

## 4.0 ENVIRONMENTAL IMPACT ANALYSIS

### K. UTILITIES AND SERVICE SYSTEMS

#### 1. WATER SUPPLY

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##### 1. INTRODUCTION

This section estimates the Project's water demand and assesses the adequacy of water supply and infrastructure capacity to meet that demand. The Project's consistency with relevant plans and regulations to meet demand is also discussed. The focus of this section is on water consumption for domestic use. For further discussion of water availability for firefighting, see Section 4.I-1, Fire Protection, of this Draft EIR. The data and conclusions regarding the availability of water resources is based on a Water Supply Assessment (WSA) prepared by the Los Angeles Department of Water and Power (LADWP).<sup>1</sup> Information regarding local infrastructure was provided in the Psomas Technical Report (Civil Engineering Report) for the Project.<sup>2</sup> The WSA and Civil Engineering Report are contained in the Draft EIR Appendices, Appendix K-1 and Appendix I-2, respectively.

##### 2. ENVIRONMENTAL SETTING

###### a. Existing Conditions

###### (1) Current Conditions at the Project Site

###### (a) Water Consumption

The Project Site is currently developed with the Luxe Hotel on the northwest portion of the Project Site with the remainder of the Project Site developed with surface parking. The Luxe Hotel, with 112,748 square feet (Sf), includes 178 guest rooms, with hotel related ancillary facilities. The WSA for the Project estimates the existing water consumption for these uses to be 19,287 gallons per day (gpd) or 21.61 acre feet per year (af/y).

###### (b) Water Infrastructure

Water service to the Project Site is available from the existing water lines located within the adjacent street right-of-ways. These include a 10 inch water line in 11th Street with a system maximum pressure of 63 pounds per square inch (psi); a 12 inch water line in Figueroa Street with a system maximum pressure of 63 psi; and a 12 inch water line in Olympic Boulevard with a system maximum pressure of 91 psi. There are two active services located at 1020 S Figueroa; one 6" domestic service and one 6" fire service.

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<sup>1</sup> Los Angeles Department of Water and Power, *Water Supply Assessment – 1020 South Figueroa Street Project*, April 13, 2016. Adopted May 3, 2016, Resolution No. 016 264, included as Appendix K-1 of this Draft EIR.

<sup>2</sup> Psomas, *1020 S. Figueroa Street Project, Environmental Impact Report – Grading & Drainage and Utilities (Civil Engineering Report)*, April 18, 2016, included as Appendix I-2 of this Draft EIR.

## (2) Water Supply

LADWP is responsible for providing water within the City of Los Angeles limits and ensuring that the delivered water quality meets applicable California health standards for drinking water. Water is supplied to the City from the following sources: the Los Angeles Aqueducts (LAA), local groundwater, purchased water from the Metropolitan Water District of Southern California (MWD) and recycled water.

**Table 4.K.1-1, LADWP Water Supply**, summarizes LADWP water supplies from these sources over the last ten years. As shown in Table 4.K.1-1, in 2015, LADWP had an available water supply of 496,297 af/y, of which approximately 5 percent of LADWP's water supply was from the LAA, approximately 16 percent came from local groundwater, approximately 76 percent from the MWD, and approximately 2 percent was from recycled water.<sup>3</sup> Additionally, less than one percent was taken and stored into the reservoir system. The supply available is generally consistent with the demand from year to year, as LADWP purchases additional water from MWD only on an as-needed basis. These water sources are described in further detail below.

**Table 4.K.1-1**

**LADWP Water Supply  
(In Acre-Feet)**

Year	Los Angeles Aqueducts	Local Groundwater	MWD	Recycled Water	Transfer, Spread, Spills, and Storage	Total
2006	380,235	67,999	188,598	3,893	-1,336	641,361
2007	127,392	88,041	435,278	3,595	1,044	653,261
2008	148,407	64,604	429,170	7,048	1,664	647,565
2009	137,261	66,998	350,918	7,570	3,052	559,695
2010	251,126	68,346	203,745	6,900	-938	531,055
2011	357,752	49,915	119,381	7,708	-153	534,909
2012	166,858	57,784	325,439	5,965	3,386	552,660
2013	64,690	66,272	438,534	9,253	-2,404	581,153
2014	62,088	94,280	391,320	11,307	2,080	556,915
2015	26,828	81,618	378,439	9,844	432	496,297

Source: Los Angeles Department of Water and Power, Water Supply Assessment – 1020 South Figueroa Street Project, 2016.

### (a) Los Angeles Aqueducts

Water from the LAA comes primarily from streams and groundwater originating from snowmelt runoff from the Eastern Sierra Nevada Mountains. Due to varying hydrologic conditions, water supply from these sources can fluctuate yearly. The City holds water rights in the Eastern Sierra Nevada where the LAA water supplies originate. In recent years, LAA supplies have been less than historically normal due to environmental obligations to restore Mono Lake and mitigate dust from Owens Lake. LADWP's ability to

<sup>3</sup> Los Angeles Department of Water and Power, Water Supply Assessment, *op. cit.*

export Mono Basin water is now tied directly to the elevation of Mono Lake and flows of various streams that are tributary to Mono Lake. Additionally, pursuant to a Memorandum of Agreement between LADWP and the Great Basin Unified Air Pollution Control District (GBUAPCD), LADWP's ability to export LAA water is tied to the dust mitigation program implemented for Owens Lake.<sup>4</sup>

On November 14, 2014, an historic agreement between the City and GBUAPCD was announced which defined the full extent of future liability for LADWP on Owens Lake. The agreement allows LADWP to use water efficient and waterless dust mitigation measures, while maintaining existing wildlife habitat on the lakebed. As a result, LADWP expects to save significant amounts of water in coming years with implementation of the Owens Lake Master Project and other water conservation projects.<sup>5</sup>

Average deliveries of water from the LAA system have been approximately 160,461 af/y from fiscal year (FY) 2010/11 to 2014/15. During this period, the record low snow pack for the LAA watershed in the Eastern Sierra Nevada was recorded on April 1, 2015. The average annual long-term LAA delivery between 2010 and 2035, using the 50-year average hydrology from FY 1956/57 to 2005/06, is expected to be approximately 254,000 af/y and gradually decline to 244,000 af/y due to projected climate change impacts.<sup>6</sup>

### **(b) Groundwater**

LADWP extracts groundwater from the San Fernando, Sylmar, and Central groundwater basins.<sup>7</sup> LADWP holds adjudicated extraction rights in the groundwater basins, meaning that the groundwater supplies and quantities have been assigned by the courts to existing users. However, the San Fernando and Sylmar Basins are subject to the judgment in *City of San Fernando vs. City of Los Angeles*. Per that judgment, pumping must be reported to the court-appointed Upper Los Angeles River Area (ULARA) Watermaster. The Central Basin is also subject to a court judgment. Pumping is reported to California Department of Water Resources (DWR), which acts as Watermaster.

The San Fernando Basin, which consists of 112,000 acres of land and comprises 91.2 percent of the ULARA, is the largest within the ULARA. The majority of LADWP's groundwater is extracted from the San Fernando Basin. The City has accumulated 537,453 afy of stored water credits in the San Fernando Basin, as of October 2013.<sup>8</sup> The Sylmar Basin, located in the northern part of the ULARA, consists of 5,600 acres of land and comprises 4.6 percent of the ULARA. LADWP has an annual entitlement of 3,570 af/y from the Sylmar Basin.<sup>9</sup> Annual entitlements to the Central Basin is 16.546 af/y.<sup>10</sup>

<sup>4</sup> *Los Angeles Department of Water and Power, 2010 Urban Water Management Plan, adopted by the Board of Water and Power Commissioners of the City of Los Angeles, May 3, 2011; Chapter 5.4, Owens Lake Dust Mitigation.*

<sup>5</sup> *Los Angeles Department of Water and Power, Water Supply Assessment, op. cit., page 28.*

<sup>6</sup> *Ibid.*

<sup>7</sup> *Currently, LADWP does not exercise its pumping rights at the West Coast Basin due to localized water quality issues.*

<sup>8</sup> *Los Angeles Department of Water and Power, 2010 Urban Water Management Plan, op. cit.; Chapter 5.3, Environmental Issues and Mitigation Chapter 6.2, San Fernando Basin. The stored water credits are as reported in the Water Supply Assessment.*

<sup>9</sup> *Ibid, Chapter 6.3, Sylmar and Eagle Rock Basins; with updated entitlement information provided in the Water Supply Assessment.*

<sup>10</sup> *Ibid, Chapter 6.4, Central Basin; with updated entitlement information provided in the Water Supply Assessment.*

The supplies of groundwater in recent years as well as projections through 2035 are shown in **Table 4.K.1-2, Local Groundwater Basin Supply**. For the July 2014 – June 2015 time period, LADWP extracted 80,097 acre-feet and 6,948 acre-feet from the San Fernando and Central Basins, respectively, with no water extracted from the Sylmar basin. LADWP plans to continue production from its groundwater basins in the coming years to offset reductions in imported supplies. However, extraction from the basins will be limited by water quality and overdraft protection. Both LADWP and DWR have programs in place to monitor wells to prevent overdrafting. LADWP's groundwater pumping practice is based on a "safe yield" operation. The objective of "safe yield" operation, over a period of years, is to extract an amount of groundwater equal to the native and imported water that recharges the basin. Future projections for groundwater extraction at five year intervals are also shown in Table 4.K.1-2. As indicated, the expected extraction for the San Fernando, Sylmar and Central Basins in the years leading up to and inclusive of 2035 is 92,000 af/y, 4,500 af/y, and 15,000 af/y, respectively.

Table 4.K.1-2

**Local Groundwater Basin Supply  
(In Acre-Feet)**

Year	San Fernando	Sylmar	Central
<b>Recent Years</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
<b>Future Projections</b>			
2019-2020	78,800	4,500	15,000
2024-2025	92,000	4,500	15,000
2029-2030	92,000	4,500	15,000
2034-2035	92,000	4,500	15,000

*Source: Los Angeles Department of Water and Power, Water Supply Assessment – 1020 South Figueroa Street Project, April 13, 2016.*

### **(c) Metropolitan Water District of Southern California**

#### **(i) MWD Responsibilities for Water Supply**

The City purchases a large amount of its water supply from MWD. MWD is comprised of 26 member agencies including the City. MWD is the largest water wholesaler for domestic and municipal uses in Southern California. All 26-member agencies have preferential rights to purchase water from MWD. As of June 30, 2015, LADWP has a preferential right to purchase 20.01 percent of MWD's total water supply. MWD meets the demand for water through assessments of future supply and demand, which are presented in the MWD's Regional Urban Water Management Plan (RUWMP), the most recent being prepared in 2015 (Draft

2015 RUWMP), updating the 2010 RUWMP.<sup>11</sup> This plan addresses the future of MWD's water supplies and demand through the year 2040. Evaluations are prepared for average year conditions, single dry-year conditions, and multiple dry-year conditions. The analysis for multiple-dry year conditions, i.e. under the most challenging weather conditions, is presented in Table 2-4 of the Draft 2015 RUWMP. The analysis in the 2010 RUWMP indicated that that reliable water sources would be available to continuously meet demand through 2035. The estimated demand for 2035 was 2,399,000 af/y. The expected water supply, based on current programs, was 2,415,000 af/y, or a surplus of 16,000 af/y. With implementation of programs under development, the supply would be increased by 755,000 af/y, resulting in a potential surplus of 771,000 af/y. In the Draft 2015 RUWMP, the projected 2040 demand water is 2,201,000 af/y, supply is 2,910,000 af/y under current programs, and an additional 398,000 af/y under programs under development for a potential surplus of 1,107,000 af/y.

MWD also prepares an Integrated Water Resources Plan (IRP). The IRP provides a water management framework that includes plans and programs for meeting future water needs. It addresses issues that can affect future water supply such as water quality, climate change, and regulatory and operational changes. MWD first adopted its IRP in 1996. The most recent IRP, the 2015 IRP, was adopted in January 2016 (2015 IRP). It establishes a water supply reliability mission of providing its service area with adequate and reliable supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way. Among other topics, the 2015 IRP discusses water conservation, local and imported water supplies, storage and transfers, water demand, and adaptation to drought conditions.

Specifically, the 2015 IRP includes the following strategies to meet future water demand:

- Stabilizing and maintaining imported supplies
- Meeting future growth through increase conservation and existing and new local supplies
- Pursuing a comprehensive transfers and exchanges strategy
- Building storage in wet and normal years to manage risk and drought
- Preparing for climate change with Future Supply Actions – recycled water, seawater desalination, stormwater capture, and groundwater cleanup.

The 2015 IRP reliability targets identify developments in imported and local water supply, and in water conservation that, if successful, would provide a future without water shortages and mandatory restrictions under planned conditions. For imported supplies, MWD would make investments to maximize Colorado River Aqueduct deliveries in dry years. On the State Water Project, MWD would make ecologically-sound infrastructure investments so that the water system can capture sufficient supplies to help meet average year demands and to refill the MWD storage network in above-average and wet years. Lowering regional residential per capita demand by 20 percent by the year 2020 (compared to a baseline established in 2009 state legislation), reducing water use from outdoor landscapes and advancing additional local supplies are among the planned actions to keep supplies and demands in balance. Table ES-1 of the 2015 IRP shows the supply reliability and conservation targets. As presented in Table ES-1, the total supply reliability target for each five year increase between 2016 and 2040 would exceed the retail demand after conservation. In 2040,

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<sup>11</sup> *Metropolitan Water District of Southern California, Draft 2015 Urban Water Management Plan, March 2016.*

retail demand after conservation is estimated to be 4,273,000 acre-feet and the total supply reliability target is approximately 4,539,000 acre-feet, representing an excess of 266,000 acre-feet.

***(ii) LADWP – MWD Cooperation in Developing Water Resources***

LADWP has worked with MWD in developing a plan for allocating water supplies during periods of shortage. On February 12, 2008, the MWD Board adopted a Water Supply Allocation Plan. LADWP supported the adoption of this plan to acquire its dry weather condition supplies from MWD.

LADWP further coordinates closely with MWD to ensure implementation of its plans and efforts to provide additional water supply reliability. MWD's long-term plans to meet its member agencies' growing reliability needs are through improvements to the State Water Project (SWP) as outlined in the Bay Delta Conservation Plan, 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.

An in depth discussion of MWD is provided in Appendix F of the WSA, included Appendix K-1 of this Draft EIR. The following discussion summarizes key issues being addressed by the MWD in their planning of future water supply.

***(iii) Recent Developments Regarding Water Supply***

***Restrictions on Water Supply***

In response to the 2009 regulatory restrictions on water supplies from Northern California, the MWD Board announced on April 14, 2009, that supply deliveries to the member agencies would be reduced by 10 percent. Reduced supply allocation was to be effective from July 1, 2009 through June 30, 2010, but in April 2010, the MWD Board approved an extension of the reduced supply allocation through June 30, 2011, primarily to restore the storage balances in MWD's groundwater and surface storage facilities.

On March 31, 2011, California Governor Jerry Brown declared an end to the statewide drought emergency that had been proclaimed earlier on February 27, 2009, by then-Governor of California Arnold Schwarzenegger. MWD's Board subsequently voted on April 12, 2011 to end implementation of the 2010/11 water supply allocation. In the same decision, the MWD Board also voted to not implement a water supply allocation for 2011/12. These actions restored full imported water deliveries to member agencies without risk of allocation penalties effective April 2011.

Dry conditions have persisted since 2012. On January 17, 2014, Governor Brown declared a State of Emergency and directed state officials to take necessary actions to prepare for these drought conditions. The declaration lists numerous actions to be taken by the state agencies to continue to meet the water needs of Californians. These include such measures as reducing water consumption by state agencies, expediting the processing of water transfers, accelerating funding for water supply enhancement projects, and modifying requirements for reservoir releases or diversion limitations. The directive also called upon local urban water suppliers and municipalities to implement their local water shortage contingency plans immediately in order to avoid or forestall outright restrictions that could become necessary later in the drought season; and to update their legally required urban and agricultural water management plans, which

help plan for extended drought conditions. Finally the directive initiated a campaign calling on Californians to reduce their water usage by 20 percent.<sup>12</sup>

On April 1, 2015 Governor Jerry Brown renewed his emergency declaration and issued an Executive Order that imposed a mandatory 25 percent statewide water reduction and prohibited water uses through February 28, 2016, compared to the designated base year of 2013. In order to achieve this goal, the Executive Order emphasizes limiting outdoor irrigation, with incentives for lawn removal and penalties for improper irrigation. To help California achieve its reduction goal and mitigate the drought, California American Water created and implemented a 5 stage Water Shortage Contingency Plan. All districts except Ventura are currently in Stage 2, Ventura has entered Stage 3 Mandatory Conservation on Sept 15, 2015. The Executive Order stated that the 25 percent goal would not apply equally to every community throughout the State. The State Water Board released guidelines ranging from 8 to 36 percent. Communities with high gallons per capita per day (use per person) consumption are being asked to conserve the most whereas communities that already have a low use per person are being asked for smaller reductions. The proposed Target Reduction from 2013 Base Year for Los Angeles County is 26 percent.<sup>13</sup>

On April 14, 2015, to support Governor Brown's Executive Order and to reduce withdrawals from MWD's dry-year storage reserves, MWD implemented the Water Supply Allocation Plan at a Level 3 Regional Shortage Level (15 percent reduction in supplies), effective July 1, 2015 through June 30, 2016. MWD's dry-year storage reserves ended 2015 at approximately 0.87 million acre-feet. As of February 2016, LADWP was within, and projects to stay within, its MWD allocation through June 2016.

On May 5, 2015, the State Water Board adopted an emergency regulation requiring a 25 percent reduction in overall potable urban water use Statewide in accordance with the Governor's Executive Order. On February 2, 2016 the State Water Board approved an updated and extended emergency regulation that would continue mandatory regulations through October 2016, unless revised before then. As of March 2016, Californians reduced their water use by 24.3 percent compared to March 2013.<sup>14</sup>

On Monday May 9, 2016 Governor Brown issued a new Executive Order to continue water savings as drought conditions persist. The Executive Order aims to make water conservation a way of life in California. Californians have responded to the call to conserve water during the drought by dialing back sprinklers, replacing lawns, fixing leaky faucets and installing more efficient toilets and washing machines. The Executive Order calls for long-term improvements to local drought preparation across the State, and directs the State Water Resources Control Board to develop proposed emergency water restrictions for 2017 if the drought persists. These new actions are intended to help achieve as a top priority in the Governor's Water Action Plan – to "Make Conservation a California Way of Life." The administration will seek public input in the coming months on new water conservation and efficiency standards called for in this Executive Order.

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<sup>12</sup> Edmund G Brown Junior, Office of the Governor web-site; <http://gov.ca.gov/news.php?id=18368>. Accessed September 3, 2014.

<sup>13</sup> California American Water, Conservation and Rebates, <http://www.amwater.com/caaw/learning-center/page25356.html>. Accessed May 8, 2016.

<sup>14</sup> California Drought, Strong Statewide Water Conservation Effort in March; Water-Saving Habits Aid in 24.3 Percent Reduction, <http://drought.ca.gov/topstory/top-story-58.html>. Accessed May 8, 2016.

The Executive Order intends to achieve the following: use water more wisely, eliminate water waste, strengthen local drought resilience, and improve agricultural water use efficiency and drought planning.<sup>15</sup>

### ***Recent Issues Related to the State Water Project***

The amount of water available to the MWD has been affected by litigation regarding the SWP. Federal Endangered Species Act (ESA) litigation filed by several environmental interest groups in the United States District Court for the Eastern District of California alleged that existing biological opinions and incidental take statements inadequately analyzed impacts on listed species under the Federal ESA. On May 25, 2007, Federal District Judge Wanger issued a decision on summary judgment finding the United States Fish and Wildlife Service's (USFWS) biological opinion for Delta smelt was invalid. On December 14, 2007, Judge Wanger issued his Interim Remedial Order requiring that the SWP and Central Valley Project operate according to certain specified criteria until a new biological opinion for the Delta smelt is issued. USFWS released the new biological opinion on December 15, 2008. Based on the Water Allocation Analysis released by DWR on December 19, 2008, which analyzed the biological opinion's effects on State Water Project operations, export restrictions under median hydrologic conditions reduce deliveries to MWD by approximately 500,000 acre-feet.

MWD and other impacted agencies and stakeholders filed separate lawsuits in federal district court challenging the biological opinion, which the federal court consolidated under the caption Delta Smelt Consolidated Cases. On December 14, 2010, Judge Wanger issued a decision on summary judgment finding that there were major scientific and legal flaws in the Delta smelt biological opinion and remanding the biological opinion to the USFWS for reconsideration. The court's decision invalidates some of the restrictions on project operations contained in the Delta smelt biological opinion. On May 4, 2011, Judge Wanger issued a decision directing the USFWS to complete a new draft biological opinion by October 1, 2011, and to complete a final biological opinion with environmental documentation by December 1, 2013. Later stipulations and orders changed the October 1, 2011 due date for a draft biological opinion to December 14, 2011, and changed the December 1, 2013 due date for the final biological opinion to December 1, 2014. These events have highlighted the challenges that water suppliers throughout the State currently face regarding supplies from the Delta.

In past years, DWR had reduced allocations of SWP water and with reductions to zero on January 31, 2014. Subsequently there have been increases in the allocation. On April 21, 2016, the DWR announced that it was increasing the allocation of 2016 SWP water from 45 percent to 60 percent of total contracted water deliveries to the SWP contractors. Sixty percent of 1,911,500 af/y, which is the MWD's contracted water delivery amount, is 1,146,900 af/y. This increase was primarily due to March storms that soaked northern California after a mostly dry February.<sup>16</sup>

<sup>15</sup> Governor Brown Issues Order to Continue Water Savings as Drought Persists, <https://www.gov.ca.gov/news.php?id=19408>. Accessed May 9, 2016.

<sup>16</sup> California Department of Water Resources, News Release, State Water Project Allocation Increased, [http://www.water.ca.gov/recent\\_news.cfm](http://www.water.ca.gov/recent_news.cfm) and California Department of Water Resources, State Water Project, SWPAO – Notices to Contractors, Number 16-06 Accessed May 5, 2016.



### ***Delta Policy Legislation***

In November 2009, the State Legislature and then Governor Arnold Schwarzenegger passed the 2009 Comprehensive Water Package, which consisted of four policy bills and an \$11.14 billion bond proposal designed to ensure a reliable water supply for California's future and to restore the Delta and other ecologically sensitive areas. The Water Bond Measure was originally certified to be on the State's 2010 ballot. It was removed and placed on the 2012 ballot. The California State Legislature, on July 5, 2012, approved a bill to take the measure off the 2012 ballot and put it on the 2014 ballot. In 2014 the legislature replaced the 2010 Water Bond with a new bond measure to provide \$7.545 billion to fund investments in water projects and programs as part of a Statewide, comprehensive water plan for California (Proposition 1). Proposition 1 – The Water Quality, Supply, and Infrastructure Improvement Act of 2014 was approved by voters on November 4, 2014. Senate Bill (SB) X7-1 (Simitian) of the 2009 Water Package established the co-equal goals for the Delta: to provide a more reliable water supply for California and to protect, restore, and enhance the Delta ecosystem. SB X7-1 also established a framework to achieve the co-equal goals for the Delta by creating a new Delta governance structure - including the Delta Stewardship Council, Delta Conservancy; and Delta Protection Commission - and laying out a process for determining the consistency of the Bay Delta Conservation Plan (BDCP) with the co-equal goals.

Implementation of the four policy bills in the 2009 Water Package is currently underway, including the parallel development of the Delta Plan, a comprehensive, long-term management plan for the Delta adopted by the Delta Stewardship Council on May 16, 2013, and the BDCP, which will provide the basis for the issuance of endangered species permits for the operation of the State Water Project and Central Valley Project and for Delta conveyance improvements. The draft BDCP and the associated draft environmental impact report/environmental impact statement (EIR/EIS) were made available to the public for review on December 13, 2013. Comments for these documents were due on July 29, 2014. On December 19, 2014, several significant changes to the water conveyance portion of the BDCP were announced, including the elimination of three pumping plants, to respond to concerns of Delta landowners and others. On April 30, 2015, State and Federal agencies proposed a new sub-alternative, Alternative 4A, which would replace Alternative 4 (the proposed BDCP) as the State's proposed project. Alternative 4A reflected the State's proposal to separate the conveyance facility and habitat restoration measures into two separate efforts: California WaterFix and California EcoRestore. The environmental analysis of California WaterFix, as well as two other additional alternatives, and updated information from the 2013 BDCP Draft EIR/EIS were included in the BDCP/California WaterFix Partially Recirculated Draft EIR/Supplemental Draft EIS (RDEIR/SDEIS). The RDEIR/SDEIS was released for public review on July 10, 2015. The comment period ended on October 30, 2015. The final planning documents are expected to be completed in late 2016.

The responsibilities assigned to entities created by the Delta Governance Bill include such tasks as the following: develop performance measures to assess the progress of achieving the goals of the Delta Plan; ensure consistency of the BDCP with the co-equal goals of water supply reliability and Delta restoration; promote the economic vitality in the Delta through increased tourism and the promotion of Delta legacy communities; adopt an economic sustainability plan for the Delta; promote environmental education about, and the public use of, public lands in the Delta.

In addition to the Delta Governance Bill, the proposed Water Bond would allocate funds for projects to assist in achieving the BDCP's co-equal goal of maintaining and restoring the Delta ecosystem. BDCP will help to reduce the risk posed by seismic activities to water supplies from the Delta, protect drinking water quality and help to alleviate conflicts between water management and environmental protection. BDCP success is

crucial to providing long-term solutions in the Delta and will help to improve and maximize SWP reliability, and consequently MWD's overall reliability. These statewide initiatives along with LADWP's local supply and efficiency programs will ensure that LADWP is better prepared to deal with the natural variability of local water supplies, by having more reliable access to supplemental water supplies purchases from MWD.

In response to these recent developments in the Delta, MWD is engaged in planning processes that will identify local solutions that, when combined with the rest of its supply portfolio, will ensure a reliable long-term water supply for its member agencies. In the near-term, MWD will continue to rely on the plans and policies outlined in its Regional UWMP and 2015 IRP to address water supply shortages and interruptions (including potential shut downs of SWP pumps) to meet water demands.

#### **(d) Water Recycling with Stormwater Capture and Water Conservation**

In addition to the primary LADWP water sources discussed above, stormwater capture, water conservation and recycling will play an increasing role in meeting future water demands. LADWP has implemented programs to address these issues, with efforts underway to further promote and increase the level of these programs. LADWP is committed to supplying a higher percentage of the City's water demand through local water supply development. This commitment is reflected in the adoption of numerous water conservation ordinances and through provisions of the regularly revised UWMP, as described further in the Regulatory discussion below. Through integrated planning the City works closely with MWD, the Department of Public Works Bureau of Sanitation, other regional water providers, and various stakeholder groups to develop and implement programs that reduce overall water use. These strategies are intended to ensure a reliable water supply for Los Angeles residents and businesses.

### **(3) Global Warming and Climate Change**

Potential impacts of climate change on California's water resources include changes in snow pack, sea level, and river flows. Climate change is also expected to result in more variable weather patterns that can lead to longer and more severe drought. In addition, sea level rise will continue to threaten the sustainability of the Sacramento-San Joaquin Delta.<sup>17</sup> In response to Governor's Executive Order S-3-05, DWR prepared a report on this issue in May 2009, entitled "Using Future Climate Projections to Support Water Resources Decision Making in California," which presents an overview of the advances that DWR has made toward using future climate projection information to support decision making by quantifying possible impacts to water resources for a range of future climate scenarios. Advances have been made in using future climate projection information in water resources planning in California, including improved understanding of how well selected climate models represent historical climate conditions and refined methodologies for representing stream flows, outdoor urban and agricultural water demands, and sea level rise in planning tools. The range of impacts presented indicated the need for adaptation measures to improve the reliability of future water supplies in California.<sup>18</sup>

<sup>17</sup> California Department of Water Resources, *Climate Change*, <http://www.water.ca.gov/climatechange>. Accessed May 8, 2016.

<sup>18</sup> California Department of Water Resources, "Using Future Climate Projections to Support Water Resources Decision Making in California," May 2009, page 2; <http://www.energy.ca.gov/2009publications/CEC-500-2009-052/CEC-500-2009-052-D.PDF>. Accessed May 8, 2016.

DWR has further addressed the issue of climate change and how it can affect California's water supply, by undertaking mitigation and adaptation measures. DWR is a member of the California Climate Action Registry and is listed as a "Climate Action Leader" for reporting its greenhouse gas emissions for three consecutive years (2007, 2008 and 2009), and having the data verified by third party audit.<sup>19</sup> In 2008, DWR adopted the "Climate Change Adaptation Strategy," which urges a new approach to California's water and other natural resources in the face of changing climate.<sup>20</sup> In 2009, DWR adopted its own Sustainability Policy, and in 2010, DWR established clear and measurable goals for sustainability implementations.<sup>21,22</sup>

In December 2010, DWR prepared a survey which presents summaries of 13 different reports and studies prepared by DWR addressing climate change entitled "Climate Change Characterization and Analysis in California Water Resources Planning Studies - Final Report." A variety of approaches to characterize and analyze future climate have been used in various DWR planning studies. The December 2010 paper summarized the approaches and methodologies that have been used since 2006. It was the first comprehensive comparative look at the different approaches, their strengths and weaknesses, and how they have been used in past studies. This work laid the groundwork for a future DWR study aimed at developing a standard framework and a consistent set of approaches to be used for characterizing and analyzing climate change in future DWR planning studies and to provide guidance for DWR partners and grantees.<sup>23</sup>

In 2011, DWR in cooperation with the U.S. Environmental Protection Agency, U.S. Army Corps of Engineers, and Resources Legacy Fund completed the Climate Change Handbook for Regional Water Planning, provides a framework for considering climate change in water management planning. Key decision considerations, resources, tools, and decision options are presented to guide resource managers and planners as they develop means of adapting their programs to a changing climate. The Climate Change Handbook is focused on the California Integrated Regional Water Management Planning (IRWMP) process, for incorporating climate change into the watershed or water supply planning process. The Climate Change Handbook considers both climate change adaptation (reduction of impacts) and mitigation (GHG reduction). Quantitative tools and techniques for addressing both are introduced and discussed in order to prepare comprehensive IRWMPs.<sup>24</sup>

In 2014, DWR released up-to-date climate change information, including hydrologic impacts and projections at the statewide and regional levels, adaptation strategies, and energy intensity of water supplies in California Water Plan Update 2013 (California Water Plan). The California Water Plan is the strategic plan for managing and developing water resources statewide for current and future generations by providing a

<sup>19</sup> California Climate Action Registry, *Climate Action Leaders*; <http://www.climateregistry.org/about/members/climate-action-leaders.html>. Accessed May 8, 2016.

<sup>20</sup> California Department of Water Resources, *Climate Change Adaptation Strategies for California's Water: Managing an Uncertain Future*, October 2008; <http://www.water.ca.gov/climatechange/docs/ClimateChangeWhitePaper.pdf>. Accessed May 8, 2016.

<sup>21</sup> California Department of Water Resources, *Memorandum to All DWR Employees, "Sustainability Workgroup," April 22, 2009*; [http://www.water.ca.gov/climatechange/docs/Sustainability\\_Policy.pdf](http://www.water.ca.gov/climatechange/docs/Sustainability_Policy.pdf). Accessed May 8, 2016.

<sup>22</sup> California Department of Water Resources, *Memorandum to All DWR Employees, "Sustainability Targets," September 20, 2010*; [http://www.water.ca.gov/climatechange/docs/Memo\\_sustainability-Sept%202010.pdf](http://www.water.ca.gov/climatechange/docs/Memo_sustainability-Sept%202010.pdf). Accessed May 8, 2016.

<sup>23</sup> California Department of Water Resources, *"Climate Change Characterization and Analysis in California Water Resources Planning Studies - Final Report," December 2010, at page v*; [http://www.water.ca.gov/climatechange/docs/DWR\\_CCCStudy\\_FinalReport\\_Dec23.pdf](http://www.water.ca.gov/climatechange/docs/DWR_CCCStudy_FinalReport_Dec23.pdf). Accessed May 8, 2016.

<sup>24</sup> California Department of Water Resources, *Climate Change, Climate Change Handbook for Regional Water Planning*, <http://www.water.ca.gov/climatechange/CCHandbook.cfm>. Accessed May 8, 2016.

collaborative planning framework to develop findings and recommendations and make informed decisions for California's water future. The California Water Plan, updated every five years, presents the status and trends of California's water-dependent natural resources; water supplies; and agricultural, urban, and environmental water demands for a range of plausible future scenarios. The California Water Plan also evaluates different combinations of regional and statewide resource management strategies to reduce water demand, increase water supply, reduce flood risk, improve water quality, and enhance environmental and resource stewardship. The evaluations and assessments performed for the plan help identify effective actions and policies for meeting California's resource management objectives in the near term and for several decades to come.<sup>25</sup> A stated goal of the California Water Plan is to prepare for climate uncertainty by developing adaptation strategies and investing in a diverse set of actions that reduce the risk and consequences posed by climate change, as well as make the system more resilient to change and increase the sustainability of water and flood management systems and the ecosystems they depend on.<sup>26</sup> Two actions to address climate change include: 1) use and reuse water more efficiently through conservation, recycling and reuse, and 2) expand conjunctive management of multiple water supply sources with existing and new surface and groundwater storage.<sup>27</sup>

While climate change is expected to continue through at least the end of this century, the magnitude and nature of future changes are uncertain. This uncertainty serves to complicate the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood.<sup>28</sup> However, preliminary modeling conducted by DWR indicates that under one climate change scenario, average yearly SWP Table A deliveries in 2050 could be reduced by 10.2 percent.<sup>29,30</sup>

In light of these conclusions, both governmental agencies and non-governmental organizations recommend that water decision-makers operate existing water systems to allow for increased flexibility. Other recommendations include incorporating climate change research into infrastructure design, conjunctively managing surface water and groundwater supplies, and integrating water and land use practices. As a result, in March 2002, MWD's Board of Directors adopted climate change policy principles that relate to water resources. A second expert panel on climate change was convened in 2007 to present and explain new findings from the climate change science community. Also in 2007, MWD became one of the founding members of the Water Utility Climate Alliance (WUCA). WUCA provides a collaborative avenue for knowledge sharing and research support on climate change. These climate change principles and research

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<sup>25</sup> California Department of Water Resources, California Water Plan, About Us, [http://www.water.ca.gov/waterplan/about\\_us/about\\_us.cfm](http://www.water.ca.gov/waterplan/about_us/about_us.cfm). Accessed May 8, 2016.

<sup>26</sup> California Department of Water Resources, California Water Plan, Update 2013, page 10A, <http://www.water.ca.gov/waterplan/cwpu2013/final/index.cfm>. Accessed May 9, 2016.

<sup>27</sup> *Ibid.*, page 11A.

<sup>28</sup> California Department of Water Resources, "Progress on Incorporating Climate Change into Management of California's Water Resources," July 2006, page 2-54; <http://www.water.ca.gov/climatechange/docs/DWRClimateChangeJuly06.pdf>. Accessed May 8, 2016.

<sup>29</sup> *Ibid.*, page 4-49.

<sup>30</sup> Table A water deliveries represent the schedule of the maximum amount of water that water contractors to the DWR may receive annually from the SWP. There are 29 water contractors who have signed long term contracts with the DWR for a total of 4.173 million acre feet per year. Table A deliveries are not guarantees of annual delivery amounts but are used to allocate individual contractors' portion of the delivery amounts available.

results are reflected in MWD's 2015 IRP.<sup>31</sup> Further, in response to climate change and uncertainty, MWD's 2010 RUWMP incorporated three basic elements to promote adaptability and flexibility, important in addressing impacts of climate change: conservation, groundwater recharge, and water recycling.<sup>32</sup> The Draft 2015 RUWMP identifies programs and policies to address climate change such as: exploring water supply/energy relationships to increase efficiencies; participating in the Climate Registry; acquiring green fleet vehicles; developing solar power at two water treatment plants; and identifying and pursuing development of green renewable water and energy programs that support the efficient and sustainable use of water.<sup>33</sup>

As previously described, on April 30, 2015 State and federal agencies identified a new, preferred alternative that advances water system improvements and habitat restoration as two separate projects, California WaterFix and California EcoRestore. Long-term solutions to resolving Delta challenges will be evaluated against the following six benchmarks: 1) restore and protect State Water Project deliveries; 2) improve export water quality; 3) promote flexible pumping operations in a dynamic Delta environment; 4) enhance Delta ecosystems fishery habitat; 5) reduce seismic risks; and 6) reduce climate change risk.<sup>34</sup> MWD has demonstrated a commitment to addressing climate change by evaluating the vulnerability of its water systems to global warming impacts and has developed appropriate response strategies and management tools that account for the impacts of climate change on future water supplies. For further discussion on the effects of global climate change, refer to Section 4.D, *Greenhouse Gas Emissions*, of this Draft EIR.

## b. Regulatory Framework

### (1) State

#### (a) California Urban Water Management Plan Act

The California Urban Water Management Planning Act (California Water Code [CWC] Division 6, Part 2.6, Sections 10610-10656) addresses several State policies regarding water conservation and the development of water management plans to ensure the efficient use of available supplies. The California Urban Water Management Planning Act also requires water suppliers to develop water management plans every five years to identify short-term and long-term demand management measures to meet growing water demands during normal, dry, and multiple-dry years. Specifically, municipal water suppliers that serve more than 3,000 customers or provide more than 3,000 af/y of water must adopt an Urban Water Management Plan (UWMP).

#### (b) Senate Bill 610, Senate Bill 221, and Senate Bill 7

State legislation addressing water supply, Senate Bill (SB) 610 and SB 221, became effective January 1, 2002. SB 610, codified in CWC §10910 et seq., describes requirements for both water supply assessments (WSAs)

<sup>31</sup> *Metropolitan Water District of Southern California, Integrated Water Resources Plan, 2015 Update, Report No. 1518, January 2016; [http://www.mwdh2o.com/PDF/AboutYourWater/2015%20IRP%20Update%20Report%20\(web\).pdf](http://www.mwdh2o.com/PDF/AboutYourWater/2015%20IRP%20Update%20Report%20(web).pdf). Accessed May 9, 2016.*

<sup>32</sup> *Metropolitan Water District of Southern California, The Regional Urban Water Management Plan, November 2010; <http://www.mwdh2o.com/AboutYourWater/Planning/Planning-Documents/Pages/default.aspx>. Accessed May 9, 2016.*

<sup>33</sup> *Metropolitan Water District of Southern California, 2015 Draft Urban Water Management Plan, March 2016, page 2-28, <http://www.mwdh2o.com/AboutYourWater/Planning/Planning-Documents/Pages/default.aspx>. Accessed May 9, 2016.*

<sup>34</sup> *The Metropolitan Water District of Southern California, State-Federal Proposal for Delta Restoration, <http://www.mwdh2o.com/PDF/AboutYourWater/Delta/CalWaterFixOverview.pdf>. Accessed May 9, 2016.*

and UWMPs applicable to the California Environmental Quality Act (CEQA) process. SB 610 requires that for projects subject to CEQA, which meet specific size criteria, the water supplier must prepare a WSA that determines whether the projected water demand associated with a proposed project is included as part of the most recently adopted UWMP. Specifically, a WSA shall identify existing water supply entitlements, water rights, or water service contracts held by the public water system, and prior years' water deliveries received by the public water system. In addition, it must address water supplies over a 20-year period and consider normal, single-dry, and multiple-dry year conditions. In accordance with SB 610 and Section 10912 of the CWC, such projects subject to CEQA requiring completion of a WSA include the following:

- Residential developments of more than 500 dwelling units;
- Shopping centers or business establishments 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 plants, or industrial parks planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area;
- Mixed-use projects that include one or more of the projects specified in this subdivision; or
- Projects that would demand an amount of water equivalent to or greater than the amount of water required by a 500 dwelling unit project.

The WSA must be approved by the public water system at a regular or special meeting and must be incorporated into the CEQA document. The lead agency must then make certain findings related to water supply based on the WSA.

In addition, under SB 610, a water supplier responsible for the preparation and periodic updating of an UWMP must describe the water supply projects and programs that may be undertaken to meet the total project water use of the service area. If groundwater is identified as a source of water available to the supplier, the following additional information must be included in the UWMP: (1) a groundwater management plan; (2) a description of the groundwater basin(s) to be used and the water use adjudication rights, if any; (3) a description and analysis of groundwater use in the past five years; and (4) a discussion of the sufficiency of the groundwater that is projected to be pumped by the supplier.

Complementary legislation to SB 610 was enacted on November 10, 2009, with the passage of SB 7. SB 7 mandates new water conservation goals for UWMPs, requiring urban water suppliers to achieve a 20 percent per capita water consumption reduction by the year 2020 statewide, as described in the "20 x 2020" State Water Conservation Plan.<sup>35</sup> As such, each updated UWMP must now incorporate a description of how each respective urban water supplier will quantitatively implement this water conservation mandate, in addition to the requirements of SB 610.

<sup>35</sup> *California State Water Resources Control Board, 20 x 2020 Water Conservation Plan, February 2010. [http://www.swrcb.ca.gov/water\\_issues/hot\\_topics/20x2020/docs/20x2020plan.pdf](http://www.swrcb.ca.gov/water_issues/hot_topics/20x2020/docs/20x2020plan.pdf). Accessed September 2014.*

SB 221 also addresses water supply in the land use planning process and focuses on new residential subdivisions in non-urban areas. SB 221 requires that written verification from the water service provider be submitted indicating sufficient water supply is available to serve a proposed subdivision, or the local agency shall make a specified finding that sufficient water supplies are or will be available prior to completion of a project. SB 221 specifically applies to residential subdivisions of 500 units or more. In addition, Government Code Section 66473.7(i) exempts "...any residential project proposed for a site that is within an urbanized area and has been previously developed for urban uses; or where the immediate contiguous properties surrounding the residential project site are, or previously have been, developed for urban uses; or housing projects that are exclusively for very low and low-income households."

### **(c) California Code of Regulations**

#### ***(i) Title 20***

Title 20, Sections 1605.1(h) and 1605.1(i) of the California Code of Regulations (CCR) establishes efficiency standards (i.e., maximum flow rates) for all new federally-regulated plumbing fittings and fixtures, including such fixtures as showerheads, lavatory faucets and water closets. Amongst the standards, the maximum flow rate for showerheads and lavatory faucets are 2.5 gallons per minute (gpm) at 80 psi and 2.2 gpm at 60 psi, respectively. The standard for water closets is 1.8 gallons per flush. In addition, Section 1605.3(h) establishes State efficiency standards for non-federally regulated plumbing fittings, including commercial pre-rinse spray valves.

#### ***(ii) Title 24, Part 11***

Part 11 of Title 24, the title that regulates the design and construction of buildings, establishes the California Green Building Standards Code (CALGreen). The purpose of CALGreen is to improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices in the following categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality. CalGreen includes both mandatory measures as well as voluntary measures. The mandatory measures establish minimum baselines that must be met in order for a building to be approved. The voluntary measures can be adopted by local jurisdictions for greater efficiency.

## **(2) Local**

### **(a) City of Los Angeles General Plan Framework**

Chapter 9, Infrastructure and Public Services, of the City's General Plan Framework identifies goals, objectives, and policies for utilities in the City including wastewater collection and treatment. Goal 9C is to provide adequate water supply, storage facilities, and delivery system to serve the needs of existing and future water needs.<sup>36</sup>

<sup>36</sup> *City of Los Angeles, General Plan Framework Element, Chapter 9: Infrastructure and Public Services – Water Supply.*

**(b) Central City Community Plan**

The Central City Community Plan states within its purpose statement the promotion of "... an arrangement of land use, infrastructure, and services intended to enhance the economic, social, and physical health, safety, welfare, and convenience of the people who live, work and invest in the community." The Community Plan identifies aging infrastructure as an issue, but does not provide specific policies regarding the provision of infrastructure facilities for individual development projects, which are routinely evaluated on a project-by-project basis.

**(c) City of Los Angeles Ordinances**

The City has adopted several ordinances to reduce the amount of water consumption in the City. These include measures pursuant to the City's green building efforts, encouragement of sustainable development and initiatives to address potential water shortages due to changing supply availability. The ordinances are discussed below.

**Ordinance No. 180,822.** The Water Efficiency Requirements Ordinance, City Ordinance No. 180,822, effective Dec. 1, 2009, established water efficiency requirements for new development and renovation of existing buildings, mandating installation of high efficiency plumbing fixtures in residential and commercial buildings. These standards are more stringent than the standards described above for the State regulations. For example, the maximum toilet flow is 1.28 gallons per flush in contrast to the State standard of 1.8 gallons per flush, and the faucet standard is 2.2 gallons per minute in contrast to the States 2.5 gallons per minute.

**Ordinance No. 181,480.** The City's Green Building Code, Ordinance No. 181,480, creates a set of development standards and guidelines to further energy efficiency and reduction of greenhouse gases. It builds upon and sets higher standards than those incorporated in the CALGreen described above. Amongst its provisions are efficiency standards regarding water consumption fixtures and appliances in new buildings. The Green Building Code is implemented through the building permit review process, during which projects are evaluated for compliance with the required water conservation features.

**Ordinance No. 170,978.** In 1996, Ordinance No. 170,978 amended Los Angeles Municipal Code Sections 12.40 through 12.43 to establish consistent landscape requirements for new projects within the City. This ordinance requires numerous water conservation measures in landscape, installation, and maintenance including but not limited to the use of drip irrigation and soak hoses in lieu of sprinklers to lower the amount of water lost to evaporation and overspray; setting automatic sprinkler systems to irrigate during the early morning or evening hours to minimize water loss due to evaporation; and watering less in the cooler months and during the rainy season. The ordinance also provides guidance intended to increase the "residence time of precipitation" within a given watershed.

**Ordinance No. 181,899; and Ordinance No. 183,833.** In 2011, the City adopted Ordinance No. 181,899, the City-wide Low Impact Development (LID) Ordinance (LID Ordinance). LID is a stormwater management strategy with goals to mitigate the impacts of increased runoff and stormwater pollution as close to its source as possible. Among other provisions regarding drainage, the LID promotes the collection and use of on-site stormwater for irrigation of landscaping and recharge to the groundwater table where/if appropriate. Ordinance 183,833, the Stormwater and Urban Runoff Pollution Control Ordinance, establishes City requirements to meet its obligation under its Municipal Separate Storm Sewer (MS4) Permit. The ordinance further delineates implementation procedures for meeting the City's LID requirements.



**Ordinance No. 183,608.** The City's Emergency Water Conservation Plan was most recently updated on June 9, 2015, superseding Ordinance No. 181,288. The purpose of this Ordinance is to provide mandatory water consumption practices during times when the supply of water available for use is reduced due to such factors as weather conditions, groundwater levels, etc. The Ordinance establishes varied water consumption limitations arranged by Phases, whereby the level of restriction for each Phase is tied to the level of water conservation required. Water conservation measures include such restrictions as limited watering of hard surfaces, and automobiles, and rationed watering of landscaping. The most recent update to the Ordinance added an additional phase to allow for outdoor watering two days a week, and to clarify other prohibited uses for other phases. The Los Angeles City Council previously implemented Phase III restrictions of the Ordinance and the LADWP Board of Water and Power Commissioners adopted Shortage Year Rates as well in 2009. Phase II restrictions were implemented in August 2010 and remain in effect today.

On January 20, 2014, LADWP issued a Statement Regarding Statewide Drought conditions. The statement said that Los Angeles has prepared for this drought, pointing out Angelenos use less water per capita than residents of any major U.S. city with a population over 1 million. According to the statement, LADWP and other Southern California water agencies have invested in storage over the past decade; and together with a strong conservation program, these investments will allow the City to weather the current shortage.<sup>37</sup> The statement asked residents to look for more ways to reduce their water use and take advantage of money saving rebates offered by LADWP, including rebates for the use of water efficient appliances and devices and replacement of water-thirsty lawns with California Friendly landscape. LADWP also expanded its public outreach and education efforts to raise awareness about the dry year conditions and users' responsibility to use water wisely and in accordance with the City's Water Conservation Ordinance.

On October 14, 2014, Mayor Eric Garcetti issued Executive Directive 5 (ED5), which directed that the City achieve the following goals: a 20 percent reduction in per capita potable water consumption by 2017; a reduction in LADWP purchase of imported potable water by 50 percent by 2024; and creation of an integrated strategy that increases local water supplies and improves water security in the context of climate change and seismic vulnerability. The 2010 UWMP includes existing plans by LADWP to develop local water supplies to reduce reliance on purchased water in the future. These goals include increased stormwater capture, groundwater clean-up, recycled water, and conservation.

However, to comply with ED5 goals, LADWP is currently developing plans to accelerate many of these 2010 UWMP goals. Most significant among them is an increased goal for conservation. As of the end of February 2016, the City's per capita potable water consumption has been reduced to 106.1 gallons per capita per day (GPCD), which equates to an 18.4 percent reduction compared to the baseline of fiscal year ending 2014.<sup>38</sup>

On July 21, 2015, the Board of Water and Power Commissioners adopted a Resolution recommending the Mayor and City Council consider a transition from Phase II to Phase III of City Ordinance No. 183608 if either the Mayoral or SWRCB conservation mandates are not met on a monthly basis. In addition to the requirements of Phase I and II, Phase III would limit outdoor irrigation to no more than two days a week. As of January, 2016, Phase III had not been implemented. On February 2, 2016, SWRCB, through Resolution No.

<sup>37</sup> Los Angeles Department of Water and Power, Press Release, January 20, 2014. <https://www.piersystem.com/go/doc/1475/2071446/LADWP-Statement-Regarding-Statewide-Drought-Conditions#>. Accessed September 4, 2014.

<sup>38</sup> Los Angeles Department of Water and Power, *Water Supply Assessment*, op. cit., pages 5 and 14.

2016-0007, amended and extended the emergency regulation to continue the restrictions on water use through October 2016.

#### **(d) Los Angeles Department of Water and Power Urban Water Management Plan**

In accordance with the California Urban Water Management Planning Act, LADWP adopted the 2010 UWMP on May 3, 2011, which incorporates the water conservation mandates of SB 7.<sup>39</sup> The UWMP details LADWP's efforts to promote the efficient use and management of its water resources. LADWP's UWMP used a service area-wide method in developing its water demand projections. This method does not rely on individual development demands to determine area-wide growth. Rather, the growth in water use for the entire service area was considered in developing long-term water projections for the City of Los Angeles for the next 25 years. The driving factors for this growth are demographics, weather, and conservation. LADWP used anticipated growth in the various customer class sectors, as provided by MWD, which reallocates projected demographic data from Southern California Association of Governments (SCAG) into member agencies' service areas.

The 2010 UWMP addresses priorities and water supply and demand forecasts through 2035. The forecasts of future demand for water consumption include information from 40 WSAs that were prepared during the period from 2005 to 2010. Each WSA performed by LADWP is evaluated within the context of the current adopted UWMP and current conditions. MWD, LADWP's supplemental water supplier, has also been actively developing plans and making efforts to provide additional water supply reliability for the entire Southern California region. LADWP coordinates closely with MWD to ensure implementation of MWD's water resource development plans and supplemental water reliability report prepared by MWD. This allows LADWP to work collaboratively with MWD to ensure the City's anticipated water demands are also incorporated into MWD's long-term water resources development plan.<sup>40</sup>

UWMPs are updated on five-year intervals, each updated UWMP incorporating the most recent SCAG projections and findings of recent WSAs for new development projects as required by California law. This process entails, among other requirements, an update of water supply and water demand projections for water agencies; and allows LADWP to take into account recent climate conditions. The 2015 UWMP has been released in Draft form and is scheduled for adoption in June 2016 and submittal to the California Department of Water Resources in July 2016.<sup>41</sup> Ongoing programs and plans to meet future water needs are being integrated into LADWP's 2015 UWMP.

The City's water demand projection in the 2010 UWMP was based on the 2008 Regional Transportation Plan (RTP) demographic projection by SCAG using the 2000 U.S. Census for the City. The 2012 RTP demographic projection for the City, which is the basis for the 2015 UWMP Update, was based on the 2010 U.S. Census, and is lower than the 2008 RTP demographic projection, due to decreases in the rate of population growth.

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<sup>39</sup> *Los Angeles Department of Water and Power, 2010 Urban Water Management Plan, op. cit.*

<sup>40</sup> *Ibid.*

<sup>41</sup> *LADWP, About Us, Water, Sources of Supply, 2015, Urban Water Management Plan, [https://www.ladwp.com/ladwp/faces/wcnav\\_externalId/a-w-sos-uwmp?\\_afrcState=clziyvvdod\\_29&\\_afrcLoop=364831753147071](https://www.ladwp.com/ladwp/faces/wcnav_externalId/a-w-sos-uwmp?_afrcState=clziyvvdod_29&_afrcLoop=364831753147071). Accessed May 10, 2016.*

Preliminary analysis for the 2015 UWMP shows that the City water demand projection to year 2035 based on demographic projections from 2012 RTP using population, housing and employment, as well as water conservation, and weather will be lower than the City's water demand projection in the 2010 UWMP. As a result, LADWP has indicated that the City's water supply projections in the 2010 UWMP are considered sufficient to meet the City's water demand projections based on the 2012 RTP.

### 3. ENVIRONMENTAL IMPACTS

#### a. Methodology

The Project is subject to the requirements of SB 610 because it proposes the development of over 500 residential dwelling units. Therefore, a WSA has been prepared that addresses the ability of LADWP to provide water service to the Project pursuant to the legislative requirements. The WSA data and findings have been summarized within this EIR section. The full WSA is included as Appendix K-1 of this Draft EIR.

The Project's demand for water resources was compared to the LADWP's ability to supply water pursuant to its approved 2010 UWMP. The water demand for indoor land uses was calculated based on generation factors provided by the City's Department of Public Works, Bureau of Sanitation. The estimated water demand for landscaping was based on the State's Model Water Efficient Landscape Ordinance.<sup>42</sup> Credit was given for water conservation measures on the basis of LADWP factors for the estimated water savings of the water fixtures and appliances that would be used for this Project.

The analysis of impacts with regard to the availability of water infrastructure identifies the water lines available to serve the Project Site, and identifies the available water pressure capacity along those lines and the City procedures for providing needed infrastructure. The analysis identifies the available water infrastructure to serve the Project's domestic water demand. Impacts regarding water sufficiency for fire-fighting are addressed in Section 4.I.1, *Fire Protection*, of this Draft EIR.

#### b. Thresholds of Significance

Appendix G of the CEQA Guidelines provides a set of screening questions that address impacts with regard to water.

Would the project:

- Require or result in the construction of new water facilities or the expansion of existing facilities, the construction of which would cause significant environmental effects?
- Have sufficient water supplies available to service the project from existing entitlements and resources, or are new expanded entitlements needed?

The *L.A. CEQA Thresholds Guide* incorporates the screening questions contained in Appendix G. In accordance with the City's thresholds, the determination of impacts on water services shall be made on a case-by-case basis, considering the following factors:

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<sup>42</sup> California Code of Regulations Title 23, Division 2, Chapter 2.7.

- 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.

Based on these factors, the Project would have a significant impact on water supply if:

- WS-1** The City's water supplies would not adequately serve the Project or water distribution capacity would be inadequate to serve the Project or water distribution capacity would be inadequate to serve the proposed uses after appropriate infrastructure improvements have been installed.

## **c. Project Characteristics and Project Design Features**

### **(1) Project Characteristics**

The Project would demolish the existing Luxe Hotel, and related improvements on the Project Site; and construct a new mixed-use hotel, residential and commercial development. The Project would include up to 300 hotel rooms, up to 650 residential condominium units, and up to 80,000 sf of restaurant, retail, and other commercial uses at the first two levels along all street frontages with landscaped sidewalks and an open public Plaza.

Water service to the Project Site would continue to be available from the existing water lines located within the adjacent street right-of-ways. These include the 10 inch water line in 11th Street, the 12 inch water line in Figueroa Street, and the 12 inch water line in Olympic Boulevard. Design plans for lateral tie-ins, domestic water pumps and other service specifications would be provided to LADWP for final review per City standards.

The Project would include water conservation features that would substantially reduce the Project's consumption of water resources, recognizing the City of Los Angeles' policy that future water needs shall be met by expanding water recycling and conservation. The Project standards would meet and/or exceed standards established in the Water Efficiency Requirements Ordinance - City Ordinance No.180,822; the Los Angeles Green Building Code Ordinance - City Ordinance No. 181,480; and the California Green Building Standard Code. Project design would also comply with the Standard Urban Stormwater Mitigation Plan (SUSMP) inclusive of Best Management Practices that have stormwater recharge or reuse benefits for the entire Project as applicable.

## (2) Project Design Features<sup>43</sup>

Based on the commitments by the Applicant to the LADWP regarding specific design features to accomplish the above, the following Project Design Feature would be applicable to the Project:

**PDF-WS-1: Water Conservation Features:** The Project shall provide the following specific water efficiency features:

- High Efficiency Toilets with flush volume of 1.0 gallons of water per flush
- High Efficiency Clothes Washers (Residential) – water savings factor of 4.0 or less
- Lavatory Faucet with flow rate of 1.2 gallons per minute or less for Residential Units and Hotel Rooms
- Kitchen Faucets with flow rate of 1.5 gallons per minute or less for Residential Units, Hotel Rooms, and Retail/Commercial
- Showerheads with flow rate of 1.5 gallons per minute or less
- Showerheads – no more than one showerhead per stall
- Efficient Rotor Sprinkler Nozzles for Landscape Irrigation – <1.0 gallons per minute
- Weather Based Irrigation Controller
- Drought Tolerant Plants – 70% of total landscaping
- High Efficiency Clothes Washers (Commercial) – water savings factor of 7.5 or less
- Domestic Water Heating System located close proximity to point(s) of use
- Cooling Tower Conductivity Controllers or Cooling Tower pH Conductivity Controllers
- Water-Saving Pool Filter
- Drip/ Subsurface Irrigation
- Proper Hydro-zoning/ (groups plants with similar water requirements together)
- Landscaping Contouring to minimize precipitation runoff
- Artificial Turf

<sup>43</sup> *The Los Angeles Superior Court issued a statement of decision (Case No. BS 084677) on August 15, 2007 which upheld a local agency's Return to a Writ of Mandate and Final Additional Analysis to an EIR for a local development project (California Oak Foundation v. City of Santa Clarita (2005) 133 Cal.App.4th) and struck down certification of the EIR for the Gate King project because it did not address legal uncertainties surrounding a water transfer. Among other issues, the statement of decision dealt with the analysis of the potential impact of global warming on water supplies and concluded that it was proper that no quantification of the impact of climate change on the reliability of SWP water was prepared because DWR has indicated in its reports that quantification is premature. The statement of decision indicates that DWR, with the most expertise on water supply in California, has determined that the science on global warming has not reached a point where it can be quantified and incorporated into delivery projections of the SWP. Accordingly, the statement of decision also concludes that the City is in no better position to quantify the effects of global warming on the reliability of SWP water and that it is not required to do so under CEQA.*

- Water Conserving Turf Cynodon Dactylon (Tifgreen)
- Rainwater Harvesting

#### d. Project Impacts

**Threshold WS-1:** The Project would have a significant impact if the City's water supplies would not adequately serve the Project or water distribution capacity would be inadequate to serve the proposed uses after appropriate infrastructure improvements have been installed.

##### (1) Construction Impacts

*Impact Statement WS-1: Construction impacts regarding the consumption of water resources would be less than significant. Project construction would require only intermittent use of water resources over a limited time duration.*

Water consumption would be required to accommodate Project construction activities, such as soil watering (i.e., for fugitive dust control), clean up, masonry, painting, and other related activities. As the Project would occur in two phases beginning third quarter of 2017 and ending first quarter of 2023, construction activities would occur intermittently, with demand for water consumption varied, and generally short-term and temporary in nature. The activities requiring water would not create substantial water demand. Typically, fugitive dust watering is provided by private purveyors and not provided from on-site water sources. Overall, construction activities would require minimal water consumption and would not be expected to have adverse impact on available water supplies or the existing water distribution system. Therefore, impacts associated with short-term construction activities would be less than significant.

##### (2) Operations Impacts

*Impact Statement WS-2: Impacts of Project operations on the supply of water would be less than significant. The Project includes a large number of water conservation features that would reduce the demand for water resources. The use of water for Project activities is accounted for within the LADWP's water demand projections and their WSA finding that there would be sufficient water supplies to serve the Project pursuant to the UWMP. Sufficient water infrastructure to serve the Project is available within the roadway right-of-ways adjacent to the Project Site.*

##### (a) Water Demand

The Project would demolish the existing Luxe Hotel, and develop the Site with the proposed development of up to 300 hotel rooms, up to 650 residential condominium units, and up to 80,000 sf of restaurant, retail, and other commercial uses with landscaping and related ancillary uses.

As described in the Setting Section above, the estimate of current water consumption from the existing uses is 19,287 gpd. These proposed new development would create demand for the consumption of water resources, over and above the existing levels.

The amount of water that would be required for the Project is shown in **Table 4.K.1-3, *Estimated Water Consumption***.<sup>44</sup> As indicated, the estimated demand for water is 219,525 gpd or 245.92 afy. This is the net increase resulting from the Project after accounting for the existing water consumption. The estimate of water consumption includes the amount of water conservation required by Ordinance 180,822 and Applicant-volunteered water conservation features. Ordinance required savings are 28,018 gpd; and additional savings for Applicant-volunteered conservation features are 15,269 gpd. The total conservation for the itemized savings shown in Table 4.K.1-3 is 43,287 gpd, or 15 percent of the base demand.

LADWP's 2010 UWMP provides water demand projections in five-year increments through 2035, which are based on regional demographic data provided by SCAG, as well as billing data for each major customer class, weather, and conservation. **Table 4.K.1-4, *Water Demand Forecast Through 2035 (In Acre-Feet Per Year)***, shows the projected water demand for the City of Los Angeles through 2035. As shown in Table 4.K.1-4, the City's water demand is projected to reach 641,622 af/y by 2035, which is an increase of 95,851 af/y, or 17.6 percent, from the 2010 consumption of 545,771 af/y.

The increase in water demand from the Project of 245.92 af/y reflects approximately 0.25 percent of the City's total increase in water demand through 2035. This additional demand has been taken into account during preparation of the City's UWMP, and is within the capacity of the LADWP to serve the Project, as well as existing and planned future water demands of its service area within multi-dry year supply conditions.<sup>45</sup>

As discussed in the water reliability section of the UWMP, LADWP expects to have a reliable supply of up to 710,800 acre-feet of water in 2035.<sup>46</sup> This is in contrast to the estimated demand of 641,622 af/y, or a difference of 69,178 af/y. As further discussed in the UWMP, LADWP expects to maintain a reliable water supply, in part by increasing the City sources of water and reducing purchases from the MWD. During times of severe water shortages, when MWD allocates its imported water, LADWP customers have adapted and reduced consumption as per restrictions in the Emergency Water Conservation Plan Ordinance. For example, current implementation of Shortage Year Rates and appropriate phase related conservation measures of the Ordinance has resulted in reducing the total customer water usage reducing the total customer water usage, on average, by approximately 18.2 percent for the months of June 2009 through February 2016.<sup>47</sup> Regarding the MWD's ability to sell water to the LADWP, the MWD's 2010 Regional UWMP shows that with its investments in storage, water transfers and improving the reliability of the Delta, water shortages are not expected to occur within the next 25 years.<sup>48</sup> As previously indicated, both the Draft 2015 RUWMP and 2015 IRP anticipate a surplus of available water to meet projected demand.

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<sup>44</sup> The tables presented here provide a summary of the estimate as prepared in the WSA. For detailed calculations refer to the WSA in Appendix K-1 of this Draft EIR.

<sup>45</sup> Los Angeles Department of Water and Power, *Water Supply Assessment*, op. cit., pages 5 and 39.

<sup>46</sup> Los Angeles Department of Water and Power, *2010 Urban Water Management Plan*, op. cit., Section ES-6, *Water Supply Reliability*, page 19.

<sup>47</sup> Los Angeles Department of Water and Power, *Water Supply Assessment*, op. cit., Page 5.

<sup>48</sup> Metropolitan Water District of Southern California, *2010 Regional Urban Water Management Plan*, op. cit., pages ES-5, ES6; Figure ES-1.

Table 4.K.1-3

## Estimated Water Consumption

Proposed Use	Quantity	Unit	Base Demand (gpd) <sup>a</sup>	Water Efficiency Requirements	Net Proposed Water Demand	
				Ordinance Savings (gpd)	(gpd)	(af/y)
Residential Dwelling Units	650	du	70,570		70,570	79.05
Residential Common	20,000	sf	2,800	653	2,147	2.41
Hotel Rooms	300	rms	36,000		36,000	4.333
Hotel Common	57,965	sf	21,877	2,244	19,633	21.99
Commercial(retail/Restaurant)	80,000	sf	38,810	4,059	34,751	38.93
Lounge/Terrace	35,487	sf	5,332	837	4,495	5.04
Landscaping	16,263	sf	1,384	755	629	0.70
Structured/Subterranean Parking	285,530		188		188	0.21
Cooling Tower	2,950	ton	<u>105,138</u>	<u>19,470</u>	<u>85,668</u>	<u>95.97</u>
		Total Water Demand	282,099	28,018	254,081	284.63
			Less Existing Uses to be Removed		-19,287	-21.61
			Less Additional Conservation <sup>b</sup>		-15,269	-17.10
			<b>Net Additional Water Demand</b>		<b>219,525</b>	<b>245.92</b>

<sup>a</sup> Base demand is based on City of Los Angeles Department of Public Works, Bureau of Sanitation Sewer Generation rates.

<sup>b</sup> Water conservation due to additional conservation commitments as provided in the Applicant's Water Conservation Commitment letter, and included in PDF-WS-1: Water Conservation Features.

Source: LADWP, Water Supply Assessment, April 2016

Table 4.K.1-4

Water Demand Forecast Through 2035<sup>a</sup>  
(In Acre-Feet Per Year)

Water Use Sector	2005 <sup>b</sup>	2010 <sup>b</sup>	2015	2020	2025	2030	2035
Single-Family	233,192	196,500	225,699	236,094	241,180	246,879	247,655
Multi-Family	185,536	166,810	178,782	193,220	202,999	213,284	218,762
Commercial/Gov	107,414	130,386	135,112	133,597	129,761	126,567	120,420
Industrial	62,418	19,166	18,600	16,852	14,708	12,634	10,513
Non-Revenue	26,786	32,909	41,370	42,969	43,627	44,421	44,272
<b>Total</b>	<b>615,346</b>	<b>545,771</b>	<b>599,563</b>	<b>622,732</b>	<b>632,275</b>	<b>643,785</b>	<b>641,622</b>

<sup>a</sup> Based on normal weather conditions and with passive and active water conservation.

<sup>b</sup> Actual data reflecting water used for 2005 and 2010, respectively.

Source: Los Angeles Department of Water and Power, 2010 Urban Water Management Plan, Exhibit 2J.



Pursuant to the California Urban Water Management Planning Act, water suppliers must develop an UWMP every five years to identify short-term and long-term water resources management measures to meet growing water demands during normal, single-dry, and multiple-dry years. This enables the LADWP to continue monitoring changes in the supply of and demand for water resources, and prepare responses for meeting needs through 25-year time horizons; i.e. well in advance of changes that might require further development of water resources.

The Project would meet its obligation to support Agency attempts to reduce water consumption, by providing Project Design Features PDF-WS-1, Water Conservation Features, that meet and exceed state and local requirements for water conservation. The water efficiency features include such provisions as the use of water efficient fixtures and appliances, landscaping and irrigation systems that reduce water consumption, reclamation of rain-water for on-site irrigation, and use of water efficient on-site water infrastructure. As such, the Project would be consistent with City ordinances, as would be confirmed during site-plan review for enforcement, and would contribute to conservation goals established in the adopted LADWP and MWD UWMPs.

Given that LADWP would be able to meet the water demand of the Project, as well as the existing and planned future water demands of its service area, impacts associated with long-term operation of the Project would be less than significant.

### **(b) Water Infrastructure**

The Applicant would be responsible for providing the necessary building water system on the Project Site and any extensions to connect the Project Site to existing water lines in the area. The Project would connect to existing water mains located within the adjacent street right-of-ways. These include, per LADWP and available record data, a 10 inch water line in 11th Street, a 12 inch water line in Figueroa Street, and a 12 inch water line in Olympic Boulevard. According to LADWP, sufficient capacity is available in the existing water mains to serve the Project; therefore, the Project would have a less than significant impact on existing water infrastructure.<sup>49</sup>

### **(3) Global Warming and Climate Change**

Potential impacts of climate change on California's water resources include changes in snow pack, sea level rise, and river flows. Climate change is also expected to result in more variable weather patterns that can lead to longer and more severe drought. In addition sea level rise will continue to threaten the sustainability of the Sacramento-San Joaquin Delta.

As described above, in May 2009, DWR prepared a report entitled "Using Future Climate Projections to Support Water Resources Decision Making in California," which presents an overview of the advances that DWR has made toward using future climate projection information to support decision making by quantifying possible impacts to water resources for a range of future climate scenarios.<sup>50</sup> In December 2010,

<sup>49</sup> Psomas, *Civil Engineering Report, op. cit., Appendix 2, Service Advisory Request (SAR)*.

<sup>50</sup> California Department of Water Resources, "Using Future Climate Projections to Support Water Resources Decision Making in California," May 2009, page 2; <http://www.energy.ca.gov/2009publications/CEC-500-2009-052/CEC-500-2009-052-D.PDF>. Accessed September 2014.

DWR prepared a survey which presents summaries of 13 different reports and studies prepared by DWR addressing climate change entitled “Climate Change Characterization and Analysis in California Water Resources Planning Studies - Final Report.”<sup>51</sup>

In 2014, DWR released up-to-date climate change information, including hydrologic impacts and projections at the statewide and regional levels, adaptation strategies, and energy intensity of water supplies in the California Water Plan. The California Water Plan is the strategic plan for managing and developing water resources statewide for current and future generations by providing a collaborative planning framework to develop findings and recommendations and make informed decisions for California's water future.

As indicated above and as reflected in the various DWR reports and technical memoranda prepared in response to Governor's Executive Order S-3-05, there are substantial uncertainties regarding the effects of global warming on California's water supplies. Although experts agree that the earth's atmosphere has warmed over the last century and will likely continue to warm in the future, how this warming will quantitatively affect future water supplies, and specifically, how this warming will affect SWP supplies remains speculative. This is a global phenomenon and the potential effects of global climate change on water supply are more relevant to cumulative impact consideration.

## e. Cumulative Impacts

### (1) Water Demand

Chapter 3, *General Description of Environmental Setting*, of this Draft EIR identifies 115 cumulative projects located in the City of Los Angeles that are anticipated to be developed within the vicinity of the Project Site. The 116 cumulative projects would contribute, in conjunction with the proposed Project, to water demand in the Project area. As shown in **Table 4.K.1-5, Estimated Cumulative Water Consumption**, the estimated cumulative water demand is 8,703,212 gpd or 9,748.84 af/y.

As discussed in regard to the Project impacts above, LADWP expects to have a reliable supply of up to 710,800 afy of water in 2035. This is in contrast to the estimated demand of 641,622 af/y, or a difference of 69,178 af/y. As shown in Table 4.K.1-4 the City's water demand of 641,622 af/y in 2035 is an increase of 95,851 af/y or 15 percent from the 2010 consumption of 545,771 af/y. The increase in cumulative water demand reflects approximately 10.2 percent of the City's total 95,851 af/y increase in water demand through 2035. It represents approximately 14.1 percent of the 69,178 af/y excess capacity.

LADWP, as a public water service provider, is required to prepare and periodically update an UWMP to plan and provide for water supplies to serve existing and projected demands. The UWMP prepared by LADWP accounts for existing development within the City, as well as projected growth anticipated to occur through redevelopment of existing uses and development of new uses. Additionally, under the provisions of SB 610, LADWP is required to prepare a comprehensive WSA for every new development “project” (as defined by Section 10912 of the CWC) within its service area. The types of projects subject to the requirements of SB 610 tend to be larger projects (i.e., residential projects with at least 500 dwelling units, shopping centers or

<sup>51</sup> California Department of Water Resources, “Climate Change Characterization and Analysis in California Water Resources Planning Studies - Final Report,” December 2010, page v; <http://www.water.ca.gov/climatechange/docs/ClimateChangeWhitePaper.pdf>. Accessed September 2014.

Table 4.K.1-5

## Estimated Cumulative Water Consumption

Land Uses	Quantity (units/square feet)	Generation Factor <sup>a</sup>	Base Water Demand (gpd)	(af/y)
<b>Proposed Use</b>				
Cumulative Projects				
Residential <sup>b</sup>	30,417	150 gpd/unit	4,562,550	
Retail (Less than 100,000 sf)	1,021,474	25 gpd/1,000 sf	25,537	
Retail (Greater than 100,000 sf)	1,164,582	50 gpd/1,000 sf	58,229	
Restaurant <sup>c</sup>	23,316	30 gpd/seat	699,480	
Hotel	4,576	120 gpd/room	549,120	
Office <sup>d</sup>	3,706,891	170 gpd/1,000 sf	630,171	
School <sup>e</sup>	23,246	10 gpd/student	232,460	
Child Care <sup>f</sup>	499	9 gpd/child	4,491	
Theatre	2,686	3 gpd/seat	8,058	
Bars <sup>g</sup>	13,619	720 gpd/1,000 sf	9,806	
Assisted Living	55	70 gpd/bed	3,850	
Museum	17,600	30 gpd/1,000 sf	528	
Gym	8,000	650 gpd/1,000 sf	5,200	
Event Center	72,000	3 gpd/seat	216,000	
Parking <sup>h</sup>	35,348,132	20 gpd/1,000 sf	706,963	
<b>Total - Indoor Use</b>			<b>7,712,443</b>	
Factor for Misc-Outdoor Use <sup>i</sup>			1,542,489	
Less Regulatory Conservation <sup>j</sup>			-771,244	
<b>Total Cumulative Development</b>			<b>8,483,687</b>	<b>9,502.94</b>
Proposed Project (net increase)			219,525	245.92
<b>Cumulative Water Consumption</b>			<b>8,703,212</b>	<b>9,748.84</b>

## Notes:

<sup>a</sup> Wastewater generation rates are based on City of Los Angeles Department of Public Works Sewage Generation Factor for Residential and Commercial Categories, included in Appendix K-2 of this Draft EIR.

<sup>b</sup> Rates for residential wastewater generation vary depending on unit type and size. It was assumed that all residential projects would be multi-family with an average size of two bedrooms.

<sup>c</sup> Restaurant wastewater generation rates vary from 25 to 30 gpd per seat. 30 gpd per seat was used here to provide a conservative assumption. It was assumed that there would be 25 sq.ft. per customer, inclusive of kitchen, wait stations etc. Project 23 of the Cumulative Projects Table contains two Retail/Restaurant uses of 275,000 sf and 27,765 sf, respectively. These uses were included in the quantity calculations for restaurant rather than retail for a more conservative estimate of the cumulative wastewater generation. Coffee shops have also been included in the calculations for restaurant for consistency with Water Calculations, found in Section 4.K.1, Water Supply, of this Draft EIR. The restaurant generation factor allows for a more conservative calculation of the wastewater generated.

<sup>d</sup> There was an additional 66 employees listed on top of the gross square footage for Office Uses. 30 sq. ft per employee was used here to provide a conservative assumption. The generation factor for offices with cooling towers was used.

<sup>e</sup> The School generation factor is an average of Junior and High School factors.

<sup>f</sup> Child Care size was provided in square feet, so 30 sq. ft per student was used to provide a conservative assumption.

<sup>g</sup> The Bar generation factor uses Bar: Cocktail, Public Table Area factors.

<sup>h</sup> Wastewater generation for parking associated with the various cumulative projects is subject to specific development programs of those projects and is

Table 4.K.1-5 (Continued)

## Estimated Cumulative Water Consumption

*somewhat speculative. Parking generation rates were taken from the City of Los Angeles Summary of Parking Regulations. To conservatively account for parking the following rough assumptions have been made. It is assumed that new/additional parking, beyond replacement parking and use of existing parking facilities would be as follows: 2 spaces per residential unit (as stated above, the average size of two bedrooms was used); 1 space per 250 square feet of retail; 1 space per 100 square feet of restaurant; 1 space per hotel room (one consistent rate is used for all hotel units for a more conservative estimation); 1 space per 500 square feet of office; 1 space per 5 seats for schools. Bar and Coffee Shop are included under Restaurant Uses. Child Care is included under School Uses. 1 space per 5 seats for Theatre and Event Center. 0.2 spaces per bed for Assisted Living uses. Gym and Museum are assumed to have 1 space per 100 square feet. 350 square feet of space has been assumed for each parking space.*

<sup>i</sup> *The nature of landscaping, cooling towers, etc. for cumulative projects is not known. To provide a conservative analysis it is assumed that such uses would increase the water consumption of the cumulative projects by approximately 20 percent.*

<sup>j</sup> *Regulatory requirements resulted in reduced water consumption of approximately 10 percent for the Project. A similar 10 percent credit was given for the cumulative projects.*

Source: PCR Services Corporation, 2016

business establishments 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, etc.) that may or may not have been included within the growth projections of the UWMP. The WSA for such projects, in conformance with the UWMP, evaluates 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. In addition, as described above, SB 221 requires that for residential subdivisions with 500 units or more that are in non-urban areas, written verification from the service provider (i.e., LADWP) be submitted indicating sufficient water supply is available to serve the proposed subdivision, or the local agency shall make a specified finding that sufficient water supplies are or will be available prior to completion of the project.

LADWP expects to accommodate future demand in part by shifting the proportion of water supply being purchased from the MWD. Further, during times of severe water shortages, when MWD allocates its imported water, LADWP customers have adapted and reduced consumption as per restrictions in the Emergency Water Conservation Plan Ordinance. Regarding the MWD's ability to sell water to the LADWP, the MWD's 2010 RUWMP shows that with its investments in storage, water transfers and improving the reliability of the Delta, water shortages are not expected to occur within the next 25 years.<sup>52</sup> As previously indicated, both the Draft 2015 RUWMP and 2015 IRP anticipate a surplus of available water to meet projected demand.

The Project's WSA prepared by LADWP provides a more detailed accounting of the measures discussed above to assure a reliable water supply in the future. In addition, the WSA identifies long-term strategies that go beyond the items mentioned here. These include conservation rebates and incentives to reduce indoor and outdoor water use, retrofitting City Department facilities with water-efficient hardware, promoting water efficiency in new developments, water recycling, enhanced stormwater capture, and accelerating clean-up of the San Fernando Basin to increase its contribution to the water supply.

Therefore, the City has strategies in place for addressing future water needs, with analyses of future supply of and demand for water resources. The City's estimate of future demand likely already accounts for the

<sup>52</sup> *Metropolitan Water District of Southern California, 2010 Regional Urban Water Management Plan, pages ES-5, ES6; Figure ES-1.*

demand for water resources from the cumulative development identified in Table 4.K.1-5. In any case, the above discussion indicates that the cumulative demand for water of approximately 9,385 af/y represents approximately 14.1 percent of a 69,178 af/y excess capacity, well within the available capacity.<sup>53</sup> Accordingly, impacts, inclusive of the cumulative projects as well as the proposed Project in total, related to water demand would result in a less than significant cumulative impact.

## (2) Water Infrastructure

Development of the proposed Project in conjunction with the cumulative projects would cumulatively increase water demand on the existing water infrastructure system. However, each cumulative project would be subject to City review to assure that the existing public utility facilities would be adequate to meet the domestic and fire water demands of each project. All projects are required to attain SAR reports based on flow testing of facilities to verify that there is available service. Developers are required to improve facilities where appropriate and development cannot proceed without appropriate verification and approval. Furthermore, LADWP as well as the City of Los Angeles Department of Public Works conducts ongoing evaluations to ensure facilities are adequate, and require infrastructure system improvements. Therefore, cumulative impacts on the water infrastructure system would be less than significant.

## (3) Global Warming and Water Supply

As indicated above, there are complex physical, chemical, and atmospheric mechanisms involved in global climate change that make it difficult to predict what the effects of global climate change will be, particularly at a State or local level. Due to this unpredictability, the secondary affects that global climate change may have on water supplies for a given region is even more difficult to predict.<sup>54</sup> The science on global warming is still evolving and has not reached a point where it can be quantified and incorporated into delivery projections of the SWP. However, as discussed above, water supply planning includes assessments of and incorporates certain assumptions regarding the potential effects of climate change on overall supply. Therefore, consistent with studies prepared by DWR, although certain scenarios are incorporated into overall assessments of supply, it is considered premature and speculative to make an assessment of impacts under CEQA of how climate change will affect water availability specifically for the Project. To the extent climate change affects water supplies in a manner consistent with certain scenarios, adequate supplies still are projected to remain available for the Project and for cumulative development.

<sup>53</sup> Per the City's UWMP, Section ES-6, Water Supply Reliability, page 19, the available supply is 710,800 af/y. Per the City's UWMP, Exhibit 2J the demand is 641,622 af/y, or a difference of 69,178 af/y.

<sup>54</sup> The Los Angeles Superior Court issued a statement of decision (Case No. BS 084677) on August 15, 2007 which upheld a local agency's Return to a Writ of Mandate and Final Additional Analysis to an EIR for a local development project (California Oak Foundation v. City of Santa Clarita (2005) 133 Cal.App.4th) and struck down certification of the EIR for the Gate King project because it did not address legal uncertainties surrounding a water transfer. Among other issues, the statement of decision dealt with the analysis of the potential impact of global warming on water supplies and concluded that it was proper that no quantification of the impact of climate change on the reliability of SWP water was prepared because DWR has indicated in its reports that quantification is premature. The statement of decision indicates that DWR, with the most expertise on water supply in California, has determined that the science on global warming has not reached a point where it can be quantified and incorporated into delivery projections of the SWP. Accordingly, the statement of decision also concludes that the City is in no better position to quantify the effects of global warming on the reliability of SWP water and that it is not required to do so under CEQA.

#### **4. MITIGATION MEASURES**

Based on the analysis above, the proposed Project would not result in significant impacts related to domestic water supply and infrastructure. No mitigation measures would be required.

#### **5. LEVEL OF SIGNIFICANCE AFTER MITIGATION**

As indicated above, the proposed Project's impacts to water supply and infrastructure would be less than significant, and no mitigation measures are required.