>65</sup> 60 percent in January 2017,<sup>66</sup> and 85 percent on April 14, 2017.<sup>67</sup>

On November 29, 2017, the DWR set an initial SWP allocation of 15 percent for most SWP contractors for the 2018 calendar year.<sup>68</sup> As of January 29, 2018, this allocation has increased to 20 percent for the year.<sup>69</sup> The approval by DWR considered several factors, including existing storage in SWP conservation reservoirs, SWP operational regulatory constraints, and the 2018 contractor demands. The DWR may revise the allocation and subsequent allocations if warranted by the year's developing hydrologic and water supply conditions.<sup>70</sup>

#### Recent Events at Oroville Dam

In early 2017, due to continued precipitation, the DWR increased releases to manage higher in-flows in the Feather River Basin. On February 7, 2017, the Oroville Dam main flood-control spillway experienced significant damage during the releases. In response, the DWR, for the first time in its history, stopped releases on the main spillway and diverted water to the emergency spillway. However, the emergency spillway quickly

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<sup>63</sup> California Department of Water Resources, *Notice to State Water Project Contractors, Number 16-09, 2017 State Water Project Initial Allocation—20 Percent.*

<sup>64</sup> Los Angeles Department of Water and Power, *Water Supply Assessment for the 222 West 2nd Project, January 19, 2018.*

<sup>65</sup> California Department of Water Resources, *Notice to State Water Project Contractors, Number 16-10, 2017 State Water Project Allocation—45 Percent.*

<sup>66</sup> California Department of Water Resources, *Notice to State Water Project Contractors, Number 17-01, 2017 State Water Project Allocation—60 Percent.*

<sup>67</sup> California Department of Water Resources, *Notice to State Water Project Contractors, Number 17-05, 2017 State Water Project Allocation—85 Percent.*

<sup>68</sup> California Department of Water Resources, *Notice to State Water Project Contractors, Number 17-10, 2018 State Water Project Initial Allocation—15 Percent.*

<sup>69</sup> California Department of Water Resources, *Notice to State Water Project Contractors, Number 18-02, 2018 State Water Project Allocation—20 Percent.*

<sup>70</sup> California Department of Water Resources, *Notice to State Water Project Contractors, Number 18-02, 2018 State Water Project Allocation—20 Percent.*



eroded, causing officials to order the temporary evacuation of downstream residents while ramping up water releases over the main spillway to control lake levels.<sup>71</sup>

Following a multi-agency investigation and recovery design, demolition and repairs began in May 2017. According to the DWR, the spillways were functional by November 2017, while the upper section of the main spillway will be replaced in 2018.<sup>72</sup> Despite the damage to the main spillway, water supplies are not expected to be adversely affected, as future water supplies are primarily dependent on hydrology.<sup>73</sup>

### Challenges to State Water Project Supply

Litigation and various regulations have created challenges for the State Water Project. In particular, the listing of several fish species in the Delta as threatened or endangered under the federal and/or California Endangered Species Acts has constrained State Water Project operations and created more uncertainty in State Water Project supply reliability. Based on DWR's 2015 State Water Project Delivery Capability Report, future State Water Project deliveries will continue to be impacted by restrictions on State Water Project and Central Valley Project Delta pumping, and climate change, which is altering the hydrologic conditions in the State.

### Programs Addressing Challenges within the Delta

In November 2009, the State Legislature and then Governor Schwarzenegger passed the 2009 Comprehensive Water Package, which set a statewide conservation target for urban per capita water use of 20 percent reductions by 2020 and consisted of four policy bills and an \$11.14 billion bond proposal designed to ensure a reliable future water supply for the State and to restore the Delta and other ecologically sensitive areas.<sup>74</sup>

Specifically, Senate Bill X7-1 of the 2009 Comprehensive Water Package established the coequal goals for the Delta: to provide a more reliable water supply for the State, and to protect, restore, and enhance the Delta ecosystem. Senate Bill X7-1 also

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<sup>71</sup> Los Angeles Department of Water and Power, *Water Supply Assessment for the 222 West 2nd Project*, January 9, 2018.

<sup>72</sup> California Department of Water Resources, *Reconstruction Plans*, [www.water.ca.gov/What-We-Do/Emergency-Response/Oroville-Spillways/Reconstruction-Plans](http://www.water.ca.gov/What-We-Do/Emergency-Response/Oroville-Spillways/Reconstruction-Plans), accessed March 27, 2018.

<sup>73</sup> Los Angeles Department of Water and Power, *Water Supply Assessment for the 222 West 2nd Project*, January 9, 2018.

<sup>74</sup> Los Angeles Department of Water and Power, *Water Supply Assessment for the 222 West 2nd Project*, January 9, 2018.

created a new Delta governance structure and established a process for determining the consistency of the Bay Delta Conservation Plan (BDCP) with the coequal goals.<sup>75</sup>

Implementation of the four policy bills in the 2009 Comprehensive Water Package achieved major milestones, one of which included the May 16, 2013 adoption of the Delta Plan, a comprehensive and long-term management plan for the Delta. The goal of the BDCP was to provide the basis for the issuance of endangered species permits for the operation of the State Water Project, Central Valley Project, and for Delta conveyance improvements.<sup>76</sup>

The draft BDCP and associated EIR/EIS were made available for public review and comment in December 2013. In April 2015, state agencies announced a modified preferred alternative referred to as California WaterFix, which includes design changes and refinements to address impacts to Delta communities and various environmental commitments. A separate ecosystem effort referred to as California EcoRestore was also announced that includes restoration of at least 30,000 acres of Delta habitat. A Recirculated Draft EIR/Supplemental Draft EIS evaluating California WaterFix and cumulative impacts of California EcoRestore was prepared and released for public review in July 2015.<sup>77,78</sup> Together, California WaterFix and California EcoRestore are expected to make significant contributions toward achieving the coequal goals of providing a more reliable water supply in California and protecting, restoring and enhancing the Delta ecosystem established in the Sacramento–San Joaquin Delta Reform Act of 2009. On December 22, 2016, the DWR and the U.S. Bureau of Reclamation completed the Bay Delta Conservation Plan/California WaterFix Final EIR/EIS, which has been submitted to state and federal regulatory agencies for approval and permit authorization.<sup>79</sup> On January 18, 2017, the EPA recommended that the lead agencies for WaterFix carefully consider reasonably foreseeable operational constraints to ensure appropriate design and

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<sup>75</sup> Los Angeles Department of Water and Power, *Water Supply Assessment for the 222 West 2nd Project*, January 9, 2018.

<sup>76</sup> Los Angeles Department of Water and Power, *Water Supply Assessment for the 222 West 2nd Project*, January 9, 2018.

<sup>77</sup> *Bay Delta Conservation Plan, The Environmental Review Process*, <http://baydeltaconservationplan.com/EnvironmentalReview/EnvironmentalReview/EnvironmentalReview.aspx>, accessed March 27, 2018.

<sup>78</sup> California Department of Water Resources and U.S. Bureau of Reclamation, *Bay Delta Conservation Plan/California WaterFix Partially Recirculated Draft EIR/Supplemental Draft EIR Executive Summary*, 2015.

<sup>79</sup> California Department of Water Resources and the U.S. Bureau of Reclamation, *Final Environmental Impact Report/Environmental Impact Statement for the Bay Delta Conservation Plan/California WaterFix*, December 2016.

operation.<sup>80</sup> On July 21, 2017, the California Department of Water Resources certified the Final EIR and approved the California WaterFix (Alternative 4a).<sup>81</sup> In addition, on the same day, the DWR filed a validation action with the Sacramento County Superior Court to affirm the department's authority to, among other things, issue revenue bonds to finance the planning, design, construction, and other capital costs of California WaterFix. The validation action is intended to provide assurances to the financial community for the sale of the revenue bonds for California WaterFix.<sup>82,83</sup> On April 10, 2018, the MWD Board of Directors voted to provide the additional funding necessary to allow for the construction of the full California WaterFix project. MWD's financing of the full project is expected to cost households on average up to \$4.80 per month, though that average cost would be reduced as Metropolitan recoups some of its investments from the agricultural sector. In addition, MWD would sell or lease capacity in the tunnels to allow water deliveries or exchanges for other parties.<sup>84</sup> California WaterFix has entered the design phase, and the first Requests for Qualifications have been released. Construction is anticipated to begin upon the receipt of all required permits.<sup>85</sup>

In addition, a primary consideration in the operation of the SWP is avoiding, minimizing, and/or offsetting adverse impacts to species of concern, species listed as threatened or endangered by a State or federal agency, or species proposed for listing. The SWP is operated pursuant to biological opinions issued under the federal Endangered Species Act (ESA), and consistency determinations or incidental take permits issued under the California Endangered Species Act (CESA). As such, in order to avoid and minimize adverse impacts to these species, the SWP is operated with flexibility in operational responses, which can include the Delta Cross Channel gate closure, export curtailments, changes in delivery schedules, increased reservoir releases, preferential use of certain facilities, or a combination of these actions.<sup>86</sup>

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<sup>80</sup> U.S. Environmental Protection Agency, Director of Enforcement Division, to Bureau of Reclamation, Mid-Pacific Region, Regional Director, January 18, 2017.

<sup>81</sup> Bay Delta Conservation Plan, Notice of Determination (NOD), <http://baydeltaconservationplan.com/NoticeofDetermination.aspx>, accessed October 10, 2018.

<sup>82</sup> Los Angeles Department of Water and Power, Water Supply Assessment for the 222 West 2nd Project, January 9, 2018.

<sup>83</sup> California Department of Water Resources, News for Immediate Release, California WaterFix Reaches Key Milestone as State Environmental Review is Certified, July 21, 2017.

<sup>84</sup> Metropolitan Water District of Southern California, News Release, "Metropolitan Approves Additional Funding for Full-Scale, Two-Tunnel California WaterFix," April 10, 2018.

<sup>85</sup> California Natural Resources Agency, California WaterFix, [www.californiawaterfix.com/design-construction/](http://www.californiawaterfix.com/design-construction/), accessed April 18, 2018.

<sup>86</sup> California Department of Water Resources, Bulletin 132-16, Management of the California State Water Project, June 2017.

*(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. The MWD is currently operating several State Water Project storage programs to increase the reliability of supplies from the California Aqueduct. Programs include, but are not limited to: the Yuba River Accord; Arvin-Edison/Metropolitan Water Management Program; Semitropic/Metropolitan Groundwater Storage and Exchange Program; Mojave Storage Program; Antelope Valley East Kern Storage and Exchange Program; San Bernardino Valley Municipal Water District Coordinated Operating Agreement; the San Gabriel Valley Municipal Water District Exchange Program; and Metropolitan/Central Valley Water District/Desert Water Agency Exchange and Advance Delivery Agreement.<sup>87</sup>

In addition, MWD continues to develop plans and make efforts to provide additional water supply reliability for the entire Southern California region. LADWP coordinates with MWD to ensure implementation of these water resource development plans. 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, outdoor conservation measures, and development of additional local resources, such as recycling, brackish water desalination and seawater desalination.<sup>88</sup>

Additionally, MWD has more than 5 million acre-feet of storage capacity of available reservoirs and banking/transfer programs, with approximately 1.25 million acre-feet, inclusive of "Intentionally Created Surplus" in that storage, and 626,000 acre-feet in emergency storage as of January 1, 2017.<sup>89</sup> As 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.

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<sup>87</sup> Los Angeles Department of Water and Power, *Water Supply Assessment for the 222 West 2nd Project, Appendix N, January 9, 2018.*

<sup>88</sup> Los Angeles Department of Water and Power, *Water Supply Assessment for the 222 West 2nd Project, January 9, 2018.*

<sup>89</sup> Los Angeles Department of Water and Power, *Water Supply Assessment for the 222 West 2nd Project, January 9, 2018.*

*(d) Precipitation Conditions*

In the summer of 2016, parts of Northern California remained at below-average precipitation, and Southern California precipitation was well below average. In addition, the Delta, which supplies a substantial portion of Southern California's water, had remained less than half full, while the Colorado River Basin continued to experience drought conditions.<sup>90</sup> The State continued to develop and implement necessary strategies and actions to address California's drought conditions. In particular, on January 15, 2016, the DWR and the U.S. Bureau of Reclamation finalized the 2016 Drought Contingency Plan that outlined State Water Project and Central Valley Project operations for February 2016 through November 2016.<sup>91</sup> In addition, as described above, in May 2016, Governor Brown issued Executive Order B-37-16 to build on the temporary statewide emergency water restrictions and establish longer-term water conservation measures.

Although water year 2017 (i.e., October 1, 2016, to September 30, 2017) was the second wettest on record, water year 2018 (i.e., October 1, 2017, to September 30, 2018) represented a return to dry conditions statewide, with most of the State experiencing below-average precipitation.<sup>92</sup> The April 1, 2018, reading of snowpack was 58 percent of average, compared to 163 percent of average the previous year. Southern California experienced drier conditions than northern California, with Los Angeles, Riverside, and San Diego receiving 32, 46, and 32 percent of average precipitation, respectively, compared to 79 percent of average in the Sacramento River Basin watershed.

The outlook for the 2019 water year is unclear. Present forecasting capability cannot provide a reliable prediction. Water year 2018 may have been an isolated dry year or could represent a return to drought conditions, interrupted by a wet 2017. This would be similar to conditions in the Colorado River Basin, where a 19-year dry period has included occasional average or wet years.

*(e) Global Warming and Climate Change*

As discussed in 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

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<sup>90</sup> California Department of Water Resources, *Water Conditions Update, June 2016*.

<sup>91</sup> California Department of Water Resources and U.S. Bureau of Reclamation, *Central Valley Project and State Water Project 2016 Drought Contingency Plan for Water Project Operations, February–November 2016, submitted January 15, 2016*.

<sup>92</sup> California Department of Water Resources, *Water Year 2018: Hot and Dry Conditions Return, September, 2018*.

sources subject to climate change impacts are imported water supplies from MWD and the LAA. Local sources can expect to see some changes in the future as well. 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 community regarding the potential impacts of climate change within the City of Los Angeles. 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.<sup>93</sup>

MWD and the 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.<sup>94</sup> As mentioned above, with updates published every five years, the most recent California Water Plan Update 2013 will be followed by an update in 2018 that will incorporate the issue of climate change. The California Water Plan Update 2018 is currently being drafted and will undergo a review process prior to adoption.<sup>95</sup> The DWR has also been in the process of completing its Climate Action Plan since 2012. Phases I and II of the plan include the guidance of the DWR in reducing greenhouse gas emissions and the expertise of a climate change technical advisory group formed in 2012, respectively. Phase III of the plan is expected to be completed in 2018 with a vulnerability assessment and adaptation plan of DWR assets and activities, as related to the projected changes in temperature, wildfire, sea level rise, hydrology, and water supply.<sup>96</sup> 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

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<sup>93</sup> Los Angeles Department of Water and Power, *2015 Urban Water Management Plan*, June 2016, page 12-1.

<sup>94</sup> California Department of Water Resources, *California Water Plan Update 2013, Investing in Innovation & Infrastructure, Highlights*, October 2014.

<sup>95</sup> California Department of Water Resources, *California Water Plan*, [www.water.ca.gov/Programs/California-Water-Plan](http://www.water.ca.gov/Programs/California-Water-Plan), accessed April 18, 2018.

<sup>96</sup> California Department of Water Resources, *Climate Action Plan*, [www.water.ca.gov/Programs/All-Programs/Climate-Change-Program/Climate-Action-Plan](http://www.water.ca.gov/Programs/All-Programs/Climate-Change-Program/Climate-Action-Plan), accessed March 27, 2018.

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 Executive Directive 5, the Sustainable City pLAn, and the Water Conservation Act of 2009, LADWP's 2015 UWMP aims to reduce per capita potable water use by 20 percent by 2017, by 22.5 percent by 2025, and by 25 percent by 2035, based on Fiscal Year 2013–2014 levels.<sup>97</sup> Furthermore, the LADWP is projected to increase recycled water use to 59,000 AFY by 2025 through planned municipal/industrial use and indirect potable reuse (i.e., groundwater replenishment). With the potential growth in customer demand, the LADWP projects that recycled water use will reach 75,400 AFY by 2040.<sup>98</sup> This will increase recycled water use in the City more than six-fold as a percentage of supply, from the current 2 percent to 13 percent by 2040.<sup>99</sup> Overall, LADWP's 2015 UWMP projects a 7-percent lower water demand trend than what was projected in the previous 2010 UWMP.<sup>100</sup> To achieve its goals, the LADWP has initiated water recycling projects in Elysian Park, Downtown Los Angeles, and other parts of the City and is pursuing strategies related to groundwater replenishment and the non-potable reuse of water by irrigation and industrial customers.

*(i) LADWP Water Conservation Potential Study*

In 2014, the LADWP initiated the Water Conservation Potential Study, the largest and most comprehensive conservation study in the U.S.<sup>101</sup> The study is expected to provide a better understanding of how historical water conservation investment efforts have impacted existing water use efficiency and device saturation levels. As such, the study will help the LADWP prioritize future water conservation investments in the City by identifying remaining water conservation opportunities to increase City's water use efficiency.

Phase 1 of the study estimated conservation potential, while data from comprehensive residential surveys were used to determine the current saturation of conserving devices and practices. For example, preliminary study results show that 80 percent of single family homes within the LADWP service area have high efficiency toilets, indicating that toilet rebate programs are reaching a saturation threshold. Nonresidential

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<sup>97</sup> Los Angeles Department of Water and Power, *2015 Urban Water Management Plan*, June 2016.

<sup>98</sup> Los Angeles Department of Water and Power, *2015 Urban Water Management Plan*, June 2016.

<sup>99</sup> Los Angeles Department of Water and Power, *Water Supply Assessment for the 222 West 2nd Project*, January 9, 2018.

<sup>100</sup> Los Angeles Department of Water and Power, *Water Supply Assessment for the 222 West 2nd Project*, January 9, 2018.

<sup>101</sup> Los Angeles Department of Water and Power, *Water Supply Assessment for the 222 West 2nd Project*, January 9, 2018.

sectors were evaluated for commercial and industrial water use and efficiency with previous studies conducted by the LADWP and MWD as well as expertise from water conservation professionals. Phase 2 is currently underway and will incorporate results from a comprehensive water survey of 100 City-owned facilities. City-owned facility water surveys are still being fully analyzed and will also be incorporated into a revised conservation potential that will be presented in the final report.

Initial results of the LADWP Water Conservation Potential Study show that the additional, naturally occurring water conservation potential, following the Fiscal Year End (FYE) 2015, will reach approximately 71,000 AFY by the FYE 2040. Naturally occurring savings represent conservation from natural replacement, new development adhering to building/plumbing codes, and ordinances for landscape water use. With increased LADWP funding for conservation programs, possibly requiring a level double of current program levels, conservation potential may increase to a cost-effective maximum potential of approximately 120,000 AFY by FYE 2040, inclusive of the 71,000 AFY of naturally occurring conservation. As such, the maximum achievable conservation level for FYE 2040, inclusive of and beyond cost-effective maximum potential, is projected to be 218,000 AFY.

## (2) Water Demand

### (a) Regional Water Demand

LADWP's 2015 UWMP provides water supply and demand projections in five-year increments through 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).<sup>102</sup> Table IV.L.1-3 on page IV.L.1-33 shows the projected water demand from 2020 through 2040 for the City of Los Angeles.

As shown in Table IV.L.1-3, in 2040 during average year hydrologic conditions, the City's water demand is forecasted to be approximately 675,700 AFY. Use of the current demand per capita within this forecast provides a conservative estimate of projected

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<sup>102</sup> As discussed above, the 2015 UWMP was prepared based on SCAG's 2012–2035 RTP/SCS. Since the release of the 2015 UWMP, however, new growth forecasts have become available in SCAG's 2016–2040 RTP/SCS. In order to compare the growth forecasts (i.e., population, households, and employment) of the 2012–2035 RTP/SCS and the 2016–2040 RTP/SCS, straight-line interpolations were conducted to determine current (2016) and future (2040) estimates. From these calculations, the growth forecasts from the 2016–2040 RTP/SCS were observed to be only marginally higher than those from the 2012–2035 RTP/SCS. Thus, the growth forecast of the 2016–2040 RTP/SCS would not significantly affect water demand projections.



**Table IV.L.1-3**  
**City of Los Angeles Water Demand Projections Based on Hydrologic Conditions**  
**(in Thousand AFY)**

Hydrologic Conditions <sup>a</sup>	Year				
	2020	2025	2030	2035	2040
Average Year	611.8	644.7	652.9	661.8	675.7
Single Dry Year	642.4	676.9	685.5	694.9	709.5
Multi-Dry Year	642.4	676.9	685.5	694.9	709.5

AFY = acre-feet per year  
Demands include existing passive conservation.

<sup>a</sup> The LADWP defined three hydrologic conditions: average year (50-year average hydrology from Fiscal Years 1961-1962 through 2010–2011; single dry year (such as a repeat of the Fiscal Year 2014–2015 drought; and multi-dry year (such as a repeat of Fiscal Years 2012–2013 through 2014–2015.)

Source: Los Angeles Department of Water and Power, 2015 Urban Water Management Plan, June 2016; Exhibits 11F, 11G, and 11H.

future water demand to ensure water supplies are available to meet 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.<sup>103</sup>

As discussed above, as of February 2, 2017, the City met its goal established by ED 5 and the Sustainable City 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.<sup>104</sup>

*(b) On-Site Water Demand*

As discussed in Section II, Project Description, of this Draft EIR, existing uses at the Project Site consist of a former surface parking lot, which is currently in use as a staging and excavation area for construction of the Los Angeles County Metropolitan

<sup>103</sup> Los Angeles Department of Water and Power, 2015 Urban Water Management Plan, June 2016, Exhibits 11E–11K.

<sup>104</sup> 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, [www.lamayor.org/los-angeles-achieves-mayor-garcetti%E2%80%99s-goal-20-percent-water-savings](http://www.lamayor.org/los-angeles-achieves-mayor-garcetti%E2%80%99s-goal-20-percent-water-savings), accessed March 27, 2018.

Transportation Authority (Metro) Regional Connector 2nd Street/Broadway rail station and portal, and a five-story parking structure that includes rooftop parking and two subterranean levels. Current landscaping on the Project Site is limited to street trees and a narrow landscaped parkway that traverses the center of the site along the northerly edge of the existing parking structure. The landscaped parkway also includes shrubs and limited areas of turf, along with park benches. As provided in Table IV.L.1-4 on page IV.L.1-42 in the analysis below, based on LADWP billing data as an annual average from 2010 to 2017, the former surface parking lot on-site generated a water demand of 0 gallons per day (gpd).<sup>105</sup>

### (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 2015–2016.<sup>106</sup> Much of the water flows north to south, entering Los Angeles at the Los Angeles Aqueduct Filtration Plant (LAAFP) in Sylmar, which is owned and operated by LADWP. Water entering the LAAFP undergoes treatment and disinfection before being distributed throughout the LADWP's water service area.<sup>107</sup> The existing water infrastructure in the Project area includes an 8-inch water main on 2nd Street, a 16-inch water main on Broadway, and a 12-inch water main on Spring Street.

In addition, LADWP provides water for firefighting services in accordance with the City's Fire Code (LAMC Chapter V, Article 7) (discussed above). There are multiple existing fire hydrants surrounding the Project Site, including at the following locations: southeast corner of 2nd Street and Broadway; southeast corner of 2nd Street and Spring Street; west side of Spring Street just south of the Project Site; and west side of Broadway just south of the Project Site.

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<sup>105</sup> *Within the Project Site, the former surface parking lot, where the proposed building would be developed, is currently in use as a staging and excavation area for construction of the Metro Regional Connector 2nd Street/Broadway rail station and portal. Water use associated with that construction is separate from the Project and was previously evaluated in a Final EIS/EIR (SCH No. 2009031043), available at [www.metro.net/projects/connector/connector-final-eiseir/](http://www.metro.net/projects/connector/connector-final-eiseir/), accessed October 30, 2018.*

<sup>106</sup> *Los Angeles Department of Water and Power, 2017 Briefing Book, August 2017.*

<sup>107</sup> *Los Angeles Department of Water and Power, 2015 Urban Water Management Plan, June 2016.*

### 3. Project Impacts

#### a. Methodology

The analysis of the Project's impacts to water supply is based on the WSA for the Project prepared by LADWP pursuant to Senate Bill 610. The WSA includes a conservative calculation of the Project's anticipated net water demand (including potential land uses with the highest water demand) by applying the City Department of Public Works, Bureau of Sanitation's (LASAN) wastewater generation rates to the proposed land uses associated with the Project. The WSA accounts for the water use associated with the existing uses to be removed, as well as the reduction in Project water demand with implementation of water conservation features. In accordance with Senate Bill 610, the resulting net demand for water associated with the Project is then analyzed relative to LADWP's existing and planned future water supplies 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 Utilities Report prepared for the Project by Psomas, which is included in Appendix N.2 of this Draft EIR. The Utilities Report includes a comparison of the estimated net water demand for the Project to the available capacity of the existing water infrastructure.

#### b. Thresholds of Significance

##### (1) State CEQA Guidelines Appendix G

In accordance with State CEQA Guidelines Appendix G (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 construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or***

***Threshold (b): [Not] have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed.***

##### (2) 2006 L.A. CEQA Thresholds Guide

The *L.A. CEQA Thresholds Guide* states that the determination of significance shall be made on a case-by-case basis, considering the following criteria to evaluate water:

- 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.

In assessing impacts related to water supply and infrastructure in this section, the City will use Appendix G as the thresholds of significance. The criteria identified above from the *L.A. CEQA Thresholds Guide* will be used where applicable and relevant to assist in analyzing the Appendix G threshold questions.

## c. Analysis of Project Impacts

### (1) Project Design Features

The following Project design features are proposed with regard to water:

**WAT-PDF-1:** The Project design shall incorporate the following design features to support water conservation in excess of LAMC requirements:

- High-efficiency toilets with a flush volume of 1.1 gallons of water per flush or less, including dual-flush water closets.
- No-flush or waterless urinals in all non-residential restrooms.
- Non-residential restroom faucets with a maximum flow rate of 0.35 gallon per minute and a self-closing design.
- Non-residential sensor-operated kitchen faucets (except restaurant kitchens) with a maximum flow rate of 0.5 gallon per minute.
- Residential bathroom and kitchen faucets with a maximum flow rate of 1.0 gallon per minute.
- Residential showerheads with a flow rate no greater than 1.5 gallons per minute.
- High-efficiency, Energy Star–rated residential clothes washers with a water factor of 4.0 or less for top-loading machines and/or a water factor of 3.6 or less for front-loading machines.

- High-efficiency standard and/or compact Energy Star-rated residential dishwashers that use 3.0 gallons of water or less per cycle.
- Leak detection system for any domestic water systems, swimming pool, Jacuzzi, or other comparable spa equipment installed on-site.
- Drip/microspray/subsurface irrigation where appropriate.
- Matched precipitation (flow) rates for sprinkler heads.
- Proper hydro-zoning and turf minimization.
- Landscape contouring to minimize precipitation runoff.
- Minimum irrigation system distribution uniformity of 75 percent.
- Landscape contouring/bioswales, rain gardens, cisterns, and tree pits to minimize precipitation runoff.
- Native and/or drought-tolerant plant materials—approximately 72 percent of total landscaping.

In addition, as discussed in Section IV.I.2, Public Services—Fire Protection, of this Draft EIR, a fire flow pump system would be installed as part of the Project to provide adequate fire flow pressures inside the proposed building (refer to Project Design Feature FIR-PDF-1). Proposed water connections would be installed by LADWP off of either the 12-inch main line in Spring Street or the 16-inch main line in Broadway.

## (2) Relevant Project Characteristics

As described in detail in Section II, Project Description, of this Draft EIR, the Project involves the development of a 30-story mixed-use building consisting of 107 residential units (comprising an estimated 137,347 square feet), plus 7,200 square feet of ground level commercial retail uses, and 534,044 square feet of office uses. The proposed residences would include 12 studios, 42 one-bedroom units, 40 two-bedroom units, and 13 three-bedroom units ranging from approximately 650 square feet to 1,630 square feet in size. The proposed building also would include a cooling tower with an 1,800- to 2,000-ton chiller capacity, which will operate 24 hours/day at a minimum of 5.5 cycles of concentration in accordance with City ordinance requirements. This system would include cooling tower conductivity controllers or cooling tower pH conductivity controllers, may include automatic water treatment to minimize cooling tower blowdown and water waste, and would prohibit the use of single-pass cooling equipment.

As summarized above in Project Design Feature WAT-PDF-1 and described in Section II, Project Description, the Project's landscape plan would feature drought-tolerant plants, including both native and adaptive native plant materials, as well as an efficient

irrigation system. Table 1 within the Project's Request for Water Supply Assessment (provided in Appendix N.1 of this Draft EIR) lists the Plant Factors (PF) and corresponding hydrozone surface areas for the proposed landscape plan, in accordance with California Code of Regulations Title 23, Division 2, Chapter 2.7, Model Water Efficient Landscape Ordinance. This information was used by LADWP in calculating and evaluating the Project's total water demand.

### (3) Project Impacts

***Threshold (a): Would the Project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?***

#### *(a) Construction*

The Project would require connections to existing water lines in the adjacent streets to serve the proposed building. Specifically, water connections would be installed off of either the 12-inch main line in Spring Street or the 16-inch main line in Broadway. Construction impacts associated with the connections and installation of on-site water distribution lines would primarily involve trenching to place the lines below surface. As the design and installation of new service connections would be required to meet applicable City standards, the Project contractors would coordinate with the LADWP to identify the locations and depth of all lines prior to ground disturbance. Furthermore, LADWP would be notified in advance of proposed ground disturbance activities in order to avoid water lines and disruption of water service. As discussed further below, no new public or private fire hydrants would be necessary as part of the Project.

The limited off-site connection activities could temporarily affect access in adjacent rights-of-way. However, as discussed in Section IV.J, Transportation/Traffic, of this Draft EIR, a construction management plan would be implemented during Project construction pursuant to Project Design Feature TR-PDF-1 to ensure that adequate and safe access remains available within and near the Project Site during construction activities. The construction management plan would identify the location of any temporary construction activities, durations and hours, public transit stop relocations, street parking or sidewalk closures, warning signs, and access to abutting properties. Appropriate construction traffic control measures (e.g., alternate routing, protection barriers, etc.) would also be implemented, as necessary, to ensure emergency access to the Project Site and traffic flow is maintained on adjacent right-of-ways.

In addition, the Project's construction activities would involve a temporary demand for water associated with dust control, equipment and site cleanup, excavation and export,

soil removal and compaction, mixing and placement of concrete, irrigation for plant and landscaping establishment, testing of water connections and flushing, and other short-term, related activities. The existing water distribution capacity would be adequate to serve the Project's construction-related water demand, which would be limited and temporary. Furthermore, as discussed above, minor off-site construction impacts associated with installation of the new service connections off of either Spring Street or Broadway would be temporary in nature and would not result in a substantial interruption in water service or inconvenience to motorists or pedestrians.

**Overall, construction activities associated with the Project would not require or result in the construction of new water facilities or expansion of existing facilities that could have a significant impact on the environment. As such, construction-related impacts affecting water infrastructure would be less than significant.**

*(b) Operation*

As discussed in the Utilities Report included as Appendix N.2 of this Draft EIR, the water infrastructure for the Project was analyzed based on fire service water demand, which is short-term but typically exponentially larger than daily operational water demands. The evaluation of fire service water demand is considered a conservative approach in determining the Project's water infrastructure needs.

Fire flow to 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. As discussed above, the Project falls within the Industrial and Commercial development category, which has a required minimum fire flow of 6,000 gpm to 9,000 gpm from four to six adjacent fire hydrants flowing simultaneously, with a minimum residual pressure of 20 psi at full flow. As discussed in the Utilities Report, Service Advisory Requests were provided by LADWP to determine water pressure and flow capacity for the existing lines in the Project area. This data shows water pressure in the adjacent lines ranges between 39 and 56 psi, depending on the street. As this pressure is generally considered low for a development of the Project's size, it was determined that a pump would be needed to provide adequate fire flow pressures inside the building. As set forth in Project Design Feature FIR-PDF-1, detailed in Section IV.1.2, Public Services—Fire Protection, of this Draft EIR, the Project would include the installation of a fire flow pump system in order to provide adequate water pressure for fire-fighting purposes within the proposed building. Furthermore, the building would incorporate supplemental fire safety features requiring water usage, including an automatic fire sprinkler system, in compliance with LAFD recommendations and based on approval by the Fire Marshal (refer to Section IV.1.2, Public Services—Fire Protection, for further discussion). The installation of the fire flow pump system, as well as the automatic fire sprinkler system, would be subject to LAFD

review and approval during LAFD's fire/life safety plan review and LAFD's fire/life safety inspection for the Project, as set forth in LAMC Section 57.118.

In addition, as previously discussed, there are four public fire hydrants near the Project Site at the following locations: southeast corner of 2nd Street and Broadway; southeast corner of 2nd Street and Spring Street; west side of Spring Street just south of the Project Site; and west side of Broadway just south of the Project Site. Based on review of existing water services, LAFD determined the current hydrant locations and coverage are adequate for the Project, based on the Industrial and Commercial land use category requirements.<sup>108</sup> Thus, no additional public or private fire hydrants would be necessary for the Project.

**Based on the above analysis, the Project would not exceed the available capacity of the water distribution infrastructure serving the Project Site. Accordingly, the Project would not require or result in the construction of new water facilities or expansion of existing facilities that could cause significant environmental effects. Therefore, the Project's operational impacts on water infrastructure would be less than significant.**

***Threshold (b): Would the Project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?***

*(a) Construction*

As noted above, the Project's construction activities would involve a temporary demand for water associated with dust control, equipment and site cleanup, excavation and export, soil removal and compaction, mixing and placement of concrete, irrigation for plant and landscaping establishment, testing of water connections and flushing, and other short-term, related activities. These activities would occur incrementally throughout the construction period. The amount of water used during construction would vary depending on soil conditions, weather, and the specific activities being performed but in any case would be minor (i.e., substantially less than operational water usage), as well as short-term and intermittent in nature. As discussed in the Utilities Report (included as Appendix N.2 of this Draft EIR), water use during construction would be limited and would be well within the availability of LADWP's water supply. Furthermore, as concluded in LADWP's 2015 UWMP, the projected water demand throughout the entire City would be met by available

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<sup>108</sup> *Psomas, 222 West 2nd Street Project Utilities Technical Memorandum, November 30, 2018, included as Appendix N.2 of this Draft EIR.*



supplies during all hydrologic conditions (average year, single-dry year, and multiple-dry year) in each year from 2020 through 2040, during which time Project construction would occur (2022–2025).

**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, the Project would have sufficient water supplies available, and construction-related impacts to water supply would be less than significant.**

*(b) Operation*

Development of the Project would result in an increase in long-term water demand related to human consumption, operational uses, maintenance, irrigation, 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 using wastewater generation factors established by LASAN. As previously discussed, the Project would incorporate sustainability features such as efficient plumbing fixtures and appliances, water-efficient/drought-tolerant landscaping, state-of-the-art irrigation, and appropriate leak detection that would reduce the Project’s water demand, as detailed in Project Design Feature WAT-PDF-1. As shown in Table IV.L.1-4 on page IV.L.1-42, assuming consistent water use throughout the year and when accounting for water savings due to both required and additional proposed water conservation measures, the Project is estimated to result in a water demand of 129,784 gpd (145.39 AFY).

The 2015 UWMP forecasts adequate water supplies to meet all projected water demands in the City for normal, single-dry, and multiple-dry years through the year 2040. Furthermore, as outlined in the 2015 UWMP, LADWP is committed to providing a reliable water supply for the City. The 2015 UWMP takes into account 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 associated with projected population growth through a combination of water conservation and water recycling. The 2015 UWMP also promotes the goals of the City’s Executive Directive and Sustainable City pLAN. The 2015 UWMP addresses the current and future State Water Project supply shortages and concludes that MWD’s actions in response to the threats to the State Water Project would ensure continued reliability of its water deliveries. By focusing on demand reduction and alternative sources of water supplies, LADWP can further ensure that long-term dependence on MWD supplies will not be exacerbated by potential future shortages. As previously discussed, water conservation and recycling will play an increasing role in meeting future water demands in the City.

**Table IV.L.1-4  
Estimated Project Water Demand**

Land Use	Units	Demand Factor <sup>a</sup>	Total Water Demand (gpd)
<b>Existing Uses to be Removed</b>			
Surface Parking Lot <sup>b</sup>	0 sf	—	0
<i>Total Existing</i>			<i>0</i>
<b>Proposed Uses</b>			
Residential: Studio	12 du	75 gpd/du	900
Residential: One Bedroom	42 du	110 gpd/du	4,620
Residential: Two Bedroom	40 du	150 gpd/du	6,000
Residential: Three Bedroom	13 du	190 gpd/du	2,470
Residential Units Base Demand Adjustment <sup>c</sup>	—	—	1,718
Fitness Center <sup>d</sup>	5,444 sf	650 gpd/1,000 sf	3,539
Common Rooms <sup>e</sup>	1,463 sf	50 gpd/1,000 sf	73
Commercial	7,200 sf	50 gpd/1,000 sf	360
Office Uses	534,044 sf	120 gpd/1,000 sf	64,085
Residential Amenities Base Demand Adjustment <sup>c</sup>	—	—	981
Landscaping <sup>f</sup>	11,566 sf	—	1,080
Cooling Tower <sup>g</sup>	2,000 tons	36 gpd/ton	71,280
<i>Total Proposed</i>			<i>157,106</i>
<b>Required Water Savings<sup>h</sup></b>			
Residential Units	—	—	(5,567)
Commercial/Retail	—	—	(3,168)
Landscaping	—	—	(486)
Cooling Tower	—	—	(14,256)
<i>Total Water Savings</i>			<i>(23,477)</i>
<b>Additional Conservation<sup>i</sup></b>			<b>(3,845)</b>
<b>Total Net Water Demand (Proposed – Existing – Required Water Savings – Additional Conservation)</b>			<b>129,784</b>
<p><i>gpd = gallons per day</i>  <i>du = dwelling units</i>  <i>sf = square feet</i>  <i>— = Information is not applicable.</i></p> <p><sup>a</sup> Based on sewage generation rates provided by LASAN, Sewage Facilities Charge, Sewage Generation Factor for Residential and Commercial Categories, effective April 6, 2012.</p> <p><sup>b</sup> Based on the LADWP billing data (annual average) from 2010 to 2017. This water usage is associated with the parking lot only, where the proposed building would be developed.</p>			

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

Land Use	Units	Demand Factor <sup>a</sup>	Total Water Demand (gpd)
<p><sup>c</sup> Base Demand Adjustment is the estimated savings due to Ordinance No. 180,822 accounted for in the current LASAN sewage generation rates.</p> <p><sup>d</sup> Based on the Health Club/Spa sewage generation rate, which includes any lobby area, workout floors, aerobic rooms, swimming pools, Jacuzzis, saunas, locker rooms, showers, and restrooms. Relative to the Project, this includes the 2,544-square-foot indoor fitness center and the 2,900-square-foot outdoor pool area.</p> <p><sup>e</sup> Common rooms are ancillary rooms for tenant use. Water demand is based on the Lounge sewage generation rate.</p> <p><sup>f</sup> Estimated per California Code of Regulations, Title 23, Division 2, Chapter 2.7, Model Water Efficient Landscape Ordinance.</p> <p><sup>g</sup> Based on operation on 24 hours per day, 7 days per week, 6 cycles of concentrations, and 55 percent of chiller capacity.</p> <p><sup>h</sup> Pursuant to City of Los Angeles Ordinance No. 184,248, 2013 California Plumbing Code, 2013 California Green Building Code, 2014 Los Angeles Plumbing Code, and 2014 Los Angeles Green Building Code. (Note: the Project would be subject to the 2016 California Green Building Code and the 2017 Los Angeles Green Building Code, or whichever codes are current at the time of building construction.)</p> <p><sup>i</sup> Based on the conservations commitments specific to the Project as identified in Table II of the WSA.</p> <p>Source: Psomas, 222 West 2nd Street Project Utilities Technical Memorandum, November 30, 2018 (refer to Appendix N.2 of this Draft EIR); Los Angeles Department of Water and Power, Water Supply Assessment for the 222 West 2nd Project, January 9, 2018 (refer to Appendix N.1 of this Draft EIR).</p>			

The 2015 UWMP utilizes SCAG’s 2012–2035 RTP/SCS data to provide for comprehensive water demand forecasts, taking into account changes in population, housing units, and employment.<sup>109</sup> The Project would generate approximately 261 new residents and 107 new households at Project buildout in 2023.<sup>110</sup> In addition, the Project would generate approximately 2,322 new employees.<sup>111</sup> This level of growth would be

<sup>109</sup> The demand projections in LADWP’s 2015 Urban Water Management Plan are based on demographic growth projections in SCAG’s 2012–2035 RTP/SCS, the 2000 U.S. Census data, and the 2010 U.S. Census data. Since preparation of LADWP’s 2015 Urban Water Management Plan, new growth forecasts have become available in SCAG’s 2016–2040 RTP/SCS. However, the growth forecasts in SCAG’s 2016 RTP/SCS are only marginally higher than those in the 2012–2035 RTP/SCS, in terms of current (2016) estimates and future (2040) projections for the SCAG Region, and, therefore, would not significantly affect water demand projections.

<sup>110</sup> Based on an estimated household size for multi-family housing units in the City of Los Angeles area of 2.44 persons per unit, the Project’s proposed 107 residential units would generate approximately 261 persons.

<sup>111</sup> Based on the employee generation rates for “Neighborhood Shopping Center” land uses (i.e., 0.00271 employee per average square foot) and “Large High Rise Commercial Office” land uses (i.e., 0.00431 (Footnote continued on next page)

consistent with SCAG's 2012–2035 RTP/SCS growth projections for the City of Los Angeles.<sup>112</sup> Specifically, based on SCAG's projections for the City, the estimated 261 new residents generated by the Project would represent approximately 0.40 percent of the population growth between 2022 and 2025, and the 107 households would represent approximately 0.31 percent of the projected household growth between 2022 and 2025.<sup>113</sup> In addition, the estimated 2,322 on-site employees generated by the Project would represent approximately 13.03 percent of employment growth between 2022 and 2025.<sup>114</sup> Therefore, the Project would be well within SCAG's 2012–2035 projections for the City of Los Angeles.

As previously discussed, the water supply and demand projections set forth in LADWP's 2015 UWMP are based on population growth estimates provided in SCAG's 2012–2035 RTP/SCS. More specifically, the 2015 UWMP uses a service area-wide approach that does not rely on individual demands but rather takes into account broad changes in population, housing units, and employment based on SCAG data. Based on the determination that the Project is consistent with SCAG's demographic forecasts for the City, LADWP found that the Project's water demand is included in the 2015 UWMP water demand projections. As discussed above, the 2015 UWMP forecasts adequate water supplies to meet all projected water demands in the City through 2040.

**Based on the above analysis, the Project's estimated water demand would not exceed the available supplies projected by LADWP for normal, single-dry, and**

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*employee per average square foot) provided in the Los Angeles Unified School District, 2016 Developer Fee Justification Study, the 7,200 square feet of commercial retail uses and 534,044 square feet of office uses would generate approximately 2,322 employees.*

<sup>112</sup> Refer to Section IV.H, Population, Housing, and Employment, of this Draft EIR, for an analysis of Project growth relative to the 2016–2040 RTP/SCS growth projections.

<sup>113</sup> Based on a linear interpolation of SCAG's 2020–2035 data, as shown in SCAG's 2012–2035 RTP/SCS Growth Forecast Appendix, Table 18. The 2022 values for population, housing, and employment are calculated using SCAG's 2020 and 2035 values to find the average increase between years and then applying that annual increase to each year until 2022. Similarly, the 2025 values for population, housing, and employment are calculated using SCAG's 2020 and 2035 values to find the average increase between years and then applying that annual increase to each year until 2025.

*Population growth between 2022 (4,035,553 persons) and 2025 (4,101,333 persons) is approximately 65,780 persons. The Project's 261 new residents would represent approximately 0.40 percent of this growth  $[(261 \div 65,780) \times 100 = 0.40]$ .*

*Household growth between 2022 (1,478,487 households) and 2025 (1,512,667 households) is approximately 34,180 households. The Project's 107 new households would represent approximately 0.31 percent of this growth  $[(107 \div 34,180) \times 100 = 0.31]$ .*

<sup>114</sup> Employment growth between 2022 (1,829,580 employees) and 2025 (1,847,400 employees) is approximately 17,820 employees. The Project's 2,322 new employees would represent approximately 13.03 percent of this growth  $[(2,322 \div 17,820) \times 100 = 13.03]$ .

multiple-dry years through the year 2040. In addition, the Project's water demand falls within the 2015 UWMP's projected increase in citywide water demands and potential multi-dry year water supply conditions. Thus, LADWP would be able to meet the Project's water demand, as well as the existing and planned future water demands within its service area. Therefore, the Project's operational impacts on water supply would be less than significant.

## 4. Cumulative Impacts

The Project, in conjunction with growth forecasted in the City through 2025 (i.e., the Project's buildout year), would cumulatively increase the demand for water, thus potentially resulting in cumulative impacts on water infrastructure and water supplies. Cumulative growth in the Project vicinity through 2025 includes specific known development projects, as well as general ambient growth projected to occur.

As identified in Section III, Environmental Setting, of this Draft EIR, 173 related projects in the surrounding area are expected to be constructed and/or operational during the same time period as the Project. Much of this growth is anticipated by the City and will be incorporated into the Central City Community Plan update, known as the DTLA 2040 Plan, which the Department of City Planning is in the process of preparing (refer to Section IV.F, Land Use, of this Draft EIR for further discussion). According to the DTLA 2040 projections, an additional approximately 125,000 people, 70,000 housing units, and 55,000 jobs will be added to the Downtown area by the year 2040.<sup>115</sup>

### *(a) Water Infrastructure*

The geographic context for the cumulative impact analysis on water infrastructure is the vicinity of the Project Site (i.e., the area that includes the water infrastructure that would serve the Project). Development of the Project and future new development in the surrounding vicinity 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 ensure the existing public infrastructure would be adequate to meet the domestic and fire service 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. Furthermore, LADWP, the City Department of Public Works, and the LAFD would conduct ongoing evaluations of City infrastructure to ensure facilities are adequate.

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<sup>115</sup> Growth projections current as of December 2018. Source: City of Los Angeles, DTLA 2040, About This Project, [www.dtl2040.org/](http://www.dtl2040.org/), accessed December 6, 2018.

**Therefore, cumulative impacts on the water infrastructure system 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 of Los Angeles and portions of the cities of West Hollywood, Culver City, and South Pasadena, as well as the Owens Valley). As previously discussed, LADWP, as a public water service provider, is required to prepare and periodically update its urban water management plan to plan and provide for sufficient water supplies to serve existing and projected demands. LADWP's 2015 UWMP accounts for existing development within the LADWP service area, as well as projected growth through the year 2040. Additionally, under the provisions of Senate Bill 610, LADWP is required to prepare a comprehensive water supply assessment for every new development "project" (as defined by Section 10912 of the Water Code) within its service area that meets certain thresholds. The water supply assessments for such projects would evaluate the quality and reliability of existing and projected water supplies, as well as alternative sources of water supply and measures to secure alternative sources if needed.

As shown in Table IV.L.1-5 on page IV.L.1-47, the 173 related projects would generate an estimated total average water demand of 12,853,544 gpd (14,397.82 AFY). This 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 or project-specific water conservation commitments that go beyond regulatory requirements, nor the water demand of any existing uses on those project sites that may be removed in conjunction with redevelopment activities. The Project combined with the related projects would yield an estimated cumulative average water demand of 12,983,328 gpd (14,543.20 AFY).

As previously stated, based on water demand projections through 2040 in LADWP's 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., 2025, the Project's buildout year) based on the growth projections in SCAG's RTP/SCS. As discussed in Section IV.H, Population, Housing, and Employment, of this Draft EIR, cumulative population, housing, and employment growth associated with the related projects combined with the Project would fall within SCAG's growth forecasts for the City. In addition, the estimated cumulative average water demand generated by the Project and related projects would represent approximately 2.26 percent of total Citywide water demand (under average year conditions) in 2025 and approximately 2.15 percent in 2040. Furthermore, 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

**Table IV.L.1-5  
Cumulative Water Demand**

<b>No.<sup>a</sup></b>	<b>Project Name and Location</b>	<b>Land Use</b>	<b>Size</b>	<b>Generation Factor<sup>b,c</sup></b>	<b>Total (gpd)</b>
1 <sup>a</sup>	Blossom Plaza 900 North Broadway	Condominium	223 du	—	0
		Retail	25,000 glsf	—	0
		Restaurant	15,000 gsf	—	0
2 <sup>a</sup>	Ava Little Tokyo 200 South Los Angeles Street	Condominium	570 du	—	0
		Apartment	280 du	—	0
		Retail	50,000 glsf	—	0
3	454 East Commercial Street	Bus Maintenance Facility <sup>d</sup> (2 acres)	43,560 sf	0.050 gpd/sf	2,178
4	Tenten Wilshire Expansion 1027 West Wilshire Boulevard	Condominium	356 du	190 gpd/du	67,640
		Retail	5,000 glsf	0.025 gpd/sf	125
		Office	5,000 gsf	0.12 gpd/sf	600
5 <sup>a</sup>	Vibiana Lofts 225 South Los Angeles Street	Condominium	300 du	—	0
		Retail	3,400 glsf	—	0
6	215 West 9th Street	Condominium	210 du	190 gpd/du	39,900
		Retail	9,000 glsf	0.025 gpd/sf	225
7	1101 North Main Street	Condominium	318 du	190 gpd/du	60,420
8	Amacon Project 1133 South Hope Street	Apartment	208 du	190 gpd/du	39,520
		Retail	5,069 glsf	0.025 gpd/sf	127
9	Megatoys 905 East 2nd Street	Condominium	320 du	190 gpd/du	60,800
		Retail	18,716 glsf	0.025 gpd/sf	468
10	Park Fifth 427 W. 5th St., 437 S. Hill St.	Condominium	660 du	190 gpd/du	125,400
		Restaurant (13,742 gsf)	458 seats	30 gpd/seat	13,742
11	1115 South Hill Street	Condominium	172 du	190 gpd/du	32,680
		Restaurant (6,850 gsf)	228 seats	30 gpd/seat	6,850
12	1102 West 6th Street	Apartment	649 du	190 gpd/du	123,310
		Retail	39,996 glsf	0.025 gpd/sf	1,000

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

No. <sup>a</sup>	Project Name and Location	Land Use	Size	Generation Factor <sup>b,c</sup>	Total (gpd)
13	1130 West Wilshire Boulevard	Office	88,224 gsf	0.12 gpd/sf	10,587
		Day Care	20 stu	9 gpd/child	180
		High-Turnover Restaurant (248 gsf)	8 seats	30 gpd/seat	248
		Quality Restaurant (5,375 gsf)	179 seats	30 gpd/seat	5,375
14 <sup>a</sup>	Metro Bus Maintenance & Operations 920 North Vignes Street	Bus Maintenance Facility	N/A	—	0
15	Glass Tower Project 1050 South Grand Avenue	Condominium	151 du	190 gpd/du	28,690
		Retail	3,472 glsf	0.025 gpd/sf	87
		Restaurant (2,200 gsf)	73 seats	30 gpd/seat	2,200
16	Embassy Tower 848 South Grand Avenue	Condominium	420 du	190 gpd/du	79,800
		Retail	38,500 glsf	0.025 gpd/sf	963
17	Beverly + Lucas Project 1430 West Beverly Boulevard	Apartment	243 du	190 gpd/du	46,170
		Retail	3,500 glsf	0.025 gpd/sf	88
18	Wilshire Grand Redevelopment Project 900 West Wilshire Boulevard	Hotel	889 rm	120 gpd/rm	106,680
		General Office	369,300 gsf	0.12 gpd/sf	44,316
		Retail/Restaurant <sup>e</sup> (34,776 gsf)	1,159 seats	30 gpd/seat	34,776
19	Barlow Hospital Replacement & MP 2000 Stadium Way	Condominium	800 du	190 gpd/du	152,000
		Hospital <sup>f</sup>	56 beds	70 gpd/bed	3,920
		Retail	15,000 glsf	0.025 gpd/sf	375
20	1435 West 3rd Street	Apartment	122 du	190 gpd/du	23,180
		Retail	3,500 glsf	0.025 gpd/sf	88
21	Grand Avenue Project 100 & 225 South Grand Avenue	Condominium	1,432 du	190 gpd/du	272,080
		Apartment	357 du	190 gpd/du	67,830
		Office	681,000 gsf	0.12 gpd/sf	81,720
		Retail	449,000 glsf	0.050 gpd/sf	22,450



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

No. <sup>a</sup>	Project Name and Location	Land Use	Size	Generation Factor <sup>b,c</sup>	Total (gpd)
22	Metropolis Mixed-Use 899 South Francisco Street	Hotel	480 rm	120 gpd/rm	57,600
		Condominium	836 du	190 gpd/du	158,840
		Retail/Restaurant <sup>e</sup> (46,000 gsf)	1,533 seats	30 gpd/seat	46,000
		Office	988,225 gsf	0.12 gpd/sf	118,587
23	LA Civic Center Office 150 North Los Angeles Street	Office	712,500 gsf	0.12 gpd/sf	85,500
		Retail	35,000 glsf	0.025 gpd/sf	875
		Child Care <sup>g</sup> (2,500 gsf)	34 per	9 gpd/child	309
24	1300 South Hope Street	Apartment	419 du	190 gpd/du	79,610
		Retail	42,200 glsf	0.025 gpd/sf	1,055
25	928 South Broadway	Apartment	662 du	190 gpd/du	125,780
		Live/Work	11 du	190 gpd/du	2,090
		Retail	47,000 glsf	0.025 gpd/sf	1,175
		Office	34,824 gsf	0.12 gpd/sf	4,179
26	1200 South Grand Avenue	Apartment	640 du	190 gpd/du	121,600
		Retail	45,000 glsf	0.025 gpd/sf	1,125
27	Valencia Project 1501 West Wilshire Boulevard	Apartment	218 du	190 gpd/du	41,420
		Retail	6,000 glsf	0.025 gpd/sf	150
		Restaurant (1,500 gsf)	50 seats	30 gpd/seat	1,500
28	1329 West 7th Street	Apartment	87 du	190 gpd/du	16,530
29	534–552 South Main Street, 539–547 South Los Angeles Street	Apartment	160 du	190 gpd/du	30,400
		Retail	18,000 glsf	0.025 gpd/sf	450
		Restaurant (3,500 gsf)	117 seats	30 gpd/seat	3,500
		Fast-Food Restaurant (3,500 gsf)	117 seats	30 gpd/seat	3,500
30	840 South Olive Street	Condominium	303 du	190 gpd/du	57,570
		Restaurant (9,680 gsf)	323 seats	30 gpd/seat	9,680
		Retail	1,500 glsf	0.025 gpd/sf	38

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

No. <sup>a</sup>	Project Name and Location	Land Use	Size	Generation Factor <sup>b,c</sup>	Total (gpd)
31 <sup>a</sup>	770 South Grand Avenue	Apartment	700 du	—	0
		Retail	27,000 glsf	—	0
		Restaurant	5,000 gsf	—	0
32	Santa Fe Freight Yard Redevelopment 950 East 3rd Street	Apartment	635 du	190 gpd/du	120,650
		Retail/Restaurant <sup>e</sup> (30,062 glsf)	1,002 seats	30 gpd/seat	30,062
		School	532 stu	11 gpd/du	5,852
33	201 South Broadway	Mixed Office/Retail/Restaurant <sup>e</sup> (27,675 gsf)	923 seats	30 gpd/seat	27,675
34	The City Market 1057 South San Pedro Street	Office	549,141 gsf	0.12 gpd/sf	65,897
		Retail	224,862 glsf	0.050 gpd/sf	11,244
		Cinema	744 seats	3 gpd/seat	2,232
		Apartment	877 du	190 gpd/du	166,630
		Hotel	210 rm	120 gpd/rm	25,200
		Condominium	68 du	190 gpd/du	12,920
35	400 South Broadway	Apartment	450 du	190 gpd/du	85,500
		Retail	6,904 glsf	0.025 gpd/sf	173
		Bar	5,000 gsf	0.720 gpd/sf	3,600
36	1001 South Olive Street	Apartment	225 du	190 gpd/du	42,750
		Restaurant (5,000 gsf)	167 seats	30 gpd/seat	5,000
37	Camden Arts Mixed-Use 1525 East Industrial Street	Apartment	328 du	190 gpd/du	62,320
		Retail	6,400 glsf	0.025 gpd/sf	160
		Restaurant (5,700 gsf)	190 seats	30 gpd/seat	5,700
		Office	27,300 gsf	0.12 gpd/sf	3,276
38	920 South Hill Street	Apartment	239 du	190 gpd/du	45,410
		Retail	5,400 glsf	0.025 gpd/sf	135
39	955 South Broadway	Apartment	163 du	190 gpd/du	30,970
		Retail	6,406 glsf	0.025 gpd/sf	161

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

<b>No.<sup>a</sup></b>	<b>Project Name and Location</b>	<b>Land Use</b>	<b>Size</b>	<b>Generation Factor<sup>b,c</sup></b>	<b>Total (gpd)</b>
40	801 South Olive Street	Apartment	363 du	190 gpd/du	68,970
		Restaurant (7,500 gsf)	250 seats	30 gpd/seat	7,500
		Retail	2,500 glsf	0.025 gpd/sf	63
41	1212 South Flower Street	Condominium	730 du	190 gpd/du	138,700
		Retail	7,873 glsf	0.025 gpd/sf	197
42	820 South Olive Street; 825 South Hill Street	Apartment	589 du	190 gpd/du	111,910
		Retail	4,500 glsf	0.025 gpd/sf	113
43	Sunset Everett Mixed-Use 1185 West Sunset Boulevard	Apartment	214 du	190 gpd/du	40,660
		Condominium	6 du	190 gpd/du	1,140
		Single-Family Residential	6 du	190 gpd/du	1,140
44	601 South Main Street	Condominium	452 du	190 gpd/du	85,880
		Retail	25,000 glsf	0.025 gpd/sf	625
45	2051 East 7th Street	Apartment	320 du	190 gpd/du	60,800
		Retail	15,000 glsf	0.025 gpd/sf	375
		Restaurant (5,000 gsf)	167 seats	30 gpd/seat	5,000
46	Herald Examiner 1111 South Broadway & 156 West 11th Street & 1201 South Main Street	Apartment	391 du	190 gpd/du	74,290
		Retail	49,000 glsf	0.025 gpd/sf	1,225
		Office	39,725 gsf	0.12 gpd/sf	4,767
47	South Park Site 1 1120 South Grand Avenue	Apartment	666 du	190 gpd/du	126,540
		Retail	20,600 glsf	0.025 gpd/sf	515
48	South Park Site 4 1230 South Olive Street	Apartment	360 du	190 gpd/du	68,400
		Retail	6,400 glsf	0.025 gpd/sf	160
49	1247 South Grand Avenue	Apartment	115 du	190 gpd/du	21,850
		Retail	4,610 glsf	0.025 gpd/sf	116
50	Legal Aid Foundation of Los Angeles 1550 West 8th Street	Office	33,957 gsf	0.12 gpd/sf	4,075

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

No. <sup>a</sup>	Project Name and Location	Land Use	Size	Generation Factor <sup>b,c</sup>	Total (gpd)
51	Variety Arts Mixed-Use 940 South Figueroa Street	Theater	1,942 seats	3 gpd/seat	5,826
		Restaurant (10,056 gsf)	335 seats	30 gpd/seat	10,056
		Bar	5,119 gsf	0.720 gpd/sf	3,686
52	La Plaza Cultura Village 527 North Spring Street	Apartment	345 du	190 gpd/du	65,550
		Retail	23,000 gsf	0.025 gpd/sf	575
		Specialty Retail	21,000 gsf	0.025 gpd/sf	525
		Restaurant (11,000 gsf)	367 seats	30 gpd/seat	11,000
53	1036 South Grand Avenue	Restaurant (7,149 gsf)	238 seats	30 gpd/seat	7,149
54	Coca Cola 963 East 4th Street	Office	78,600 gsf	0.12 gpd/sf	9,432
		Retail	25,000 gsf	0.025 gpd/sf	625
		Restaurant (20,000 gsf)	667 seats	30 gpd/seat	20,000
55	1335 West 1st Street	Apartment	102 du	190 gpd/du	19,380
		Retail	3,463 gsf	0.025 gpd/sf	87
56	459 South Hartford Avenue	Apartment	101 du	190 gpd/du	19,190
57	401 North Boylston Street	Apartment	121 du	190 gpd/du	22,990
58	1800 East 7th Street	Apartment	122 du	190 gpd/du	23,180
		Restaurant (4,605 gsf)	154 seats	30 gpd/seat	4,605
		Retail	3,245 gsf	0.025 gpd/sf	82
59	1150 West Wilshire Boulevard	Apartment	80 du	190 gpd/du	15,200
		Restaurant (4,589 gsf)	153 seats	30 gpd/seat	4,589
60	737 South Spring Street	Apartment	320 du	190 gpd/du	60,800
		Pharmacy/Drug Store	25,000 gsf	0.025 gpd/sf	625
61	520 South Mateo Street	Apartment	600 du	190 gpd/du	114,000
		Office	30,000 gsf	0.12 gpd/sf	3,600
		Retail	15,000 gsf	0.025 gpd/sf	375
		Restaurant (15,000 gsf)	500 seats	30 gpd/seat	15,000
62	1218 West Ingraham Street	Apartment	80 du	190 gpd/du	15,200

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

<b>No.<sup>a</sup></b>	<b>Project Name and Location</b>	<b>Land Use</b>	<b>Size</b>	<b>Generation Factor<sup>b,c</sup></b>	<b>Total (gpd)</b>
63	Palmetto & Mateo 555 South Mateo Street	Retail	153,000 glsf	0.050 gpd/sf	7,650
64	732 South Spring Street	Apartment	400 du	190 gpd/du	76,000
		Pharmacy/Drug Store	15,000 gsf	0.025 gpd/sf	375
65	340 South Hill Street	Apartment	428 du	190 gpd/du	81,320
		Restaurant (2,894 gsf)	96 seats	30 gpd/seat	2,894
66	1145 West 7th Street	Condominium	241 du	190 gpd/du	45,790
		Retail	7,291 glsf	0.025 gpd/sf	183
67	540 South Santa Fe Avenue	Office	89,825 gsf	0.12 gpd/sf	10,779
68	360 South Alameda Street	Apartment	55 du	190 gpd/du	10,450
		Office	6,300 gsf	0.12 gpd/sf	756
		Restaurant (2,500 gsf)	83 seats	30 gpd/seat	2,500
69	118 South Astronaut Ellison S Onizuka Street	Apartment	77 du	190 gpd/du	14,630
70	Kaiser Permanente Los Angeles Medical Center Expansion 765 West College Street	Medical Office	100,000 gsf	0.250 gpd/sf	25,000
		Inpatient Facility <sup>f</sup>	62 beds	70 gpd/bed	4,340
71	Stadium Way & Chavez Ravine Apartments 959 East Stadium Way	Apartment	158 du	190 gpd/du	30,020
72	700 West Cesar Chavez Avenue	Apartment	299 du	190 gpd/du	56,810
		Retail	8,000 glsf	0.025 gpd/sf	200
73	Clinic at 7th & Wall 649 South Wall Street	Medical Office <sup>h</sup> (66 emp)	16,500 sf	0.250 gpd/sf	4,125
		Assisted Living <sup>f</sup>	55 beds	70 gpd/bed	3,850
74	Metro Emergency Security Operations Center 410 North Center Street	Office	110,000 gsf	0.12 gpd/sf	13,200
75	500 South Mateo Street	Restaurant (12,882 gsf)	429 seats	30 gpd/seat	12,882

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

No. <sup>a</sup>	Project Name and Location	Land Use	Size	Generation Factor <sup>b,c</sup>	Total (gpd)
76	Medallion Phase 2 300 South Main Street	Apartment	471 du	190 gpd/du	89,490
		Retail	5,190 glsf	0.025 gpd/sf	130
		Restaurant (27,780 gsf)	926 seats	30 gpd/seat	27,780
77	Alexan South Broadway 850 South Hill Street	Apartment	300 du	190 gpd/du	57,000
		Retail	3,500 glsf	0.025 gpd/sf	88
		Restaurant (3,500 gsf)	117 seats	30 gpd/seat	3,500
78	340 North Patton Street	Apartment	44 du	190 gpd/du	8,360
79	Alameda Hotel 400 South Alameda Street	Hotel	66 rm	120 gpd/rm	7,920
		Restaurant (2,130 gsf)	71 seats	30 gpd/seat	2,130
		Retail	840 glsf	0.025 gpd/sf	21
80	Apex II 700 West 9th Street	Apartment	341 du	190 gpd/du	64,790
		Retail	11,687 glsf	0.025 gpd/sf	293
81	649 South Olive Street	Hotel	241 rm	120 gpd/rm	28,920
82	Sapphire Mixed-Use 1111 West 6th Street	Apartment	362 du	190 gpd/du	68,780
		Retail	25,805 glsf	0.025 gpd/sf	646
83	Grand Residences 1233 South Grand Avenue	Condominium	161 du	190 gpd/du	30,590
		Restaurant (3,000 gsf)	100 seats	30 gpd/seat	3,000
84	675 South Bixel Street	Hotel	126 rm	120 gpd/rm	15,120
		Apartment	422 du	190 gpd/du	80,180
		Retail	4,874 glsf	0.025 gpd/sf	122
85	740 South Hartford Avenue	Apartment	80 du	190 gpd/du	15,200
86	Lifan Tower 1235 West 7th Street	Condominium	304 du	190 gpd/du	57,760
		Retail	5,699 glsf	0.025 gpd/sf	143
87	940 South Hill Street	Apartment	232 du	190 gpd/du	44,080
		Restaurant (14,000 glsf)	467 seats	30 gpd/seat	14,000
88	1322 Linwood Avenue	Apartment	84 du	190 gpd/du	15,960

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

<b>No.<sup>a</sup></b>	<b>Project Name and Location</b>	<b>Land Use</b>	<b>Size</b>	<b>Generation Factor<sup>b,c</sup></b>	<b>Total (gpd)</b>
89	1340 South Olive Street	Apartment	156 du	190 gpd/du	29,640
		Retail	5,000 glsf	0.025 gpd/sf	125
		Restaurant (10,000 gsf)	333 seats	30 gpd/seat	10,000
90	1334 South Flower Street	Apartment	188 du	190 gpd/du	35,720
		Retail/Restaurant <sup>e</sup> (10,096 glsf)	337 seats	30 gpd/seat	10,096
91	929 East 2nd Street	Retail	37,974 glsf	0.025 gpd/sf	950
		Other <sup>i</sup>	71,078 gsf	0.120 gpd/sf	8,530
92	633 South Spring Street	Hotel	176 rm	120 gpd/rm	21,120
		Restaurant (8,430 gsf)	281 seats	30 gpd/seat	8,430
		Bar	5,290 gsf	0.720 gpd/sf	3,809
93	Luxe Hotel 1020 South Figueroa Street	Hotel	300 rm	120 gpd/rm	36,000
		Condominium	435 du	190 gpd/du	82,650
		Retail	58,959 glsf	0.025 gpd/sf	1,474
94	1200 South Figueroa Street	Residential	648 du	190 gpd/du	123,120
		Restaurant (20,000 gsf)	667 seats	30 gpd/seat	20,000
		Retail	28,000 glsf	0.025 gpd/sf	700
95	701 South Hill Street	Apartment	124 du	190 gpd/du	23,560
		Retail	8,500 glsf	0.025 gpd/sf	213
96	525 South Spring Street	Apartment	360 du	190 gpd/du	68,400
		Retail	9,400 glsf	0.025 gpd/sf	235
97	Case Hotel 1106 South Broadway	Hotel	151 rm	120 gpd/rm	18,120
98 <sup>a</sup>	425 West 11th Street	Office	500 emp	—	0
99	Freehand Hotel 416 West 8th Street	Hotel	200 rm	120 gpd/rm	24,000

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

<b>No.<sup>a</sup></b>	<b>Project Name and Location</b>	<b>Land Use</b>	<b>Size</b>	<b>Generation Factor<sup>b,c</sup></b>	<b>Total (gpd)</b>
100	The Bloc 700 South Flower Street	Office	737,710 gsf	0.12 gpd/sf	88,526
		Retail	260,000 glsf	0.050 gpd/sf	13,000
		Restaurant (50,000 gsf)	1,667 seats	30 gpd/seat	50,000
		Theater	800 seats	3 gpd/seat	2,400
101	1728 West 7th Street	Restaurant/Bar <sup>e</sup> (13,100 gsf)	437 seats	30 gpd/seat	13,100
102	Olympic Tower 815 West Olympic Boulevard	Hotel	373 rm	120 gpd/rm	44,760
		Retail	65,074 glsf	0.025 gpd/sf	1,627
		Condominium	374 du	190 gpd/du	71,060
		Office	33,498 gsf	0.12 gpd/sf	4,020
		Conference Center <sup>i</sup>	10,801 gsf	0.350 gpd/sf	3,781
103	LA Gateway Project 1025 West Olympic Boulevard	Apartment	1,367 du	190 gpd/du	259,730
		Restaurant (20,000 gsf)	667 seats	30 gpd/seat	20,000
		Retail	20,000 glsf	0.025 gpd/sf	500
104	Oceanwide Plaza 1101 South Flower Street	Condominium	504 du	190 gpd/du	95,760
		Hotel	183 rm	120 gpd/rm	21,960
		Retail	120,583 glsf	0.050 gpd/sf	6,030
		Restaurant (46,000 gsf)	1,533 seats	30 gpd/seat	46,000
105	Los Angeles Sports and Entertainment District Figueroa Street & 11th Street	Office	601,800 gsf	0.12 gpd/sf	72,216
		Convention Center <sup>j</sup>	250,000 gsf	0.350 gpd/sf	87,500
106 <sup>a</sup>	Hall of Justice 211 West Temple Street	Government Building	1,600 emp	—	0
		Parking Structure	1,000 spc	—	0
107 <sup>a</sup>	418 South Spring Street	High-Rise Condominium	96 du	—	0
		Hotel	122 rm	—	0
		Retail	10,000 glsf	—	0
		Health Club	2,000 gsf	—	0
		Bar	3,500 gsf	—	0



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

<b>No.<sup>a</sup></b>	<b>Project Name and Location</b>	<b>Land Use</b>	<b>Size</b>	<b>Generation Factor<sup>b,c</sup></b>	<b>Total (gpd)</b>
108	1013 North Everett Street	Apartment	49 du	190 gpd/du	9,310
109	708 North Hill Street	Apartment	162 du	190 gpd/du	30,780
		Retail	5,000 glsf	0.025 gpd/sf	125
110	211 West Alpine Street	Apartment	122 du	190 gpd/du	23,180
		Retail	7,500 glsf	0.025 gpd/sf	188
111	130 South Beaudry Avenue	Apartment	220 du	190 gpd/du	41,800
112	College Station Mixed-Use 129 W. College Street, 924 N. Spring Street	Condominium	770 du	190 gpd/du	146,300
		Retail	51,592 glsf	0.025 gpd/sf	1,290
113	Urban View Lots 495 South Hartford Avenue	Apartment	218 du	190 gpd/du	41,420
114	1316 West Court Street	Apartment	60 du	190 gpd/du	11,400
115	8th & Figueroa Mixed-Use 744 South Figueroa Street	Apartment	438 du	190 gpd/du	83,220
		Retail	7,500 glsf	0.025 gpd/sf	188
116	1201 North Broadway	Apartment	118 du	190 gpd/du	22,420
		Office	8,800 gsf	0.12 gpd/sf	1,056
117	1346–1354 West Court Street	Apartment	43 du	190 gpd/du	8,170
118	433 South Main Street	Condominium	161 du	190 gpd/du	30,590
		Mixed-Use <sup>i</sup>	6,900 gsf	0.12 gpd/sf	828
119	Downtown LA Hotel 926 West James M. Woods Boulevard	Hotel	247 rm	120 gpd/rm	29,640
120	JMF Tower 333 West 5th Street	Condominium	100 du	190 gpd/du	19,000
		Hotel	200 rm	120 gpd/rm	24,000
		Restaurant (27,500 gsf)	917 seats	30 gpd/seat	27,500

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

<b>No.<sup>a</sup></b>	<b>Project Name and Location</b>	<b>Land Use</b>	<b>Size</b>	<b>Generation Factor<sup>b,c</sup></b>	<b>Total (gpd)</b>
121	Times Mirror Square 202 West 1st Street	Apartment	1,127 du	190 gpd/du	214,130
		Office	285,088 gsf	0.12 gpd/sf	34,211
		Supermarket	50,000 gsf	0.025 gpd/sf	1,250
		Restaurant (75,589 gsf)	2,520 seats	30 gpd/seat	75,589
122	888 South Hope Street	Apartment	526 du	190 gpd/du	99,940
123	Sofia Los Angeles 1106 West 6th Street	Apartment	606 du	190 gpd/du	115,140
		Retail	25,000 glsf	0.025 gpd/sf	625
124	Ferrante 1000 West Temple Street	Apartment	1,500 du	190 gpd/du	285,000
		Retail	30,000 glsf	0.025 gpd/sf	750
125	640 South Alameda Street, 1206 East 6th Street	Apartment	1,305 du	190 gpd/du	247,950
		Condominium	431 du	190 gpd/du	81,890
		Hotel	412 rm	120 gpd/rm	49,440
		Office	253,514 gsf	0.12 gpd/sf	30,422
		Retail	127,609 glsf	0.050 gpd/sf	6,381
		School <sup>g</sup> (29,316 gsf)	402 stu	11 gpd/stu	4,418
	Art Space <sup>k</sup>	22,429 gsf	0.050 gpd/sf	1,122	
126	1300 South Figueroa Street	Hotel	1,024 rm	120 gpd/rm	122,880
127	Budokan of Los Angeles 237–249 South Los Angeles Street	Sports Center <sup>l</sup>	63,000 gsf	0.200 gpd/sf	12,600
128	King's Arch 537 South Broadway	Office	45,000 gsf	0.12 gpd/sf	5,400
129	Title Insurance Building 433 South Spring Street	Office	320,000 gsf	0.12 gpd/sf	38,400
130	Subway Terminal Retail 417 South Hill Street	Retail/Office <sup>m</sup>	130,000 glsf	0.12 gpd/sf	15,600
131	405 South Hewitt Street	Office	255,500 gsf	0.12 gpd/sf	30,660
		Retail	4,970 glsf	0.025 gpd/sf	125
		Restaurant (9,940 gsf)	331 seats	30 gpd/seat	9,940

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

No. <sup>a</sup>	Project Name and Location	Land Use	Size	Generation Factor <sup>b,c</sup>	Total (gpd)
132	333 South Alameda Street	Apartment	994 du	190 gpd/du	188,860
		Retail	99,300 glsf	0.025 gpd/sf	2,483
133	The San Pedro Towers 600–628 S. San Pedro St, 611– 615 S. Crocker St, 518–522 E. 6th St	Affordable Housing	298 du	190 gpd/du	56,620
		Manager Apartment	5 du	190 gpd/du	950
		Retail	3,136 glsf	0.025 gpd/sf	79
		Office	16,773 gsf	0.12 gpd/sf	2,013
134	1000 South Hill Street	Apartment	498 du	190 gpd/du	94,620
		Retail	8,707 glsf	0.025 gpd/sf	218
135	1011 North Broadway	Hotel	92 rm	120 gpd/rm	11,040
136	1018 West Ingraham Street	Apartment	43 du	190 gpd/du	8,170
		Retail	7,400 glsf	0.025 gpd/sf	185
137	1100 East 5th Street	Apartment	220 du	190 gpd/du	41,800
		Office	20,021 gsf	0.12 gpd/sf	2,403
		Restaurant (19,609 gsf)	654 seats	30 gpd/seat	19,609
		Retail	9,250 glsf	0.025 gpd/sf	232
138	1100 South Main Street	Apartment	379 du	190 gpd/du	72,010
		Retail	25,810 glsf	0.025 gpd/sf	646
139	1625 West Palo Alto Street	Hotel	88 rm	120 gpd/rm	10,560
140	1219 South Hope Street	Hotel	75 rm	120 gpd/rm	9,000
		Restaurant (7,700 gsf)	257 seats	30 gpd/seat	7,700
141	1246 West Court Street	Apartment	54 du	190 gpd/du	10,260
142	1307 West 7th Street	Apartment	76 du	190 gpd/du	14,440
		Retail	6,035 glsf	0.025 gpd/sf	151
143	1322 West Maryland Street	Apartment	47 du	190 gpd/du	8,930
		Retail	760 glsf	0.025 gpd/sf	19
144	1323 South Grand Avenue	Apartment	284 du	190 gpd/du	53,960
		Retail	6,300 glsf	0.025 gpd/sf	158

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

<b>No.<sup>a</sup></b>	<b>Project Name and Location</b>	<b>Land Use</b>	<b>Size</b>	<b>Generation Factor<sup>b,c</sup></b>	<b>Total (gpd)</b>
145	656 South Stanford Avenue	Apartment	82 du	190 gpd/du	15,580
146	The Weingart Towers 554–562 South San Pedro Street, 555–561 South Crocker Street	Affordable Housing	378 du	190 gpd/du	71,820
		Manager Apartment	4 du	190 gpd/du	760
		Retail	1,758 glsf	0.025 gpd/sf	44
		Office	4,410 gsf	0.12 gpd/sf	530
		Dining Room/Flex Space <sup>e</sup> (5,932 gsf)	198 seats	30 gpd/seat	5,932
147	601 South Central Avenue	Apartment	236 du	190 gpd/du	44,840
		Retail	12,000 glsf	0.025 gpd/sf	300
148	640 South Santa Fe Avenue	Office	107,127 gsf	0.12 gpd/sf	12,856
149	641 South Imperial Street	Apartment	140 du	190 gpd/du	26,600
		Office	14,749 gsf	0.12 gpd/sf	1,770
150	643 North Spring Street	Apartment	203 du	190 gpd/du	38,570
		Retail	21,049 glsf	0.025 gpd/sf	527
151	668 South Alameda Street	Apartment	475 du	190 gpd/du	90,250
		Office	43,000 gsf	0.12 gpd/sf	5,160
		Retail	9,000 glsf	0.025 gpd/sf	225
		Supermarket	15,000 gsf	0.025 gpd/sf	375
		Restaurant (17,000 gsf)	567 seats	30 gpd/seat	17,000
152	676 South Mateo Street	Apartment	172 du	190 gpd/du	32,680
		Retail	23,025 glsf	0.025 gpd/sf	576
153	755 South Los Angeles Street	Office	60,243 gsf	0.12 gpd/sf	7,230
		Retail	16,694 glsf	0.025 gpd/sf	418
		Restaurant (26,959 gsf)	899 seats	30 gpd/seat	26,959
154	940 East 4th Street	Apartment	93 du	190 gpd/du	17,670
		Retail	14,248 glsf	0.025 gpd/sf	357
		Office	6,000 gsf	0.12 gpd/sf	720

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

<b>No.<sup>a</sup></b>	<b>Project Name and Location</b>	<b>Land Use</b>	<b>Size</b>	<b>Generation Factor<sup>b,c</sup></b>	<b>Total (gpd)</b>
155	1410 South Flower Street	Apartment	152 du	190 gpd/du	28,880
		Retail	1,184 glsf	0.025 gpd/sf	30
156	845 South Olive Street	Apartment	208 du	190 gpd/du	39,520
		Retail	810 glsf	0.025 gpd/sf	21
		Restaurant (1,620 gsf)	54 seats	30 gpd/seat	1,620
157	330 South Alameda Street	Apartment	186 du	190 gpd/du	35,340
		Office	10,415 gsf	0.12 gpd/sf	1,250
		Retail	11,925 glsf	0.025 gpd/sf	299
158	527 South Colyton Street	Condominium	310 du	190 gpd/du	58,900
		Retail	11,375 glsf	0.025 gpd/sf	285
		Art Production Space <sup>k</sup>	11,736 gsf	0.050 gpd/sf	587
159	Fashion District Residences 212–230 East 7th Street, 701–739 South Maple Avenue	Apartment	452 du	190 gpd/du	85,880
		Retail	6,802 glsf	0.025 gpd/sf	171
		Restaurant (6,802 gsf)	227 seats	30 gpd/seat	6,802
160	755 South Wall Street	Apartment	323 du	190 gpd/du	61,370
		Retail	4,400 glsf	0.025 gpd/sf	110
		Event Space <sup>n</sup>	125 per	11 gpd/per	1,375
		Office	53,200 gsf	0.12 gpd/sf	6,384
		Restaurant (4,420 gsf)	147 seats	30 gpd/seat	4,420
161	1101 East 5th Street, 445–457 South Colyton Street	Live/Work	129 du	190 gpd/du	24,510
		Retail	26,979 glsf	0.025 gpd/sf	675
		Restaurant (31,719 gsf)	1,057 seats	30 gpd/seat	31,719
		Hotel	113 rm	120 gpd/rm	13,560
		Art Uses <sup>k</sup>	13,771 gsf	0.050 gpd/sf	689
162	1045 South Olive Street	Apartment	800 du	190 gpd/du	152,000

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

<b>No.<sup>a</sup></b>	<b>Project Name and Location</b>	<b>Land Use</b>	<b>Size</b>	<b>Generation Factor<sup>b,c</sup></b>	<b>Total (gpd)</b>
163	Figueroa Centre 913 South Figueroa Street	Hotel	220 rm	120 gpd/rm	26,400
		Apartment	200 du	190 gpd/du	38,000
		Retail	94,080 glsf	0.025 gpd/sf	2,352
164	8th, Grand & Hope Tower 754 South Hope Street	Apartment	409 du	190 gpd/du	77,710
		Retail	7,329 sf	0.025 gpd/sf	184
165	1340 South Hill Street	Apartment	233 du	190 gpd/du	44,270
166	670 Mesquit Street	Apartment	308 du	190 gpd/du	58,520
		Hotel	236 rm	120 gpd/rm	28,320
		Office	944,055 gsf	0.12 gpd/sf	113,287
		Retail	79,240 glsf	0.025 gpd/sf	1,981
		Restaurant (89,576 gsf)	2,986 seats	30 gpd/seat	89,576
		Event Space <sup>l</sup>	93,617 gsf	0.350 gpd/sf	32,766
		Gym	62,148 gsf	0.650 gpd/sf	40,397
		Grocery	56,912 gsf	0.025 gpd/sf	1,423
167	1030–1380 N. Broadway, 1251 N. Spring St	Apartment	920 du	190 gpd/du	174,800
		Retail	21,406 glsf	0.025 gpd/sf	536
168	Alameda Square 777 South Alameda Street	Office	1,300,000 gsf	0.12 gpd/sf	156,000
		Retail	250,000 glsf	0.050 gpd/sf	12,500
169	1248 South Figueroa Street	Hotel	1,162 rm	120 gpd/rm	139,440
		Restaurant (13,145 gsf)	438 seats	30 gpd/seat	13,145
170	215 West 14th Street	Apartment	154 du	190 gpd/du	29,260
		Retail	10,700 glsf	0.025 gpd/sf	268
171	1745 East 7th Street	Apartment	57 du	190 gpd/du	10,830
		Retail	6,000 glsf	0.025 gpd/sf	150
172	354 South Spring Street	Apartment	212 du	190 gpd/du	40,280
		Restaurant (15,280 gsf)	509 seats	30 gpd/seat	15,280

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

No. <sup>a</sup>	Project Name and Location	Land Use	Size	Generation Factor <sup>b,c</sup>	Total (gpd)
173	Alameda District Plan	Residential	22 du	190 gpd/du	4,180
		Office	7,443,200 gsf	0.12 gpd/sf	893,184
		Retail	645,000 glsf	0.050 gpd/sf	32,250
		Hotel	750 rm	120 gpd/rm	90,000
		Restaurant (20,000 gsf)	667 seats	30 gpd/seat	20,000
		Museum	70,000 gsf	0.12 gpd/sf	8,400
<b>Related Projects Water Demand</b>					<b>12,853,544</b>
<b>Project Water Demand</b>					<b>129,784</b>
<b>Total Water Demand for Related Projects and Project</b>					<b>12,983,328</b>

*du = dwelling units*  
*emp = employees*  
*glsf = gross leasable square feet*  
*gpd = gallons per day*  
*gsf = gross square feet*  
*per = persons*  
*rm = rooms*  
*sf = square feet*  
*spc = spaces*  
*stu = students*  
*N/A = Information is not available.*  
*— = Information is not applicable.*

*Totals calculated may not sum due to rounding.*

<sup>a</sup> *Related Project Nos. 1, 2, 5, 14, 31, 98, 106, and 107 have been built and are operational. As these related projects have already been accounted for in existing conditions, water demand was not calculated for cumulative impact purposes.*

<sup>b</sup> *This analysis is based on sewage generation rates provided by LASAN, Sewerage Facilities Charge, Sewage Generation Factor for Residential*

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

No. <sup>a</sup>	Project Name and Location	Land Use	Size	Generation Factor <sup>b,c</sup>	Total (gpd)
	<i>and Commercial Categories, effective April 6, 2012, except as noted below.</i>				
<sup>c</sup>	<i>This analysis conservatively assumes all dwelling units are 3-bedroom units. In addition, restaurant water/wastewater generation is calculated based on the Los Angeles Department of Water and Power standard of 1 seat per 30 square feet.</i>				
<sup>d</sup>	<i>It is conservatively assumed that 50 percent (i.e., 1 acre, or 43,560 square feet) of the bus maintenance facility will generate water/wastewater. As sewage generation rates provided by LASAN do not include rates for bus maintenance facilities, the highest comparable land use rate of 50 gallons per day per 1,000 square feet for “Machine Shop” has been applied.</i>				
<sup>e</sup>	<i>This related project does not distinguish square footage between these uses. Therefore, to provide a conservative analysis, this related project is assumed to include only restaurant uses.</i>				
<sup>f</sup>	<i>The generation rate reflects LASAN rates for hospitals and convalescent homes.</i>				
<sup>g</sup>	<i>Generation rates provided by LASAN do not include floor area-based rates for child care or school uses. Therefore, a rate of 73 square feet per student or child has been applied to calculate the number of students, as provided by the California Department of Education, Report on Complete Schools, <a href="http://www.cde.ca.gov/ls/fa/sf/completesch.asp">www.cde.ca.gov/ls/fa/sf/completesch.asp</a>, accessed August 23, 2017.</i>				
<sup>h</sup>	<i>Generation rates provided by LASAN do not include employee-based rates. Therefore, a rate of 4 employees per 1,000 square feet of medical office space has been applied to calculate floor area, based on Section IV.N.(1), Water Consumption, of the Draft EIR for Village at Playa Vista Draft EIR, August 2003.</i>				
<sup>i</sup>	<i>This related project does not specify proposed land uses. Therefore, the “Office” rate has been assumed, which is more conservative than other non-residential uses typical of mixed-use projects (e.g., retail uses).</i>				
<sup>j</sup>	<i>Generation rates provided by LASAN do not include rates for conference center, convention center, event space uses. Therefore, the most comparable land use rate of 350 gallons per day per 1,000 square feet for “Banquet Room/Ballroom” has been applied.</i>				
<sup>k</sup>	<i>Generation rates provided by LASAN do not include rates for art and production space uses. Therefore, the most comparable land use rate of 50 gallons per day per 1,000 square feet for “Studio: Film/TV/Recording” has been applied.</i>				
<sup>l</sup>	<i>Generation rates provided by LASAN do not include rates for sports center uses. Therefore, the most comparable land use rate of 200 gallons per day per 1,000 square feet for “Gymnasium” has been applied.</i>				
<sup>m</sup>	<i>This related project does not distinguish square footage between the retail and office uses. Therefore, to provide a conservative analysis, the higher “Office” rate has been applied.</i>				
<sup>n</sup>	<i>Generation rates provided by LASAN do not include rates per person for event center uses. Therefore, the most comparable rate available for non-residential uses per person is applied.</i>				
<i>Source: Eyestone Environmental, 2018.</i>					



be subject to the City's 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. Accordingly, LADWP found it will be able to meet the Project's water demand, as well as existing and planned future water demands within its service area.<sup>116</sup>

Overall, as discussed above, LADWP's 2015 UWMP demonstrates that LADWP will meet all new water demands from projected population growth through a combination of water conservation and water recycling. LADWP's 2015 UWMP specifically outlines the creation of sustainable sources of water for the City of Los Angeles to reduce dependence on imported supplies. LADWP's 2015 UWMP also incorporates the water conservation 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. To increase recycled water use, LADWP is expanding the recycled water distribution system to provide water for irrigation, industrial use, and groundwater recharge. Furthermore, LADWP will continue to update its UWMP every five years to ensure that sufficient water supply continues to be available.

**Based on the above analysis, it is anticipated that LADWP would be able to supply the demands of the Project and future growth through 2025 and beyond. Therefore, cumulative impacts associated with water supply would be less than significant.**

## **5. Mitigation Measures**

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

## **6. Level of Significance After Mitigation**

Project-level and cumulative impacts related to water supply and infrastructure would be less than significant without mitigation.

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<sup>116</sup> *Los Angeles Department of Water and Power, Water Supply Assessment for the 222 West 2nd Project, January 9, 2018.*