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L.2 Utilities - Water

1. Introduction

The following section addresses potential environmental impacts related to water services and is based on the Water System Technical Report prepared by Incledon Consulting Group (May 2010), included as Technical Appendix N-1-1 to this Draft EIR, and the Water Supply Assessment prepared by the City of Los Angeles Department of Water and Power (DWP), dated April 27, 2010, included as Appendix N-1-2 to this Draft EIR.

The analysis of utility impacts focuses upon the relationship between supply and demand. In general, the supply side involves both the availability of a resource and the ability to convey the resource. The demand side involves both the net incremental demand generated by the Project and the cumulative demand of all future consumers. The capacity to supply water is a function both of available sources (which are typically controlled by a utility) and conveyance capacity (which typically is a pressurized underground pipeline system). In the case of water, there are two kinds of supply sources: natural resources and reclamation (or recycled water). Recycled water is wastewater that has been treated to a sufficient degree for certain types of uses. Recycled water is non-potable, and must be conveyed in a separate system from potable water to avoid the possibility of direct human consumption.

Water is used for fire control purposes as well as drinking, washing, flushing, landscaping, commercial, industrial and recreational purposes and other domestic consumption. Within the Project Site, some portions of the private water conveyance system are dedicated to fire control purposes and other portions are dedicated to potable domestic uses. A recycled water distribution system is also located within the Project Site.

The analysis below describes the water supply system, including the physical characteristics and existing capacities for all three system components: potable domestic water, fire protection water, and recycled water. The analysis then identifies the potential impacts on the water supply and distribution system resulting from implementation of the proposed Project. Each type of water use (i.e., domestic, fire protection, and recycled) has been specifically analyzed to evaluate potential demand generated by the proposed Project.
2. Environmental Setting

a. Regulatory Framework

State of California Water Code Sections 10910 through 10915 requires that counties and cities consider the availability of adequate water supplies for certain new large development projects. These statutory clauses require cities and counties to obtain written verification of sufficient water supply to serve proposed large development projects in their jurisdiction from the local water supplier. Pursuant to the State Water Code, projects that are required to obtain a Water Supply Assessment include the following:

- A proposed residential development of more than 500 dwelling units;
- A proposed shopping center or business establishment of more than 500,000 square feet of floor space or employing more than 1,000 persons;
- A proposed commercial office building of more than 250,000 square feet of floor space or employing more than 1,000 persons;
- A proposed hotel or motel of more than 500 rooms;
- A proposed industrial, manufacturing, or processing plant or industrial park of more than 40 acres of land, more than 650,000 square feet of floor area, or employing more than 1,000 persons;
- A mixed-use project that falls in one or more of the above-identified categories; or
- A project not falling in one of the above-identified categories but that would demand water equal to or greater than a 500 dwelling-unit project.

b. Regional Conditions

Water is supplied to the Project Site by the DWP. The DWP is the major purveyor of water in western Los Angeles County. As such, the DWP is the largest water retailer in Southern California.

The California Urban Water Management Planning Act requires every municipal water supplier who serves more than 3,000 customers or provides more than 3,000 acre-feet per year of water to prepare an Urban Water Management Plan every five years to identify short-term and long-term water resources management measures to meet growing...
In an Urban Water Management Plan, the water supplier must describe the water supply projects and programs that may be undertaken to meet the total water use of the service area. The DWP last prepared an Urban Water Management Plan in 2005. The 2005 Urban Water Management Plan includes estimates of past, current, and projected potable and recycled water use, identifies conservation and reclamation measures currently in practice, describes alternative conservation measures, and provides an urban water shortage contingency plan. The DWP’s 2005 Urban Water Management Plan addresses water supply needs through 2030 and relies on the Southern California Association of Governments’ projections of regional population growth.

According to the 2005 Urban Water Management Plan, the DWP’s primary sources of water supplies are: water purchased from the Metropolitan Water District; surface water imported via the Los Angeles Aqueduct; and local groundwater. Recycled water projects are progressing and expected to be a greater portion of DWP’s water supply in the future. Overall, these sources of water provide the necessary water to meet the DWP’s water supply needs. The DWP 2005 Urban Water Management Plan includes water demand projections in 5-year increments through 2030. The water demand projection for 2030 is 776,000 acre-feet per year, which is an increase of 17 percent from projections for 2005. The following summarizes DWP’s current water supplies based, in part, on information in DWP’s 2005 Urban Water Management Plan and DWP's Water Supply Assessment.

(1) Metropolitan Water District

The DWP is a member agency of the Metropolitan Water District of Southern California. The Metropolitan Water District is a water wholesaler which imports water from Northern California and the Colorado River. The Metropolitan Water District imports water supplies from Northern California through the State Water Project’s California Aqueduct and from the Colorado River through its own Colorado River Aqueduct. The Metropolitan Water District delivers an average of approximately 1.7 billion gallons of water per day.467 The DWP has the major allocation or entitlement of the water imported by the Metropolitan Water District.

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466 California Water Code Section 10610 et seq.
467 About MWD,” http://mwdh2o.com/mwdh2o/pages/about/about01.html, August 14, 2009.
As a member agency, the DWP has a preferential right to purchase water imported by the Metropolitan Water District. Pursuant to Section 135 of the Metropolitan Water District Act:

“Each member public agency shall have a preferential right to purchase from the district for distribution by such agency, or any public utility therein empowered by such agency for the purposes, for domestic and municipal uses within the agency a portion of the water served by the district which shall, from time to time, bear the same ratio to all of the water supply of the district as the total accumulation of amounts paid by such agency to the district on tax assessments and otherwise, excepting purchase of water, toward the capital cost and operating expense of the district’s works shall bear to the total payments received by the district on account of tax assessments and otherwise, excepting purchase of water, toward such capital cost and operating expense.”

This is known as a preferential right. Under the preferential rights system, as of 2006, the DWP is entitled to approximately 22 percent of Metropolitan Water District’s water supply.

(a) State Water Project Supplies

The Metropolitan Water District is the largest contractor for water from the State Water Project, holding a contract for approximately 2 million acre-feet of the project’s capacity. The Metropolitan Water District’s supply of water from the State Water Project is affected by variable hydrology and environmental issues in the San Francisco Bay/Sacramento-San Joaquin River Delta (Delta). Based on, among other things, historical records of hydrologic conditions, existing system capabilities, requests of the state water contractors and State Water Project contract provisions for allocating deliveries to each contractor, in 2003 the Metropolitan Water District estimated that in 2025, it would have 794,700 acre-feet available in multiple dry years, 418,000 acre-feet in a single dry year, and 1,523,300 acre-feet in an average year and 1,741,000 acre-feet in a wet year from the State Water Project.\(^{468}\)

The Metropolitan Water District’s State Water Project water supplies are currently affected by federal environmental litigation relating to endangered Delta smelt and

Salmonid species.\textsuperscript{469} In 2007 and 2008, two decisions by the United States District Court for the Eastern District of California held that California’s major water delivery systems, the State Water Project and the Central Valley Project, were violating state and federal environmental laws regarding threatened fish species.

In 2007, in Natural Resources Defense Council v. Kempthorne,\textsuperscript{470} the United States District Court ruled that the federal Endangered Species Act permit for Delta smelt relied on a legally inadequate biological opinion issued by the U.S. Fish and Wildlife Service in 2005. The United States Fish and Wildlife Service released a new biological opinion in December 2008.\textsuperscript{471} Based on the Water Allocation Analysis released by the Department of Water Resources in December 2008, which analyzed the biological opinion’s effects on the State Water Project operations, export restrictions under median hydrologic conditions could reduce deliveries to the Metropolitan Water District by 300,000 to 700,000 acre-feet for 2009.

In 2008, in Pacific Coast Federation of Fishermen's Associations v. Gutierrez,\textsuperscript{472} the United States District Court found that the biological opinion issued in 2005 for salmon and other species in rivers flowing into the Bay-Delta was inadequate. A new biological opinion for salmonid species prepared by National Marine Fisheries Service and the Bureau of Reclamation was released on June 4, 2009.\textsuperscript{473} The Department of Water Resources estimated a 10 percent average water loss, expected to begin in 2010, under the salmonid biological opinion.

The combined impact on State Water Project deliveries attributable to the Delta smelt and salmonid specific biological opinions is estimated to be one million acre-feet in an average year, reducing State Water Project deliveries from approximately 3.3 million acre-feet to approximately 2.3 million acre-feet for the year under average conditions.

In December 2009, the Department of Water Resources announced an initial 2010 State Water Project allocation of 5 percent of total contracted water deliveries to the State Water Project contractors. Five percent of the Metropolitan Water District’s contracted

\textsuperscript{469} In addition to the federal litigation, other environmental litigation has been filed in State courts. Information regarding the state court action is contained within the Water Supply Assessment included in Appendix N-1-2 to this Draft EIR.


\textsuperscript{471} Various lawsuits challenging the December 2008 biological opinion have been filed and the court has consolidated the lawsuits under the caption Delta Smelt Consolidated Cases.

\textsuperscript{472} Pacific Coast Fisherman's Associations v. Gutierrez, No.1:06-cv-245, slip op. at 148 (E.D Cal 2008).

\textsuperscript{473} Various lawsuits challenging the 2009 salmonid biological opinion have been filed. The court has consolidated the cases under the caption Consolidated Salmon Cases.
water delivery amount would be 95,575 acre-feet per year. Five percent is the lowest initial allocation percentage since the State Water Project began delivering water in 1967. However, the initial allocation is a very conservative estimate of what the Department of Water Resources expects it can deliver, and historically the initial allocation increases during the year as supply conditions improve.

In November 2009, the 2009 Comprehensive Water Package was approved by the California Legislature and Governor. The Comprehensive Water Package is comprised of four policy bills and an $11.14 billion bond proposal designed to address water supply reliability and to restore the Delta.

In response to these recent developments in the Delta, the Metropolitan Water District 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.

(b) Colorado River Supplies

The Metropolitan Water District conveys water from the Colorado River via its Colorado River Aqueduct to its member agencies throughout Southern California. The State of California has a basic apportionment of 4.4 million acre-feet of Colorado River water, of which the Metropolitan Water District’s basic apportionment is approximately 550,000 acre-feet. Until 2002, the Metropolitan Water District had been able to take more than its basic apportionment as a result of the availability of surplus water and apportioned but unused water. However, Arizona and Nevada increased their use of water from the Colorado River, leaving no unused apportionment available for California in 2002. In addition, a drought in the Colorado River Basin has reduced storage in system reservoirs and the Metropolitan Water District stopped taking surplus deliveries in 2003 to mitigate the effects of the drought.

California users of Colorado River water, including the Metropolitan Water District, have developed the California Plan, which identifies actions that California will take to operate within its 4.4 million acre-feet basic entitlement. A component of this plan is the Quantification Settlement Agreement, which establishes baseline water use for Metropolitan Water District and other parties and facilitates transfers of water among users.

Prior to 2003, the Metropolitan Water District could divert over 1.2 million acre-feet in any year, but since that time, the Metropolitan Water District’s deliveries of Colorado River water have varied from 633,000 acre-feet in 2006 to approximately 905,000 acre-feet in 2008. Average annual net deliveries for 2003 through 2008 were approximately 762,000 acre-feet, with annual volumes dependent on availability of unused higher priority agricultural water and increasing transfers of conserved water. The Metropolitan Water
District anticipates that its Colorado River Aqueduct deliveries in 2009 will exceed 1 million acre-feet for the first time since 2002, including diversions anticipated from new programs and transactions related to the Quantification Settlement Agreement.

Current challenges facing the Metropolitan Water District’s Colorado River supply include risk of drought in the Colorado River Basin and pending litigation over the Quantification Settlement Agreement.

(c) Imported Water Shortage Plans

The DWP has worked with the Metropolitan Water District in developing a framework for allocating water supplies during periods of shortage as well as surplus. In February 2008, the Metropolitan Water District adopted its Water Supply Allocation Plan. The DWP intends to work within the plan to acquire its dry year supplies from the Metropolitan Water District in the future. In addition, the Metropolitan Water District has implemented a Five-Year Supply Plan which is a comprehensive plan to pursue five-year supply actions to address potential shortfalls in the five-year planning horizon for water supply due to the effects of dry hydrologic conditions and regulatory restrictions on exports from the Delta. Additionally, the Metropolitan Water District has more than 5.0 million acre-feet of storage capacity available in reservoirs and banking/transfer programs, with approximately 1.08 million acre-feet currently in that storage.

(2) The Los Angeles Aqueduct System

The Los Angeles Aqueduct system extends approximately 340 miles from the Mono Basin to Los Angeles. The Los Angeles Aqueduct supplies come primarily from Eastern Sierra Nevada snowmelt and secondarily from groundwater pumping, and can fluctuate annually due to varying hydrologic conditions. The City holds water rights in the Eastern Sierra Nevada where the Los Angeles Aqueduct supplies originate. These supplies originate from both streams and from groundwater.

In 1972, Inyo County filed a CEQA lawsuit challenging the City’s groundwater pumping program for the Owens Valley. The lawsuit ended in 1997 with a long-term water agreement. As a result of the water agreement and subsequent Memorandum of Understanding, the DWP dedicated 37,000 acre-feet per year of water for enhancement and mitigation projects throughout Owens Valley. The DWP also provides approximately 80,000 acre-feet per year of water for other uses in the Owens Valley.

In 1994, the State Water Resources Control Board placed conditions on the DWP’s water gathering activities from Mono Basin. No more than 16,000 acre-feet of water per year may be exported from the Mono Basin until Mono Lake reaches its target elevation. Once Mono Lake reaches its target elevation, a moderate increase in water exports from
the Mono Basin will be permitted. Currently, up to 74,000 acre-feet per year of water is being utilized for environmental restoration in Mono Basin.

In 1998, the DWP and the Great Basin Unified Air Pollution Control District entered into a Memorandum of Agreement to mitigate dust emissions from Owens Lake. It is estimated that approximately 95,000 acre-feet per year of water has been used for the dust mitigation program.

With these mitigation programs, the average annual Los Angeles Aqueduct water supply to DWP has been 239,100 acre-feet over the last five years. DWP estimates that the average annual Los Angeles Aqueduct delivery is expected to be between approximately 200,000 and 230,000 acre-feet per year.

(3) Groundwater Supplies

The DWP traditionally extracts groundwater from nine well fields throughout the Owens Valley and four local groundwater basins.

The City owns approximately 315,000 acres of property in the Owens Valley. Groundwater pumping by DWP from beneath its lands in Owens Valley is used in Owens Valley and in Los Angeles pursuant to a long-term groundwater management plan with Inyo County. The City of Los Angeles and Inyo County, as part of the long-term groundwater management plan, prepared the “Green Book for the Long-Term Groundwater Management Plan for the Owens Valley and Inyo County.” This agreement sets forth plans and procedures to prevent overdraft conditions (where groundwater removal exceeds recharge) from groundwater pumping as well as to manage vegetation in the Owens Valley.

The Upper Los Angeles River Area has four local groundwater basins: (1) San Fernando; (2) Sylmar; (3) Verdugo; and (4) Eagle Rock. The DWP has water rights in the San Fernando and Sylmar Basins, as well as in two other local groundwater basins, the Central and West Coast Basins. The DWP does not currently exercise its rights in (pump water from) the West Coast Basin.

The DWP’s groundwater rights in the basins are adjudicated, meaning they are confirmed and apportioned by judgments of the California Superior Courts. The adjudications are based on maintaining long-term groundwater extractions that will not create an overdraft condition in the basin.
The San Fernando and Sylmar Basins are subject to the judgment in the City of Los Angeles vs. the Cities of San Fernando et. al.\textsuperscript{474} Pumping in these adjudicated basins is reported to the court-appointed Upper Los Angeles River Area Watermaster. The majority of the DWP’s groundwater is extracted from the San Fernando Basin. The San Fernando Basin is the largest of the four basins within the Upper Los Angeles River Area. The average DWP San Fernando Basin entitlement under the judgment is approximately 87,000 acre-feet per year. In addition, the DWP has accumulated nearly 406,313 acre-feet of stored water credits in the San Fernando Basin as of October 2008. In addition, DWP currently has an annual entitlement of 3,405 acre feet from the Sylmar Basin.

The Central Basin and West Coast Basin water rights were established through the Central Basin Judgment and West Coast Basin Judgment, respectively. The Central Basin Judgment entitlement for DWP is 15,000 acre-feet per year. The West Coast Basin Judgment entitles DWP to about 1,500 acre-feet per year.

From 2008 to 2009, DWP extracted 53,023 acre-feet, 868 acre-feet, and 11,817 acre-feet from the San Fernando, Sylmar, and Central Basins, respectively. DWP plans to continue production from its groundwater basins in the coming years to offset reductions in imported supplies. DWP's groundwater pumping practice is based on a “safe yield” operation. The objective, over a period of years, is to extract an amount of groundwater equal to the native and imported water that recharges the basin. Extractions by DWP from the basins for the last five years are shown in the Water Supply Assessment included as Appendix N-1-2 to this Draft EIR.

(4) Recycled Water

Water recycling and reuse is serving to reduce Southern California’s demand for potable water. The DWP utilizes recycled water produced by four wastewater treatment plants: the Los Angeles-Glendale Water Reclamation Plant; the Donald C. Tillman Water Reclamation Plant; the Terminal Island Treatment Plant; and the Hyperion Treatment Plant. The DWP restores wastewater to a level of quality specified by the California Department of Health Services and distributes it for landscaping and industrial uses.

The Los Angeles Greenbelt Project, started in 1992, was the City’s first commercial recycling project. Through the Greenbelt Project, recycled water is supplied by the Los Angeles-Glendale Water Reclamation Plant for landscape irrigation to the Project Site and other users in the area. The DWP’s Urban Water Management Plan notes that there is a

\textsuperscript{474} A copy of the adjudicated groundwater basin judgments is included in Appendix F of the Water Supply Assessment.
potential for almost doubling recycled water use in this area. Recycled water usage currently constitutes about one percent of the DWP’s overall water sales.

c. Municipal Water Conservation

As discussed in the DWP’s 2005 Urban Water Management Plan, water use in the City is currently approximately equal to water use 20 years ago despite a population increase of over 700,000-persons during this period. Despite the fact that the City’s population has been slowly increasing, water consumption levels have remained relatively steady. This stability in water use is largely attributed to the City’s public education campaigns and water conservation programs over the past 15 years.

The DWP is also continuing its water recycling efforts to further reduce the demand for imported water. Currently, almost 65,000 acre-feet per year of the City’s wastewater are recycled. According to the 2005 Urban Water Management Plan, approximately 1,950 acre-feet per year of recycled water is used for municipal and industrial purposes; 28,000 acre-feet per year of recycled water is used for environmental enhancement and recreation in the Sepulveda Basin; and approximately 34,000 acre-feet per year of recycled water is sold to the Metropolitan Water District, which then provides further treatment to meet demands within its service area.

In response to potential water supply uncertainties, including those impacting the Metropolitan Water District, the Mayor and the DWP released a Water Supply Action Plan (Action Plan) on May 17, 2008. The plan, entitled “Securing L.A.’s Water Supply,” serves as a blueprint for creating sustainable sources of water for the future of Los Angeles to reduce dependence on imported supplies. It is an aggressive multi-pronged approach that includes: investments in state-of-the-art technology; a combination of rebates and incentives; the installation of smart sprinklers, efficient washers, and urinals; and long-term measures such as expansion of water recycling and investment in cleaning up the local groundwater supply. The Action Plan also takes into account the realities of climate change and the dangers of drought and dry weather.

The premise of the Action Plan is that the City will meet all new demand for water due to projected population growth through a combination of water conservation and water recycling. In total, the City will conserve or recycle 32.6 billion gallons of water, which is enough to fill the entire San Fernando Valley with one foot of water, and enough to supply water to 200,000 homes for one year. Pursuant to the Action Plan, by the year 2019,

half of all new demand will be filled by a six-fold increase in recycled water supplies and by 2030 the other half will be met through ramped-up conservation efforts.\footnote{477}

The Action Plan also specifically addresses current and future State Water Project supply shortages. The California Department of Water Resources estimates that the United States District Court decisions restricting pumping from the Delta will limit Metropolitan Water District exports of their anticipated State Water Project supply by up to 50 percent in a normal year.\footnote{478} The Action Plan concludes, however, that the Metropolitan Water District’s actions in response to this threat will ensure continued reliability of its water deliveries. The Action Plan “further states that ‘[d]espite concerns about ongoing water shortages and higher costs, the [Metropolitan Water District] has upheld its pledge to plan for emergencies and natural disasters throughout this region.’”\footnote{479} The Metropolitan Water District’s 2009 non-emergency storage includes approximately 1 million acre-feet in surface and groundwater storage accounts - including Diamond Valley Lake near Hemet - and 670,000 acre-feet of storage reserved for emergencies.” The Metropolitan Water District estimates its calendar year 2010 non-emergency storage is 935,000 acre-feet. In total, this reserve of water supplies buffers the severity of a potential shortage. Furthermore, by focusing on demand reduction, implementation of the Action Plan will ensure that long-term dependence on the Metropolitan Water District supplies will not be exacerbated by potential future shortages.

The DWP Commissioners recently adopted Shortage Year Rates and the Los Angeles City Council has implemented Phase III of the Water Conservation Ordinance, both of which became effective June 1, 2009. The DWP believes that the City’s current water shortage is a transitory event consistent with historical multiple-dry-year water cycles accounted for in the Department’s 2005 Urban Water Management Plan. The Shortage Year Rates and Phase III conservation reduced average DWP customer water usage by approximately 19% from June 2009 through March 2010.

d. Local Area Conditions

The DWP supplies water for domestic and fire services to the Project Site through existing water lines adjacent to and throughout the Project Site. The location of the existing DWP lines and system currently providing service to the Project Site are shown on Figure 217 on page 1864.

\footnote{477}{Ibid, page 1.}
\footnote{478}{Water Supply Assessment, Appendix H, page A-7.}
\footnote{479}{Water Supply Assessment, page 12.}
The DWP serves the Project Site from two different pressure zone systems to accommodate elevation changes within the Project Site. These pressure zones include the lower pressure 830 System and the higher pressure 1116 System.\textsuperscript{480} The 830 System includes an 8-inch water line in Lankershim Boulevard that supplies both domestic and fire water to the north side of the Project Site. The 1116 System includes a 12-inch water line in Lankershim Boulevard that also serves the north side of the Project Site and an 8-inch water line in Barham Boulevard that provides service to the northeastern portion of the Project Site. The 1116 System also includes 12-inch and 16-inch water lines traversing the south side of the Project Site that originate from the 12-inch water lines in Lankershim Boulevard and connect with the 16-inch water line in Barham Boulevard that becomes a 12-inch and then an 8-inch line to the north along Barham Boulevard. This portion of the 1116 System serves the south side of the Project Site.

The Hollywood Pump Station is the DWP pump station that serves the 1116 System. The Hollywood Pump Station is located near the Lake Hollywood Reservoir in Weid Canyon, east of the Project Site. The existing DWP Hollywood Pump Station consists of three 1,800 gallon per minute pumps. One of the pumps acts as the operational pump. The second pump is the stand-by pump. The third pump is used when emergencies arise (i.e., fire).

The DWP also supplies recycled water to the Project Site from its regional 12-inch recycled water line. This line enters the Project Site at the intersection of Forest Lawn Drive and Barham Boulevard and connects to a recycled water pump station on the Project Site currently operated by the Applicant. This pump station distributes recycled water throughout the Project Site, via the Applicant’s privately-owned system, for irrigation and industrial uses.

Figure 218 on page 1866, shows the location for existing recycled water lines and the associated pumping station on the Project Site.

e. On-Site Conditions

The water systems within the Project Site are divided into three types of service: domestic water, fire water, and recycled water.

\textsuperscript{480} The system numbers refer to the hydraulic grade line elevations established by the DWP for its water systems. Therefore, the 1116 System refers to a mean sea level elevation of 1116 feet and the 830 System refers to a mean sea level elevation of 830 feet.
Figure 218
Existing Recycled Water Lines and Pumping Station

(1) Domestic Water Use

The portion of the Project Site within the City is currently served only by the DWP 1116 pressure distribution system. The areas of the Project Site within the County are served by the DWP through both the 830 and 1116 pressure distribution systems. There are meters provided at various locations where connections are made to the DWP water lines. Additionally, four man-made water features (Park Lake, Jaws Lake, Collapsing Bridge Pond, and portions of Falls Lake) on the Project Site are filled with domestic water.

Information was obtained from the DWP regarding existing domestic water demand on the Project Site. The existing average daily domestic water demand is approximately 1,007,436 gallons per day (1,128.6 acre-feet per year), based on average metered water use at the Project Site. The existing peak daily domestic water demand, calculated based on sewer design methodologies, is approximately 1,792,174 gallons per day.

(2) Fire Protection Water System

The fire protection system water lines for the portions of the Project Site within the City are currently served from the DWP 1116 pressure system, with the use of pressure reducing stations to serve lower elevation areas. The fire protection system water lines within the County portion of the Project Site are currently served from both the DWP 830 and 1116 pressure systems, also with the use of pressure reducing stations for lower elevation areas. Fire protection system water lines servicing the Project Site are generally 8 inches in diameter or larger. Fire demand consumption and flows are infrequent and usage is not monitored; however, the existing fire protection system can deliver a minimum of 5,000 gallons per minute for an unlimited duration of time to the Project Site. Please see Section IV.K.1, Fire Services, of this Draft EIR for related discussion regarding fire suppression water flow.

(3) Recycled Water

The Applicant operates a recycled water distribution system that is used to irrigate most landscaped areas on the Project Site and for industrial uses within the Project Site. The DWP recycled water line has the capacity to supply up to 1,000 gallons per minute of recycled water to the Applicant’s pump station. The Applicant has an agreement with the

481 Information provided by Jeff Childers, Account Manager, Los Angeles DWP, February 23, 2007, supplemented by additional information provided by Julie Spacht, Los Angeles DWP in July 2009, and additional information provided by Lani Floresca, Los Angeles DWP in August 2009 and based on usage from 2004 to 2008. The provided information does not include fire water demand.

482 Peak demand is calculated as: Peak Flow = 1.78 times the Average Demand (in million gallons per day) raised to the power of 0.92, per the ASCE Sewer Design Manual.
DWP for the purchase of recycled water for the Project Site.\footnote{Agreement By and Between The DWP of the City of Los Angeles and MCA Inc. Regarding Water Service, Agreement No. 10014, May 9, 1991.} However, recycled water from the DWP is variable and is not always available when needed. Currently, the existing recycled water demand at the Project Site, on average, is approximately 93,730 gallons per day (or 105 acre-feet per year).\footnote{Information provided by Jeff Childers, Account Manager, Los Angeles DWP, February 23, 2007, supplemented by additional information provided by Julie Spacht in July 2009, and additional information provided by Lani Floresca in August 2009 and based on usage from 2004 to 2008.} When the amount of recycled water needed for irrigation exceeds the available supply, domestic water is pumped in to supplement the supply. In an effort to provide recycled water capacity when recycled water is not available from DWP, water from the recycled water pump station on the Project Site is pumped to three on-site man-made water features where it is kept until needed. These water features include Upper Falls Lake, New Falls Lake, and portions of Falls Lake. Additional pump stations remove water from the water features and then pump and distribute the recycled water throughout the Project Site.

3. Environmental Impacts

   a. Methodology

   This section identifies the potential impacts on the DWP and on-site water supply and distribution systems resulting from the build-out of the proposed Project. The water distribution and supply system was evaluated by determining the existing physical features and capacities of the system. Information was obtained from the DWP as needed to define the existing system’s capacities to deliver water to the Project Site.

   As required by the DWP, the future daily water demand flows for the Project were determined based on water generation factors, provided by the City of Los Angeles Bureau of Engineering, which are based on land use classifications and the building square footages for each respective land use.\footnote{Written correspondence from Fatema Akhter, Water Resources Development Group, DWP, dated July 16, 2007.}

   Based on the future projected water demand for the proposed Project, the existing DWP and on-site water systems were assessed to determine whether they could meet the projected future demand of the proposed Project. Where Project impacts would exceed the capacity of the existing distribution system, specific improvements have been recommended in this section to mitigate those impacts.
b. Thresholds of Significance

The City of Los Angeles CEQA Thresholds Guide (2006) requires the water analysis to address issues relating to the capacity of the water lines that would serve a project and the impacts of the project on water infrastructure. Based on the criteria set forth in the City of Los Angeles CEQA Thresholds Guide (2006), the determination of significance shall be made on a case-by-case basis, considering the following factors:

- 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 build-out;
- 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 improvements or project design features would reduce or offset service impacts.

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

- The estimated water demand for the Project would exceed the available capacity within the distribution infrastructure that would serve the Project Site.
- The total estimated water demand for the Project at buildout would exceed available supplies.
- The construction of new or upgraded water distribution infrastructure would result in a substantial obstruction of vehicles and/or pedestrian access.
- The Project would exceed the projected employment, housing, or population growth projections of the applicable Community Plan as assumed in the planning for future water infrastructure needs.

c. Project Design Features

(1) Infrastructure

Water service to the Project Site would continue to be supplied by the DWP for domestic, fire protection and recycled water uses. Additional infrastructure for domestic, fire, and recycled water would be constructed within the Project Site to meet the projected water demand for the Project.
(a) Domestic Water

The domestic water system needed to supply the proposed Project would require the construction of water mains and laterals, in particular for the Mixed-Use Residential Area of the proposed Project. The improvements for the domestic water system would specifically include the construction and installation of 8-, 12-, and 16-inch water lines in the Mixed-Use Residential Area. Also, the sections of the existing DWP 12- and 16-inch water mains located within Universal Hollywood Drive would be removed and relocated as needed in connection with the proposed re-alignment of the road on-site. Additional domestic water system upgrades would include the installation of new on-site domestic water distribution facilities including new connections to existing DWP mains, feeder distribution lines to the points of use, and the related plumbing for uses such as sinks, toilets, water fountains and sprinkler heads (for both irrigation and fire protection).

(b) Fire Protection Water System

Additional connections to the DWP 830 and 1116 pressure zone water lines would be required for the fire protection system. The Project would comply with all applicable City and County requirements regarding fire flows, and any additional water lines and hydrants that may be needed to provide additional fire flows to new buildings would be constructed as necessary. The new water lines would be designed and installed in accordance with applicable City and County standards and would be sized to accommodate both fire flow demand and peak day domestic demand. All lines that are constructed that deliver both domestic and fire water would be constructed with the necessary materials and appropriate size to deliver the highest instantaneous demand on the individual water line.

(c) Recycled Water

Since the man-made water features that currently store the recycled water that serves the Project Site would be removed as part of the proposed Project, the installation of a new recycled water distribution system, including underground storage tanks, would be needed. The new underground storage tanks would be located on the Studio portion of the Project Site and would be sized to supply and store the recycled water demands of the Studio, Business, and Entertainment Areas. The maximum size of each individual underground storage tank would be approximately 50,000 gallons and a maximum of ten tanks would be installed, with a total capacity of approximately 500,000 gallons.

Under the proposed Project, the Applicant would construct a new recycled water system for the Mixed-Use Residential Area that would be owned, maintained, and operated by the DWP. The installation of this new recycled water system for the Mixed-Use Residential Area would include an underground storage tank, lift stations, and the installation of new recycled water distribution lines (ranging from approximately 6 to 16 inches) within the Mixed-Use Residential Area. The underground storage tank sizing is...
based on a calculation of a supply of one peak day of storage for irrigation and dual plumbing in commercial buildings for the maximum permitted development in the Mixed-Use Residential Area plus an additional 100,000 gallons, and is calculated to be 640,000 gallons.

(2) Water Supply

(a) Water Conservation

The following water conservation features would be incorporated into the proposed outdoor and indoor areas of the Project:

- **Outdoor**
  - Use of recycled water for landscape irrigation.
  - Installation of the infrastructure to deliver and use recycled water.
  - Expanded use of high efficiency irrigation systems, including weather-based irrigation controllers with rain shutoff technology or smart irrigation controllers for any area that is either landscaped or designated for future landscaping.
  - Use of water efficient landscaping such as proper hydro-zoning, turf minimization, and use of native/drought tolerant plant materials within the Mixed-Use Residential Area. New areas within the Studio, Business, and Entertainment Areas (other than production activities, entertainment attractions, sets/facades, the theme park, and visitor entries to the theme park and Universal CityWalk) would comply with the County’s landscaping design regulations, as applicable.
  - Provide education on water conservation to residents and employees.

- **Indoor**
  - Install high efficiency toilets that use 1.28 gallons per flush or less for all applications.
  - Install high efficiency urinals that use 0.5 gallons per flush or less for commercial applications.
  - Install restroom faucets that use 1.5 gallons per minute or less for all applications.
  - Install kitchen faucets that use 2.0 gallons per minute or less for residential applications.
IV.L.2 Utilities - Water

- Install pre-rinse spray valves that use 1.6 gallons per minute or less for commercial kitchens.
- Install shower-heads that use 2.0 gallons per minute or less for residential applications.
- Install self-closing faucets for public restrooms for commercial applications.
- Install high efficiency clothes washers with a water factor of 6.0 or less for residential applications.
- Install high efficiency dishwashers that are Energy-Star rated or equivalent for residential applications.

(b) Water Supply

In order to facilitate the DWP’s long-term supply of potable water available to serve the Project, the Applicant would enter into an agreement with the DWP to augment the water supply available to the DWP. Pursuant to the agreement, the Applicant would provide DWP with water rights in the Central and/or West Coast Basins, or other reliable supply sources agreed to by the DWP to offset new potable water demand within the City portions of the Project Site and, upon a declaration by the DWP General Manager, new potable water demand within the County. In addition, the DWP would increase the amount of reliable recycled water supply available to serve the Project Site.

d. Project Impacts

Under the proposed Project, approximately 139 acres of the Project Site would be located within the City, and the remaining approximately 252 acres of the Project Site would be located within the boundaries of the County. Proposed land uses within the City include all of the residential development (2,937 units), 180,000 square feet of community- and neighborhood-serving commercial uses, as well as 300,000 square feet of studio and studio office uses. Proposed land uses in the County include approximately 1.59 million square feet of net new studio, entertainment, retail, office, and related space, including 500 hotel guest rooms and related hotel facilities. Collectively in both the City and County, approximately 2.01 million square feet of net new commercial uses and 2,937 residential units are proposed.

(1) Construction Impacts

Project construction impacts (street, traffic detouring and control, and impacts to other utilities) would be confined to trenching for water lines and removing existing man-made water features, all of which would be temporary in nature. Vehicle and pedestrian access would be impacted during the connection of the proposed water mains to the
existing DWP mains located along Barham Boulevard and Buddy Holly Drive and construction of a new water main along Barham Boulevard. The installation of these connection lines and upgrades would require up to two traffic lane closures for approximately one week at the Barham and Buddy Holly Drive locations. Depending on the length of the new water main that may be required in Barham Boulevard, there could be additional traffic lane closures along Barham Boulevard from the intersection with Buddy Holly Drive to the intersection with Lake Hollywood Drive. The proposed Project’s construction impacts relative to vehicular and pedestrian access associated with the installation of the proposed new connection lines would be temporary and cause intermittent reduction in street and intersection operating capacity near the Project Site. To reduce any temporary traffic impacts, the contractor would implement a Construction Management Plan, which would ensure safe vehicle travel in general, and emergency vehicle access, in particular, throughout the construction period.

As the installation of a new water main under Barham Boulevard would occur along the same area as the Barham Boulevard Corridor Improvements, temporary impacts would be similar, but less than those that would occur with the Barham Boulevard Corridor Improvements. This occurs as the extent of construction required to install a new water main would be less than that required to implement the Barham Boulevard Corridor Improvements. The potential impacts of the Barham Boulevard Corridor Improvements are discussed in detail in Section IV.B.1.6.i of this Draft EIR. As discussed therein, ground-disturbing activities are not anticipated to result in significant impacts to historic resources, archaeological or paleontological resources, utilities, water quality, or sedimentation. All hazardous materials and any contaminated soils that may be encountered would be handled in accordance with all applicable regulations and manufacturers’ recommendations and construction would be completed in accordance with the National Pollutant Discharge Elimination System, which requires that Best Management Practices and good housekeeping measures be implemented during construction. With regard to climate change, impacts associated with implementing the proposed off-site water main improvement would be less than significant as it is anticipated that the greenhouse gas reductions that would occur under the proposed Project would be sufficient to reduce emissions to an extent greater than the 28.4 percent below “Business as Usual” standard even with the addition of greenhouse gas emissions generated during the construction of the new water main. As the installation of the new water main would be a subsurface improvement, no impacts with regard to land use, visual resources/light and glare, public services, hydrology, permanent on-street parking, biotic resources, or employment/housing/population are anticipated.

As is the case with the Barham Boulevard Corridor Improvements, while regional air quality impacts attributable to the proposed water line upgrade would be less than significant unto themselves, these emissions in conjunction with on-site and/or off-site emissions could represent an incremental increase to the Project’s significant regional construction air quality impacts, and thus, for the purposes of this analysis are concluded to
be potentially significant. As concluded in Section IV.B.1.6.i, the construction equipment required for the Barham Boulevard Corridor Improvements would result in a less than significant impact with respect to localized air quality concentrations and toxic air contaminants. As the installation of the new water main would require a similar equipment mix, but less overall equipment than the corridor improvements, the installation of the new water main would similarly result in a less than significant impact with respect to localized air quality concentrations and the release of air toxics.

Potential significant construction noise impacts could also occur during construction of the off-site water main for limited durations when mechanical construction equipment would be used within 200-300 feet of noise sensitive uses (e.g., residences, outdoor patios/plazas) given the incremental difference between construction noise levels and ambient noise levels in the area.

When considering impacts resulting from the installation of a new water main, all impacts are of a relatively short-term duration (i.e., months) and would cease to occur once the installation of the water main is complete.

During the construction of the proposed Project additional water demand to the Project Site would be required during the grading of the Mixed-Use Residential Area. This increased water demand would be approximately 340 gallons per minute, during the typical eight-hour work day. Adequate facilities for the provision of water exist and there would continue to be an adequate supply of water for construction purposes. Therefore, potential construction-related impacts would be less than significant.

(2) Operational Impacts

The proposed Project would increase the overall demand for domestic, fire, and recycled water within the Project Site. As a result, additional domestic, fire, recycled water lines, and recycled water storage tanks would need to be constructed within the boundaries of the Project Site, and potentially off-site, to help alleviate the increase in proposed water use resulting from the eventual implementation of the Project. As indicated above, the Applicant would construct the necessary on-site infrastructure improvements pursuant to applicable City and County Codes.

(a) Water Supply

The forecasted domestic water consumption for the proposed Project is based on City of Los Angeles Bureau of Engineering average daily flow factors of net new development by land use classification. The projected net new domestic water demand of the proposed

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Project is approximately 1,115,015 gallons per day for average daily flows (1249.1 acre-feet per year) and 1,967,515 gallons per day for peak daily flows. Please refer to Table 160 on page 1876, for additional information. To provide a conservative analysis, the projected water demand is overstated in that use of recycled water has not been included in the net new demands and all irrigation is assumed to be provided through domestic water even though landscape will be irrigated with recycled water. Additionally, the projected water demand does not include any reductions from the proposed water conservation measures described above under Project Design Features.

Recycled water demands for the proposed Project are also expected to increase. According to the Water System Technical Report, the peak existing recycled water demand is approximately 93,730 gallons per day (105 acre-feet per year). The proposed Project would increase the demand for recycled water by a net new amount of approximately 219,493 gallons per day.

The existing recycled water distribution system of pumps and storage areas has adequate capacity for the current and projected recycled water demands. However, as discussed above, proposed Project development would result in removal of the existing man-made water features that store recycled water. As a result, a new recycled water distribution system, including new underground storage tanks with greater storage capacity, would be required to handle the increase in recycled water demand for the Project Site. Underground storage tanks are proposed to be located within the Studio Area portion of the Project Site to serve the Studio, Business, and Entertainment Areas, and a new recycled water system would be constructed for the Mixed-Use Residential Area portion of the Project Site, as outlined under Project Design Features.

Where recycled water is used as a substitute for potable water, potable water demand would also be reduced. Continued use of recycled water for irrigation and industrial uses would occur for areas developed as part of the proposed Project. Although the estimated recycled water demand for the proposed Project would exceed the currently available capacity within the distribution infrastructure, with installation of the new recycled water distribution system, including new underground storage tanks with greater storage capacity, the potential impacts of the proposed Project would be reduced to a less than significant level.

Water and energy conservation features would be incorporated into new development pursuant to Title 24 of the California Code of Regulations as well as the City of Los Angeles requirements and as outlined under Project Design Features. The projected domestic water demand of the proposed Project does not factor in reductions from inclusion of these water conservation features. It is anticipated that through these conservation features the proposed Project would reduce potable water consumption by approximately 20 percent. Additional information regarding reductions in water use is
Table 160
Proposed Project Water Consumption

<table>
<thead>
<tr>
<th>Land Use Category</th>
<th>Size (unit) (net new development)</th>
<th>Water Demand Rate (gallons per day/unit) (^a)</th>
<th>Consumption (gallons per day)</th>
<th>Consumption (acre-feet/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>City of Los Angeles</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential</td>
<td>2,937 units</td>
<td>160/unit</td>
<td>469,920</td>
<td>526.4</td>
</tr>
<tr>
<td>Residential Retail (^b)</td>
<td>115,000 sf</td>
<td>408/1,000 sf</td>
<td>46,920</td>
<td>52.6</td>
</tr>
<tr>
<td>Community Serving</td>
<td>65,000 sf</td>
<td>408/1,000 sf</td>
<td>26,520</td>
<td>29.7</td>
</tr>
<tr>
<td>Studio</td>
<td>48,020 sf</td>
<td>80/1,000 sf</td>
<td>3,842</td>
<td>4.3</td>
</tr>
<tr>
<td>Studio Office</td>
<td>232,552 sf</td>
<td>180/1,000 sf</td>
<td>41,859</td>
<td>46.9</td>
</tr>
<tr>
<td>Child Care Center (^c)</td>
<td>(100 children)</td>
<td>8/child</td>
<td>(800)</td>
<td>-0.9</td>
</tr>
<tr>
<td>Entertainment</td>
<td>(42,240) sf</td>
<td>180/1,000 sf</td>
<td>(7,603)</td>
<td>-8.5</td>
</tr>
<tr>
<td>Irrigation (^d)</td>
<td>N/A</td>
<td>N/A</td>
<td>114,565</td>
<td>128.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Subtotal</td>
<td>695,223</td>
<td>778.8</td>
</tr>
<tr>
<td><strong>County of Los Angeles</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Studio</td>
<td>259,929 sf</td>
<td>80/1,000 sf</td>
<td>20,794</td>
<td>23.3</td>
</tr>
<tr>
<td>Studio Office</td>
<td>199,774 sf</td>
<td>180/1,000 sf</td>
<td>35,959</td>
<td>40.3</td>
</tr>
<tr>
<td>Child Care Center (^c)</td>
<td>150 children</td>
<td>8/child</td>
<td>1,200</td>
<td>1.3</td>
</tr>
<tr>
<td>Entertainment</td>
<td>187,895 sf</td>
<td>180/1,000 sf</td>
<td>33,821</td>
<td>37.9</td>
</tr>
<tr>
<td>Entertainment Retail (^b)</td>
<td>39,216 sf</td>
<td>408/1,000 sf</td>
<td>16,000</td>
<td>17.9</td>
</tr>
<tr>
<td>Amphitheater (^e)</td>
<td>(50,600 sf)</td>
<td>N/A</td>
<td>(12,084)</td>
<td>-13.5</td>
</tr>
<tr>
<td>Office</td>
<td>495,406 sf</td>
<td>180/1,000 sf</td>
<td>89,173</td>
<td>99.9</td>
</tr>
<tr>
<td>Hotel (^f)</td>
<td>500 rooms</td>
<td>260/room</td>
<td>130,000</td>
<td>145.6</td>
</tr>
<tr>
<td>Irrigation (^d)</td>
<td>N/A</td>
<td>N/A</td>
<td>104,928</td>
<td>117.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Subtotal</td>
<td>419,792</td>
<td>470.3</td>
</tr>
<tr>
<td><strong>Total (average)</strong></td>
<td></td>
<td></td>
<td>1,115,015</td>
<td>1,249.1</td>
</tr>
<tr>
<td><strong>Total (peak)</strong> (^g)</td>
<td></td>
<td></td>
<td>1,967,515</td>
<td>2,204.1</td>
</tr>
</tbody>
</table>

\(^a\) Water demand rates provided by DWP based on Bureau of Sanitation sewer generation rates.

\(^b\) Reflects a weighted average of 60% retail and 40% restaurant - "full service indoor seat". For the restaurant use, assumes 3 seats per 100 square feet of floor area.

\(^c\) Assumes one child per 100 feet of floor area.

\(^d\) Irrigation demands per Water Supply Assessment calculations.

\(^e\) Amphitheater water demand based on the reduction of 3,021 seats at 4 gpd demand/seat.

\(^f\) The Bureau of Sanitation’s water use rate for hotel use is 130 gpd/room. As the hotel is likely to include banquet and related facilities, an additional 130 gpd/hotel room is assumed for purposes of this analysis to provide a conservative estimate and to account for the additional water used by the banquet and related facilities. Therefore, the total hotel demand rate used in this analysis is 260 gpd/hotel room.

\(^g\) Peak flow rate = 1.78 times the Average Demand in millions of gallons per day raised to the power of 0.92 per American Society of Civil Engineers Sewer Design Manual.


provided in the Climate Change Technical Report which is included as Appendix Q to this Draft EIR.

The Project is estimated to increase water demand on average by 1,115,015 gallons per day (1249.1 acre-feet per year). This estimate is overstated in that it does not take into
account reductions in potable water demand from use of recycled water and implementation of the water conservation features that would be implemented by the Project.

In addition, to facilitate the DWP’s long-term supply of potable water to the Project, the Project will enter into an agreement with the DWP to augment the water supply available to the DWP through the acquisition of water from the Central and/or West Coast Basins, or other reliable supply sources agreed to by DWP. As discussed under heading 2.b.3 of this Draft EIR Section above, the Central and West Coast Basins are adjudicated groundwater basins. In these basins, the purchase and/or transfer of adjudicated water rights can be made. For the past five years, there has been an active groundwater rights sales and lease market in the Central and West Coast Basins. On average, over 22,000 acre-feet transfer each year. Under the proposed Project, potable water demand in the County is estimated to be approximately 353 acre-feet per year and in the City is estimated to be approximately 650 acre-feet per year. Given the recent history of available sales and/or leases of groundwater rights in the Central and West Coast Basins, the Project water demands can be offset through the purchase of annual adjudicated water rights in these basins. 487

Therefore, with the inclusion of the project design features, DWP can provide sufficient domestic water supplies to the Project. Therefore, water supply impacts would be less than significant. 488

(b) Infrastructure

As indicated above, water is pumped to the Project Site from the Hollywood Pump Station through various water lines and pressure zones. The DWP has indicated that the Hollywood Pump Station cannot provide sufficient water supply to satisfy fire flow demand as required by the City Fire Department. With implementation of Mitigation Measure L.2-1 below, which would augment the existing DWP infrastructure, impacts with respect to infrastructure would be reduced to a less than significant level.

The City of Los Angeles Fire Department has stated that future developments within City portions of the Project Site would be required to comply with its fire flow requirement. Due to the intermittent and variable nature of fire flows, net domestic demands have not included fire flow demand in the projected calculations. To help alleviate potential impacts, a new fire protection system would be installed to support the potential fire flow demand of

487 The Water Supply Assessment, included as Appendix N-1-2 to this Draft EIR, provides detailed information regarding the number of sales and/or leases of groundwater rights and the total quantities of those sales for the past five years in the Central and West Coast Basins.

488 Water Supply Assessment, included as Appendix N-1-2 to this Draft EIR.
up to 12,000 gallons per minute for the proposed Project. New service lines would be constructed to serve the proposed Project as described in the domestic water changes, above. In evaluating the water system, the new on-site water lines would be sized for both fire demand and peak day domestic demand. Fire protection systems would be provided on a building-by-building basis in accordance with City and County fire codes, as applicable. Proposed buildings would be designed with sprinklers for fire protection in accordance with City and County fire codes, as applicable. Additionally, the provision of additional on-site water storage capacity within high-rise buildings would provide infrastructure capable of meeting the required fire flow pressures, thereby reducing potential impacts to a less than significant level.

(c) Consistency with Growth Projections

As discussed in Section IV.N, Employment, Housing, and Population, of this Draft EIR, as most of the Project Site is an unincorporated area that is not included in the Sherman Oaks-Studio City-Toluca Lake-Cahuenga Pass Community Plan, it is not reflected in the Community Plan’s growth forecast. As a result, the analysis addresses the Project’s consistency with the growth forecasts for the City of Los Angeles Subregion (i.e., one of Southern California Association of Government’s subregions). As discussed in Section IV.N, Employment, Housing, and Population, the Project would constitute approximately one-third of one percent (0.31 percent) of Southern California Association of Government’s projected 2030 employment in the City of Los Angeles Subregion, and approximately 2.12 percent of employment growth between 2008 and 2030. The Project’s housing, plus the indirect housing demand generated by new Project employees, represents approximately 0.2 percent of the households forecast for 2030 in the City of Los Angeles Subregion, or approximately one percent of the remaining growth forecast between 2008 and 2030. The Project’s population would represent approximately 0.2 percent of the population forecast for 2030 in the City of Los Angeles Subregion and just over two percent (2.4 percent) of the remaining population growth forecast between 2008 and 2030. The Project is, therefore, consistent with Southern California Association of Government’s forecast for the City of Los Angeles Subregion and impacts with respect to an exceedance of projected employment, housing, or population growth projections assumed in the planning for future water infrastructure needs forecasts would be less than significant.

(3) Impacts Under No Annexation Scenario

The proposed detachment/annexation of land between the City and County would not alter the projected increases in demand for water services at the Project Site as shown in Table 161 on page 1879, nor the means by which water is delivered to the Project Site. Specifically, the water demand generated by land uses in the City would decrease under
### Table 161
Water Consumption Under the No Annexation Scenario

<table>
<thead>
<tr>
<th>Land Use Category</th>
<th>Size (unit) (net new development)</th>
<th>Water Demand Rate (gallons per day/unit)</th>
<th>Consumption (gallons per day)</th>
<th>Consumption (acre-feet/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>City of Los Angeles</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential</td>
<td>1,178 units</td>
<td>160/unit</td>
<td>188,480</td>
<td>211.1</td>
</tr>
<tr>
<td>Entertainment</td>
<td>67,100 sf</td>
<td>180/1,000 sf</td>
<td>12,078</td>
<td>13.5</td>
</tr>
<tr>
<td>Entertainment Retail</td>
<td>17,400 sf</td>
<td>408/1,000 sf</td>
<td>7,099</td>
<td>8.0</td>
</tr>
<tr>
<td>Community Serving</td>
<td>26,072 sf</td>
<td>408/1,000 sf</td>
<td>10,637</td>
<td>11.9</td>
</tr>
<tr>
<td>Residential Retail</td>
<td>46,128 sf</td>
<td>408/1,000 sf</td>
<td>18,820</td>
<td>21.1</td>
</tr>
<tr>
<td>Studio</td>
<td>77,220 sf</td>
<td>80/1,000 sf</td>
<td>6,178</td>
<td>6.9</td>
</tr>
<tr>
<td>Studio Office</td>
<td>244,430 sf</td>
<td>180/1,000 sf</td>
<td>43,997</td>
<td>49.3</td>
</tr>
<tr>
<td>Office</td>
<td>24,400 sf</td>
<td>180/1,000 sf</td>
<td>4,392</td>
<td>4.9</td>
</tr>
<tr>
<td>Amphitheater</td>
<td>(2,500 sf)</td>
<td>N/A</td>
<td>(597)</td>
<td>-0.7</td>
</tr>
<tr>
<td>Hotel</td>
<td>500 rooms</td>
<td>260/room</td>
<td>130,000</td>
<td>145.6</td>
</tr>
<tr>
<td>Child Care Center</td>
<td>(100 children)</td>
<td>8/child</td>
<td>(800)</td>
<td>-0.9</td>
</tr>
<tr>
<td>Irrigation</td>
<td>N/A</td>
<td>N/A</td>
<td>87,797</td>
<td>98.4</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td></td>
<td>508,081</td>
<td>569.1</td>
</tr>
<tr>
<td><strong>County of Los Angeles</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Studio</td>
<td>230,729 sf</td>
<td>80/1,000 sf</td>
<td>18,458</td>
<td>20.7</td>
</tr>
<tr>
<td>Studio Office</td>
<td>187,896 sf</td>
<td>180/1,000 sf</td>
<td>33,821</td>
<td>37.9</td>
</tr>
<tr>
<td>Child Care Center</td>
<td>150 children</td>
<td>8/child</td>
<td>1,200</td>
<td>1.3</td>
</tr>
<tr>
<td>Entertainment</td>
<td>78,555 sf</td>
<td>180/1,000 sf</td>
<td>14,140</td>
<td>15.8</td>
</tr>
<tr>
<td>Entertainment Retail</td>
<td>21,816 sf</td>
<td>408/1,000 sf</td>
<td>8,901</td>
<td>10.0</td>
</tr>
<tr>
<td>Amphitheater</td>
<td>(48,100 sf)</td>
<td>N/A</td>
<td>(11,487)</td>
<td>-12.9</td>
</tr>
<tr>
<td>Office</td>
<td>471,006 sf</td>
<td>180/1,000 sf</td>
<td>84,781</td>
<td>95.0</td>
</tr>
<tr>
<td>Residential</td>
<td>1,759 units</td>
<td>160/unit</td>
<td>281,440</td>
<td>315.3</td>
</tr>
<tr>
<td>Community Serving</td>
<td>38,928 sf</td>
<td>408/1,000 sf</td>
<td>15,883</td>
<td>17.8</td>
</tr>
<tr>
<td>Residential Retail</td>
<td>68,872 sf</td>
<td>408/1,000 sf</td>
<td>28,100</td>
<td>31.5</td>
</tr>
<tr>
<td>Irrigation</td>
<td>N/A</td>
<td>N/A</td>
<td>131,696</td>
<td>147.5</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td></td>
<td>606,933</td>
<td>679.9</td>
</tr>
<tr>
<td><strong>Total (average)</strong></td>
<td></td>
<td></td>
<td><strong>1,115,015</strong></td>
<td><strong>1,249.1</strong></td>
</tr>
<tr>
<td><strong>Total (peak)</strong></td>
<td></td>
<td></td>
<td><strong>1,967,515</strong></td>
<td><strong>2,204.1</strong></td>
</tr>
</tbody>
</table>

- **a** Water demand rates provided by DWP based on Bureau of Sanitation Sewer Generation Rates.
- **b** Reflects a weighted average of 60% retail and 40% restaurant - "full service indoor seat". For the restaurant use, assumes 3 seats per 100 square feet of floor area.
- **c** Amphitheater water demand based on the reduction of 3,021 seats at 4 gpd demand/seat.
- **d** Irrigation demands per Water Supply Assessment calculations.
- **e** Assumes one child per 100 feet of floor area.
- **f** The Bureau of Sanitation’s water use rate for hotel use is 130 gpd/room. As the hotel is likely to include banquet and related facilities, an additional 130 gpd/hotel room is assumed for purposes of this analysis to provide a conservative estimate and to account for the additional water used by the banquet and related facilities. Therefore, the total hotel demand rate used in this analysis is 260 gpd/hotel room.
- **g** Peak flow rate = 1.78 times the Average Demand (in million gallons per day) raised to the power of 0.92 per American Society of Civil Engineers Sewer Design Manual.

the No Annexation scenario, with a corresponding increase in water demand generated by land uses in the County. This change in the proportion of water demand generated within each jurisdiction in large part is due to the shifting of residential uses, with 1,178 residential units estimated to be located in the City under the No Annexation scenario, versus 2,937 residential units in the City under the proposed Project. As total water demand under the No Annexation scenario is the same as of the Project, impacts with regard to water demand would be less than significant under the No Annexation scenario, as is the case with the proposed Project. The proposed water supply augmentation agreement with DWP would also apply to the uses in the City and County under the No Annexation Scenario. The water supply service lines would be designed and constructed pursuant to the requirements of the applicable jurisdiction; therefore impacts would be the same with or without the proposed annexation. With the incorporation of the previously discussed Project Design Features and implementation of the below identified Mitigation Measures, impacts would be less than significant.

4. **Cumulative Impacts**

In order to assess overall demand and cumulative consumption impacts to the Los Angeles DWP service area, a review of the City’s Urban Water Management Plan was conducted. The 2005 Urban Water Management Plan is the DWP’s plan to provide water supplies to meet existing and future water demands within its service area. Larger new development projects pursuant to the provisions of the Water Code are required to demonstrate that adequate water supplies are available to meet the needs of each individual project. Through this process, projects that may not have been accounted for in the 2005 Urban Water Management Plan are assured that sufficient water supplies are available.

The Urban Water Management Plan used a service area wide method in developing its water demand projection. The DWP service area is used for overall demand and cumulative consumption impacts since the entire Project Site would be serviced by the DWP. As a result, the Project would not cumulatively contribute to areas beyond the DWP service boundary.

The 2005 Urban Water Management Plan’s forecasted water demand for 2030 for the entire DWP service area, based on normal weather conditions and with projected conservation, is 776,000 acre-feet per year. This is an increase in demand equaling 106,000 acre-feet per year over the 2007-2030 time period. The 2005 Urban Water Management Plan anticipates that sufficient supplies would be available to meet this demand through a combination of existing and planned locally-developed supplies, conservation and purchasing water from the Metropolitan Water District of Southern California. The 2005 Urban Water Management Plan also includes water shortage
contingency plans in the event anticipated supplies are not available. Through these processes (i.e., implementation of the 2005 Urban Water Management Plan and compliance with California Water Code requirements for water supply assessments), sufficient water supplies would be available to meet the forecasted demand. As the Project will enter into an agreement with the DWP to augment the water supply available to the DWP and Project development would have a less than significant impact with regard to water supply, cumulative water supply impacts are also concluded to be less than significant.

With regard to conveyance infrastructure, it is anticipated that all projects will comply with City requirements regarding distribution infrastructure to serve the projected demand of the related projects. As proposed improvements would meet the Project’s needs, cumulative impacts with regard to conveyance infrastructure are less than significant.

5. Project Design Features and Mitigation Measures

a. Project Design Features

Project Design Feature L.2-1: Any additional water lines and hydrants that may be needed to provide additional fire flows to new buildings shall be constructed as necessary. The new water lines shall be designed and installed in accordance with applicable City and County standards and would be sized to accommodate both fire flow demand and peak day domestic demand.

Project Design Feature L.2-2: All water lines that are constructed that deliver both domestic and fire water shall be constructed with the necessary materials and appropriate size to deliver the highest instantaneous demand on the individual water line.

Project Design Feature L.2-3: The following water conservation features shall be incorporated into the proposed outdoor and indoor areas of the Project:

Outdoor

- Use recycled water for landscape irrigation.
- Installation of the infrastructure to deliver and use recycled water.
- Expanded use of high efficiency irrigation systems, including weather-based irrigation controllers with rain shutoff technology
or smart irrigation controllers for any area that is either landscaped or designated for future landscaping.

- Use water efficient landscaping such as proper hydro-zoning, turf minimization, and use of native/drought tolerant plant materials within the Mixed-Use Residential Area. New areas within the Studio, Business, and Entertainment Areas (other than production activities, entertainment attractions, sets/facades, the theme park and visitor entries to the theme park and Universal CityWalk) would comply with the County’s landscaping design regulations, as applicable.

- Provide education on water conservation for residents and employees.

**Indoor**

- Install high efficiency toilets that use 1.28 gallons per flush or less for all applications.

- Install high efficiency urinals that use 0.5 gallons per flush or less for commercial applications.

- Install restroom faucets that use 1.5 gallons per minute or less for all applications.

- Install kitchen faucets that use 2.0 gallons per minute or less for residential applications.

- Install pre-rinse spray valves that use 1.6 gallons per minute or less for commercial kitchens.

- Install shower-heads that use 2.0 gallons per minute or less for residential applications.

- Install self-closing faucets for public restrooms for commercial applications.

- Install high efficiency clothes washers with a water factor of 6.0 or less for residential applications.

- Install high efficiency dishwashers that are Energy-Star rated or equivalent for residential applications.
**Project Design Feature L.2-4:** The Applicant or its successor shall enter into an agreement with the Department of Water and Power to augment the water supply available to the Department of Water and Power by acquiring for the Department of Water and Power water rights in the Central or West Coast Basins, or such other reliable supply sources as agreed to by the Department of Water and Power.

**b. Mitigation Measures**

The following mitigation measure would serve to reduce potential impacts from the proposed Project related to the supply and distribution of domestic water to the Project Site:

**Mitigation Measure L.2-1:** Prior to the issuance of the first certificate of occupancy for a building 75 feet tall or greater or the 100th unit of high density residential (i.e., buildings four to six stories in height or greater) within the Mixed-Use Residential Area, the Project Applicant or its successor shall contribute to the costs to construct a pumping station with a capacity of up to a maximum of 16,500 gallons per minute within the south-eastern portion of the Mixed-Use Residential Area of the Project Site. The final sizing of the pumping station shall be determined at the time of final design. The Applicant or its successor shall be responsible for the grading of the pumping station site and providing access to the site. The Los Angeles Department of Water and Power shall be responsible for construction of the pumping station itself including the provision and installation of all equipment and associated sub-systems necessary for operation of the facility.

**6. Level of Significance After Mitigation**

Implementation of the proposed Project would result in the need for increased facilities for the Los Angeles DWP in order to adequately supply water to the Project Site. A mitigation measure has been included to assure that adequate water services and facilities are available to meet the needs of the proposed Project. After mitigation and with implementation of the stated Project Design Features, no significant impacts with regard to water would occur under the proposed Project or the No Annexation scenario.