City of Beverly Hills

2020
Urban Water Management Plan

BEVERLY
HILLS

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2020 URBAN WATER MANAGEMENT PLAN

City of Beverly Hills

FINAL

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July 2021

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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
AF	Acre Feet
AFY	Acre Feet per Year
AMI	Area Median Income
AWWA	American Water Works Association
BMP	Best Management Practices
CalWEP	California Water Efficiency Partnership
CEQA	California Environmental Quality Act
CFS	Cubic Feet Per Second
CII	Commercial, Industrial, and Institutional
CIMIS	California Irrigation Management Information System
CPA	Clean Power Alliance
CRA	Colorado River Aqueduct
CVP	Central Valley Project
CWD	California Water Code
DMM	Demand Management Measure
DOF	Department of Finance
DRA	Drought Risk Assessment
DVL	Diamond Valley Lake
DWR	Department of Water Resources
ETo	Evapotranspiration from a Standardized Grass Surface
FY	Fiscal Year
GPCD	Gallons Per Capita Per Day
GPD	Gallons Per Day
GPM	Gallons Per Minute
GSA	Groundwater Sustainability Agency
GWB	Groundwater Basin
HCD	Department of Housing and Community Development
IID	Imperial Irrigation District
IRP	Integrated Resources Plan
IWRMP	Integrated Water Resources Master Plan
LADWP	Los Angeles Department of Water and Power
M&I	Municipal and Industrial
MAF	Million Acre Feet
MCL	Maximum Contaminant Level
Metropolitan, MWD	Metropolitan Water District of Southern California
MGD	Million Gallons per Day
Mg/L	Milligrams Per Liter
MOU	Memorandum of Understanding
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
OCWD	Orange County Water District

QSA	Quantification Settlement Agreement
RHNA	Regional Housing Needs Assessment
RDM	Robust Decision Making
RO	Reverse Osmosis
RTP	Regional Transportation Plan
RUWMP	Regional Urban Water Management Plan
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAG	Southern California Association of Governments
SDWA	Safe Drinking Water Act
SGMA	Sustainable Groundwater Management Act
SWP	State Water Project
SWRCB	State Water Resources Control Board
TAF	Thousand Acre Feet
USBR	U.S. Bureau of Reclamation
USEPA	United States Environmental Protection Agency
UWMP	Urban Water Management Plan
WRCC	Western Regional Climate Center
WSAP	Water Supply Allocation Plan
WSCP	Water Shortage Contingency Plan
WSDM	Water Surplus and Drought Management

1 INTRODUCTION AND OVERVIEW

1.1 Urban Water Management Plan Requirements

This report has been prepared in compliance with the Urban Water Management Planning Act (Act), which was added to the California Water Code (CWC) by Statute 1983, Chapter 1009, and became effective on January 1, 1984. This Act requires that “every urban water supplier shall prepare and adopt an urban water management plan.” An “urban water supplier” is defined as a supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually.

These plans must be filed with the California Department of Water Resources (DWR) every five years ending in 0 and 5 and submitted by December 31 of that year. The 2020 UWMP is due to DWR by July 1, 2021. The Act’s requirements include:

- Detailed description and evaluation of the supplies necessary to meet demands over at least a 20-year period, in five-year increments, for a single dry water year, in multi-year droughts, and during average year conditions,
- Documentation of the stages of actions an urban water supplier would undertake to address up to a 50 percent reduction in its water supplies,
- Description of the actions to be undertaken in the event of a catastrophic interruption in water supplies, and
- Evaluation of reasonable and practical efficient water uses, recycling, and conservation activities.

This 2020 UWMP provides a detailed summary of present and future water supplies and demands and provides an assessment of the City of Beverly Hills (City) water resource needs. Specifically, the UWMP provides water supply planning for a 25-year planning period in five-year increments and identifies water supplies needed to meet existing and future demands. The demand analysis must identify supply reliability under three hydrologic conditions: a normal year, single dry-year, and five consecutive dry-years. The City’s 2020 UWMP updates the 2015 UWMP, in compliance with new requirements of the Act.

1.1.1 New Requirements Since 2015

There are numerous additional requirements passed by the Legislature for the 2020 UWMP, updating the 2015 UWMP guidance. The following is a summary of the significant changes:

- Five Consecutive Dry-Year Water Reliability Assessment – The dry-year water reliability planning was modified from a “multiyear” time period to a “drought lasting five consecutive water years.” The Supplier must analyze the reliability of water supplies to meet demands over an extended drought period.
- Drought Risk Assessment – The Legislature created a new UWMP requirement for drought planning that requires the Supplier to assess water supply reliability over the five-year period from 2021 to 2025 that evaluates water supplies, water use, and the resulting water supply reliability under a reasonable prediction for five consecutive dry years.

- Seismic Risk – The Water Code now requires Suppliers to specifically address the seismic risk to water facilities and to have a mitigation plan.
- Water Shortage Contingency Plan – The Legislature modified the UWMP laws in 2018 to require a Water Shortage Contingency Plan (WSCP) with specific elements. The WSCP provides an action plan for a drought or catastrophic water supply shortage.
- Groundwater Supplies Coordination – The Legislature enacted the Sustainable Groundwater Management Act in 2014 to address groundwater conditions throughout California. The Water Code requires that the 2020 UWMP is consistent with any applicable Groundwater Sustainability Plans that have been completed.
- Lay Description – The Legislature included a new statutory requirement for Suppliers to include a lay description of the fundamental determinations of the UWMP. The description will include water service reliability, future challenges, and strategies for managing reliability risks. The section will provide a synopsis of the Supplier's detailed analysis.
- Reduced Reliance on Delta – Suppliers that anticipate participating in, or receiving water from, a proposed project in the Sacramento-San Joaquin Delta (Delta) have the opportunity to demonstrate reduced reliance on the Delta, consistent with Delta Plan policy.
- Reporting of Energy Intensity – Suppliers must provide information by water service operation to calculate the energy intensity of their water service. This is now required, whereas in the 2015 UWMP it was voluntary.

1.1.2 Senate Bill 7 of the Seventh Extraordinary Session of 2009, Water Conservation in the Delta Legislative Package

The state Legislature passed Senate Bill 7 as part of the Seventh Extraordinary Session, referred to as SBx7-7, on November 10, 2009, which became effective February 3, 2010. This law was the water conservation component to the historic Delta legislative package and seeks to achieve a 20 percent statewide reduction in urban per capita water use in California by December 31, 2020. The law requires each urban retail water supplier to develop urban water use targets to help meet the 20 percent goal by 2020.

The bill states that the legislative intent is to require all water suppliers to increase the efficiency of use of water resources and to establish a framework to meet the state targets for urban water conservation called for by the Governor. The bill establishes methods for urban retail water suppliers to determine targets to help achieve increased water use efficiency by the year 2020. The law is intended to promote urban water conservation standards consistent with the California Urban Water Conservation Council's adopted best management practices.

The 2020 UWMP shows the 2020 per-capita target value that was adopted in the 2015 UWMP, and the compliance value based upon actual 2020 customer water use.

1.1.3 Assembly Bill 1668 and Senate Bill 606

In 2018, Governor Brown signed into law the water conservation bills A1668 and SB 606. These bills were a result of an Executive Order from the Governor during the recent drought which required State agencies to develop and recommend a long-term water conservation framework to ensure adequate water supplies for the State now and in the future. The two bills establish guidelines for efficient water use and a framework for implementation and oversight of the new standards, which must be in place by 2022. Provisions of the bills promote long term water conservation and drought reliability and include the following:

- Established water use objectives and long-term standards for efficient water use that apply to urban retail water suppliers comprised of indoor and outdoor residential water use, dedicated irrigation meters for commercial, industrial, and institutional (CII) users, and water loss
- Provides incentives for water suppliers to recycle water
- Requires suppliers to set annual water budgets and prepare for drought

1.2 Lay Description

The City of Beverly Hills (City) has prepared this 2020 Urban Water Management Plan (UWMP) in compliance with the California Water Code (CWC). This summary satisfies the requirement of CWC to include a simple lay description of information necessary to provide a general understanding of the Plan, including a description of City's reliable water, as well as its strategies and potential challenges for the foreseeable future.

This UWMP provides an assessment of the City's water service reliability, describes, and evaluates sources of water supply, demand management measures, and other relevant information and programs. In addition to the water reliability assessments, the Plan includes an evaluation of frequent and severe periods of drought and the preparation and adoption of the Water Shortage Contingency Plan (WSCP) that provides actions in response to potential water supply shortages.

The CWC requires reporting agencies to describe their water reliability under the conditions associated with a normal water year, a single dry-year, and droughts lasting at least five consecutive water years, with projected information in five-year increments for a minimum period of 20 years into the future. The factors used to evaluate the City's water supply and demand balance for the 2020 UWMP are presented below. Some of the considerations and resulting projections may change over time with changes in water supply conditions and planning efforts. These changes will be reflected in future updates of the UWMP which occur every five years.

1.2.1 Water Demands

Water demands within the City's service area are dependent on many factors such as local climate conditions, population, demographics, land use, and economics. The City's water service area is approximately 6.35 square miles and consists of the City of Beverly Hills and a portion of the City of West Hollywood, which is about 10 percent of the City's total water service area. Based on data from the Southern California Association of Governments (SCAG) and the California Department of Finance, the City's water service area population was 43,371 in 2020 and is projected to increase by 7 percent by 2045.

Future water use is estimated by understanding the type of use and customer type creating the demand. Developing local water use profiles helps to identify quantity of water used by different land uses within the agency's service area. Knowledge of water use by customer type enables the City to develop more effective water conservation programs and to project the future benefit of those programs. Water consumption in this UWMP is evaluated by the following customer classes:

- Single-family Residential

- Multi-family Residential
- Commercial, Institutional, and Industrial

By far, the predominant land use in the City is residential, making up approximately 83% of the City's water service connections. In addition to customer water uses which are metered and billed, there are also water losses associated with leaks and meter inaccuracies. The City has programs in place to reduce these types of water losses. These include automated meter infrastructure technology that identifies potential leaks and an ongoing pipeline replacement program.

Southern California's urban water demand has been largely shaped by the efforts to comply with a 2010 water conservation law known as Senate Bill x7-7. This law required California water suppliers to reduce water demand by 20 percent (from a historical baseline) by 2020. The City has been actively engaged in efforts to reduce water use in its service area to meet the final 2020 water use target, which it has accomplished. The City achieved a 32% reduction from the baseline value. Meeting this target was critical to ensure the City's eligibility to receive future state water grants and loans. Water conservation measures that made this reduction possible are largely still in place now.

Water demand for the City was projected out to the year 2045 based on existing use data as well as projected land use, population, economic growth, and future conservation. Future conservation assumes continued implementation of the City's current conservation programs which have proven to be very effective.

1.2.2 Water Supply

The City obtains its water supply from two sources: imported surface water purchased from Metropolitan Water District of Southern California (Metropolitan) and local groundwater extracted from the local Hollywood Basin and, with the construction of a new well by 2022, the La Brea Subarea of the Central Groundwater Basin. The imported water is treated by Metropolitan and the groundwater is treated at the City's Foothill Water Treatment Plant (Foothill WTP) before being distributed to the City's water system. The Foothill WTP is currently offline and in the construction phase for a pretreatment system with plans to be online in Fall 2021. As such, current water demands are being met by imported water from Metropolitan.

The City's primary source of water supply is imported water from Metropolitan. From 2004, the year the Foothill WTP was placed into service, through 2014, the City purchased an average of 92% of its water from Metropolitan. The Foothill WTP was again taken out of service in 2015 and is expected to come online again in 2021. As a result, there has been no groundwater production since 2014.

Metropolitan's principal sources of water are the Colorado River via the Colorado River Aqueduct (CRA) and the Lake Oroville watershed in northern California through the State Water Project (SWP). Storage is also a major component of Metropolitan's dry year resource management strategy. Metropolitan's likelihood of having adequate supply capability to meet projected demands is highly dependent on its storage resources.

Colorado River Aqueduct

The Colorado River was Metropolitan's original source of water after its establishment in 1928. The CRA, which is owned and operated by Metropolitan, transports water from the Colorado River to Lake Mathews in Riverside County. The actual amount of water per year that may be conveyed through the CRA to Metropolitan's member agencies is based on availability of Colorado River water for delivery. The Colorado River Basin experienced a severe 5-year drought from 2000 to 2004 with below average rainfall and runoff. Average rainfall has been near normal since then, but runoff has remained less than average in two out of every three years. This change in the rainfall to runoff relationship is indicative of a drying trend that is characteristic of a long-term drought. With the long-term challenges of water demand exceeding available supply from the Colorado River, and additional uncertainties due to climate change, Metropolitan has developed a number of supply and conservation programs to increase the amount of supply available from the Colorado River. The volume of water available through these programs are expected to produce CRA deliveries equal to its annual capacity of 1.25 MAF.

State Water Project

The State Water Project (SWP) consists of a network of pump stations, reservoirs, aqueducts, tunnels, and power plants operated by the California Department of Water Resources (DWR) Nearly two-thirds of residents in California receive at least part of their water from the SWP.

The availability of water supplies from the SWP can be highly variable. A wet water year may be followed by a dry or critically dry year and fisheries issues can limit the operations of the delivery pumps even when water supplies are available. The Sacramento-San Joaquin River Delta (Delta) is key to the SWP's ability to deliver water to its agricultural and urban contractors. However, the Delta faces many challenges concerning its long-term sustainability such as climate change posing a threat of increased variability in floods and droughts and sea level rise which can impact water quality. Metropolitan's 2020 UWMP provides details on the factors that affect the ability to estimate existing and future water delivery reliability.

Groundwater

The City has a history of groundwater production from both the Hollywood Groundwater Basin and the adjacent portion of the La Brea Subarea of the Central Groundwater Basin as a secondary source of water supply in conjunction with imported water. The City maintains overlying rights to these basins and files annual extraction reports with DWR. The City is developing these alternative supplies to ensure a safe and reliable local water supply source that will continue to serve the community in periods of drought and shortage.

The City has water supply from six (6) wells that pump groundwater from the Hollywood Basin and is completing construction on one well in the La Brea Subarea of the Central Groundwater Basin. Two additional well sites are being located in the La Brea Subarea for additional supply in the near future. With the completion of the Foothill WTP improvements expected in 2021, it is anticipated that local groundwater will supply 20 to 25 percent of the City's water demand after conservation. By 2025, it is expected that local groundwater supply will increase to 25 to 30 percent of the total demand.

Increased Conservation

Conservation and the efficient sustainable use of water is of the highest priority to the City. Conservation represents water that is controlled locally and, from a water supply perspective, reduces imported water volumes thus increasing reliability. Conservation also has environmental benefits of reducing energy usage for treatment and delivery.

The City has responded proactively to the requirements of SBx7-7 that set goals for water use reduction. The City has also implemented water conservation ordinances and programs under the leadership of the Water Conservation Administrator. The City's water conservation programs include smart metering, conservation pricing, public outreach, water loss reduction, and conservation staff.

1.2.3 Water Service Reliability

Every urban water supplier is required to assess the reliability of their water service to its customers under normal, dry, and multiple dry water years. The City depends on imported water supplemented by local supplies to meet its water demands and has taken numerous steps to ensure it has adequate supplies under both normal and drought conditions. With the projects and programs implemented by Metropolitan and the City, the water supplies are projected to meet future demands under both normal and drought conditions.

Metropolitan's 2020 UWMP finds that Metropolitan can meet demands of its member agencies, including the City, from 2020 through 2045 during normal years, single dry year, and multiple dry years. The foundation of Metropolitan's resource strategy for achieving regional water supply reliability has been to develop and implement water resources programs and activities that provide a mix of resources. This preferred resource mix includes conservation, local resources such as water recycling and groundwater recovery, Colorado River supplies and transfers, SWP supplies and transfers, in-region surface reservoir storage, in-region groundwater storage, out-of-region water banking, treatment, conveyance, and infrastructure improvements.

The CWC also requires every urban water supplier to include, as part of its UWMP, a drought risk assessment (DRA) for its water service as part of information considered in developing its demand management measures and water supply projects and programs for the upcoming five-year period. The DRA allows suppliers to consider how to manage water supplies during dry conditions in relation to variations in demand. This process helps a supplier evaluate its Water Shortage Contingency Plan (WSCP) and anticipate appropriate shortage response actions before an actual extended drought period.

For the City's DRA, there are no foreseen interruptions in supply from Metropolitan and additional local groundwater supply is expected to become available beginning in 2022 and increasing over the five-year DRA period. Metropolitan projects sufficient supply to meet demands under both normal conditions and a potential five-year drought condition.

The combination of projects and programs implemented by Metropolitan and the City provide for reliable water supplies that are projected to meet demands. As provided in this UWMP, the City anticipates being able to meet water demand with adequate supplies through the year 2045 under normal, dry, and multiple dry year conditions. The DRA shows no water shortages are projected if a drought were to occur over the next five years.

1.2.4 Water Shortage Contingency Plan

Water supplies may be interrupted or reduced by droughts, earthquakes, and power outages which hinder a water agency's ability to effectively deliver water. Drought impacts increase with the length of a drought, as supplies in reservoirs and other storage programs are depleted and water levels in groundwater basins decline. The ability to manage water supplies in times of drought or other emergencies is an important part of water resource management for a community. In anticipation of such water supply challenges, the CWC requires suppliers to prepare and adopt a Water Shortage Contingency Plan (WSCP) which includes water shortage response actions that they would take in response to various water shortage levels. This WSCP describes the water supply shortage policies the City has in place to respond to events including reductions and catastrophic interruption in water supply.

During a water shortage period, the City will determine the extent of conservation required based on water supply availability from its imported and groundwater sources. As a Metropolitan member agency, the City will follow Metropolitan's adopted WSCP and required actions. Depending on the severity of the water shortage, the city manager will adopt a water shortage response action. The City has five existing shortage levels that are used in its WSCP that range from 5% to 50% of the normal water demand with various associated response actions. For shortage levels greater than 50%, the city manager will activate the City's Emergency Response Plan (ERP) which outlines response and recovery responsibilities during catastrophic water supply interruptions.

1.2.5 Continued Reliability Planning

Although Metropolitan's water supply has proven to be reliable and cost effective relative to local groundwater production over the years, the ongoing threat of drought and climate change has increased the need for the City to develop additional water supply reliability. In its Integrated Water Resources Master Plan (IWRMP), dated November 2020, the City has established and documented the following priorities to increase reliability though conservation, local water supplies, and other opportunities:

- Prioritizing conservation and the efficient use of water – The City has implemented water conservation ordinances and programs under the leadership of the Water Conservation Administrator.
- Optimizing existing local water supplies – Proper maintenance and rehabilitation to ensure long-term production capability of groundwater wells in the Hollywood Basin and the La Brea Subarea.
- Developing new local water supplies – The City has near-term and long-term local water supply goals. To achieve those goals, the City has identified projects to construct new local water supply facilities.
- Keeping an eye toward long-term opportunities – It is important that the City take effective near-term steps to accomplish long-term goals. The City will engage in regional efforts now to be in position for future opportunities.
- Reducing the use of imported water from Metropolitan – The City's imported water supply from Metropolitan will always be a significant portion of the water supply portfolio. However, focusing on the above priorities will allow the City to increase local control of their water supply by reducing reliance on imported water from Metropolitan.

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2 PLAN PREPARATION

2.1 Basis for Preparing a Plan

Per California Water Code (CWC), “urban water supplier” means a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers. This part applies only to water supplied from public water systems. Every urban water supplier must adopt an urban water management plan within one year after it has become an urban water supplier.

The City of Beverly Hills is a public water supplier that meets the definition of an urban water supplier with 10,662 municipal water service connections and a total 9,565 acre-feet (AF) of water supplied to customers in their water service area in 2020. See Table 2-1.

Table 2-1: Public Water Systems

Public Water Systems			
Public Water System Number	Public Water System Name	Number of Municipal Connections 2020	Water Supplied 2020 (AF)
1910156	City of Beverly Hills	10,662	9,565
Total		10,662	9,565
NOTE: Municipal connections include active and inactive service connections. Fire services are excluded. Volume of water supplied is metered use from Metropolitan billing data.			

The 2020 UWMP is intended to serve as a general, flexible, and open-ended document that is updated every five years (or more often if necessary) to reflect changes in the City’s water supply trends, and conservation and water use efficiency policies. The 2020 UWMP will be used by City staff to guide the water use and management efforts through the year 2025, when the 2020 UWMP will require an update.

2.2 Individual or Regional Planning and Compliance

The City of Beverly Hills has developed an individual UWMP (as opposed to a Regional UWMP) that reports solely on its service area; addresses all requirements of the CWC; and notifies and coordinates with appropriate regional agencies and constituents. See Table 2-2.

Table 2-2: Plan Identification

Plan Identification	
☑	Individual UWMP
☐	Regional UWMP (RUWMP)

2.3 Fiscal or Calendar Year and Unit of Measure

The City of Beverly Hills is a water retailer (as opposed to a water wholesaler). The City's 2020 UWMP has been prepared using calendar years (as opposed to fiscal years) and has been prepared using acre-feet (AF) as the units of water volume measure. See Table 2-3.

Table 2-3: Agency Identification

Agency Identification	
Type of Agency	
☐	Agency is a wholesaler
☑	Agency is a retailer
Fiscal or Calendar Year	
☑	UWMP Tables Are in Calendar Years
☐	UWMP Tables Are in Fiscal Years
Units of Measure Used in UWMP	
Unit	AF

2.4 Coordination and Outreach

2.4.1 Wholesale Coordination

Per CWC, an urban water supplier that relies upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (c). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan.

The City of Beverly Hills has provided the Metropolitan Water District of Southern California (Metropolitan), the City's water wholesaler, with projected water use in accordance with CWC and has relied upon water supply information provided by Metropolitan in fulfilling its 2020 UWMP. See Table 2-4. The City's consultant, Psomas, and City staff also participated in numerous webinars presented by Metropolitan detailing the assumptions and methodologies utilized in preparing their 2020 UWMP.

Table 2-4: Water Supplier Information Exchange

Water Supplier Information Exchange
The retail supplier has informed the following wholesale supplier(s) of projected water use in accordance with CWC 10631.
Metropolitan Water District of Southern California

The intent of the 2020 UWMP is to focus on specific issues unique to the City's water service area. While some regional UWMP issues are introduced in this Plan, more detailed regional information is presented in Metropolitan's 2020 UWMP.

2.4.2 Coordination with Other Agencies and the Community

The City's water supply planning relates to the policies, rules, and regulations of its regional and local water providers. Recognizing that close coordination among other relevant public agencies is key to the success of its UWMP, the City worked closely with other entities to develop and update this planning document.

The City encouraged community and public interest involvement in the plan update through a public hearing and inspection of the draft document. A public meeting of the Public Works Commission was held on May 13, 2021, where a draft of the UWMP was presented. The public hearing was conducted at the Beverly Hills City Council regular meeting on July 15, 2021. Public hearing notifications were published in local newspapers, both 2 weeks and 3 weeks prior to the public hearing. A copy of the published Notice of Public Hearing is included in Appendix F. The notice was also posted on the City's website, along with a draft copy of the UWMP, 3 weeks prior to the public hearing. The hearing provided an opportunity for all residents and employees in the service area to learn and ask questions about their water supply in addition to the City's plans for providing a reliable, safe, high-quality water supply.

To assist City staff in preparation of their 2020 UWMP, Psomas attended numerous UWMP Training Webinar Workshops, that were facilitated by DWR. Psomas also coordinated with the City of Beverly Hills and City of West Hollywood Planning Departments to understand current and projected land use, including new near-term development which could impact water demands within the next five years.

The City of Beverly Hills Integrated Water Resources Master Plan (IWRMP), dated November 2020, was utilized in the development of this UWMP. The IWRMP addresses the City's water resources strategy including water demand and supply projection information, near-term supply projects, potential new sources, and emergency planning.

Table 2-4A lists the entities that the City and/or Psomas coordinated with in the development of the City's 2020 UWMP. Information from the Metropolitan 2020 UWMP and the *"Urban Water Management Plan Guidebook 2020"* prepared by DWR were utilized in preparing the City's 2020 UWMP. The City's water supply planning considers the programs of local and regional water agencies.

Table 2-4A: City of Beverly Hills Coordination and Public Involvement

City of Beverly Hills Coordination and Public Involvement					
	Participated In Plan Preparation	Contacted for Assistance	Reviewed / Commented on Draft	Notified of Public Hearing	Attended Public Hearing
City Water Utility	x	x	x	x	x
City Public Works Commission	x	x	x	x	x
City Planning Department	x	x	x	x	x
City Management Department	x		x	x	x
Beverly Hills City Council			x	x	x
Metropolitan Water District		x		x	
City of West Hollywood		x	x	x	
City of Santa Monica				x	
City of Culver City				x	
Golden State Water Company				x	
L.A. Department of Water & Power				x	
L.A. County Dept. of Public Works				x	
Water Replenishment District				x	
Interested General Public				x	x

3 SYSTEM DESCRIPTION

Water demands within the City's service area are dependent on many factors such as local climate conditions, population, demographics, land use, and economics. This chapter describes the City's service area and the characteristics which relate to water demand.

3.1 General Description

The City is a general law city governed by a five-member City Council and a City Manager that serves as executive officer for the City. Professional personnel staff the City departments providing municipal services to the public. The Assistant Public Works Director manages the City's Water Utility under the auspices of the Director of Public Works.

The City's existing domestic water supply includes imported water received from the Metropolitan Water District of Southern California (Metropolitan).

3.1.1 City Water System Description

The City's current water supply source is treated imported water purchased from Metropolitan. Beginning in late 2021, the City will re-activate a newly constructed Foothill Water Treatment Facility that will treat local groundwater pumped from the Hollywood Groundwater Basin and the La Brea Subarea of the Central Groundwater Basin.

The City's imported water is delivered via two connections on Metropolitan's Santa Monica Feeder System (BH-1 and BH-2); each with a capacity of 52 cubic feet per second (cfs). The City's imported water supply is a blend of water received from Northern California and the Colorado River that is treated at Metropolitan's Weymouth Treatment Plant in La Verne and their Jensen Treatment Plant in Sylmar under normal conditions.

In addition to imported water, the City has water supply from six (6) wells that pump groundwater from the local Hollywood Basin. The City is also completing construction on one well in the La Brea Subarea of the unadjudicated Central Groundwater Basin. The raw groundwater from both these sources will be treated at the City's Foothill Water Treatment Plant (WTP) utilizing an influent sand separator and oxidant media filtration pre-treatment system followed by a 2-stage reverse osmosis (RO) treatment train. Although both the Hollywood Basin and the portion of the Central Basin from which the city extracts groundwater are unadjudicated, the City maintains overlying rights to these basins and files annual extraction reports with the State Department of Water Resources.

The City distributes treated potable water to customers inside the City limits and, as mentioned above, to a portion of the City of West Hollywood. The City's water service area distribution system consists of 170 miles of water mains, 13 water service pressure zones, 9 active pump stations, and 10 active reservoirs with a combined storage capacity of 43 MG.

The City also has three emergency water system interconnections with Los Angeles Department of Water and Power (LADWP). One connection is located at the City's Coldwater Booster Station (9,400 gpm capacity); the second is located at Reservoir No. 7 (1,800 gpm capacity for a maximum of 4 hours per day); and the third is located in the City's Zone 9 service area (3,300 gpm capacity). LADWP can also receive emergency water from the City via the Zone 9 connection.

3.2 Service Area Boundary

The City's water service area encompasses an area of approximately 6.35 square miles (4,069 acres) and consists of the City of Beverly Hills with an area of 3,646 acres, and a portion of the City of West Hollywood with an area of 423 acres, which is 10.4 percent of the City's total water service area. The City's water service area is shown on Figure 3-1.

3.3 Service Area Climate

The City is located within the South Coast Air Basin (SCAB) that encompasses all of Los Angeles County, and the urban areas of Orange, San Bernardino, and Riverside counties. The SCAB climate is characterized by southern California's "Mediterranean" climate; a semi-arid environment with moderate, dry summers and cool winters that receive the majority of rainfall.

As shown in Table 3-1A, the average maximum temperature of 78.4°F occurs in August, and the average minimum temperature of 49.6 °F occurs in January. The average annual maximum temperature for the City is 71.4°F and the average annual minimum temperature is 55.0 °F. Approximately 79 percent of the City's average annual rainfall of 16.54 inches occurs between December and March. The rainfall data is based on a 68-year average for a station located at University of California, Los Angeles. The rainfall average for the past 20-years at the same station is somewhat lower, equal to 15.58 inches. The average annual evapotranspiration (ETo) is 47.87 inches for the closest ETo station in Santa Monica. It should be noted that Santa Monica experiences a more marine climate than Beverly Hills so ETo tends to be somewhat higher in Beverly Hills.

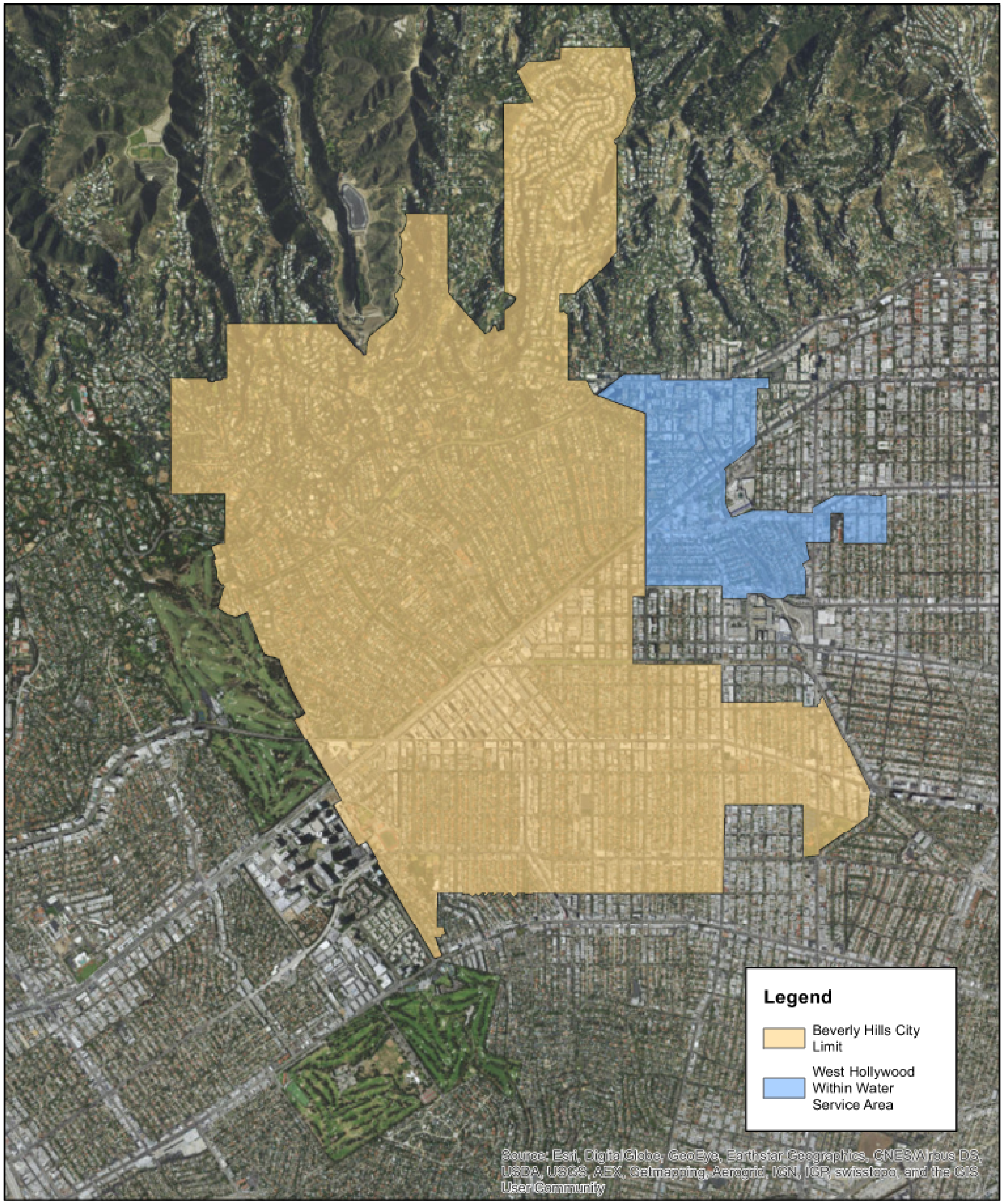
Table 3-1A: Agency Identification

Historical City Climate Characteristics				
Month	Standard Average ETo[a] (inches)	Average Rainfall[b] (inches)	Daily Max Temperature[b] (degrees F)	Daily Min Temperature[b] (degrees F)
January	2.31	3.57	66.0	49.6
February	2.59	3.96	66.3	49.8
March	3.80	2.74	66.7	50.0
April	4.80	1.03	68.6	52.2
May	5.10	0.27	69.9	54.8
June	5.23	0.06	72.6	57.6
July	5.72	0.02	77.2	60.7
August	5.63	0.08	78.4	61.6
September	4.40	0.21	78.2	60.9
October	3.53	0.55	75.2	58.0
November	2.57	1.57	71.3	54.0
December	2.19	2.79	66.7	50.5
Annual	47.87	16.54	71.4	55.0

a) Standard Average ETo from California Irrigation Management Information System (CIMIS) Station 99, Santa Monica, CA. Station 99 is CIMIS station closest to the City of Beverly Hills; Average for 12/11/1992 through 12/23/2020.

b) Data obtained from Western Regional Climate Center (WRCC), Station 049152 at UCLA, CA; 1933-2020.

Figure 3-1: Service Area Boundary



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

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Local rainfall has limited impacts on reducing demand for the City. Water that infiltrates into the soil may enter groundwater supplies depending on the local geography. However, due to the large extent of impervious cover in southern California, rainfall runoff quickly flows to a system of concrete storm drains and channels that lead directly to the ocean.

Metropolitan's water supplies come from the State Water Project (SWP) and the CRA, influenced by climate conditions in northern California and the Colorado River Basin, respectively. Drought conditions in these regions directly impact water supplies to southern California.

The local and regional climates are being impacted by climate change which, in turn, has an impact on water demands, supplies and supply reliability. Scientists and water purveyors are already observing the effects of climate change and the resulting risks related to water planning. A discussion of the effects of climate change on water demands, supplies, and reliability are discussed in later sections of this UWMP.

3.4 Service Area Population, Demographics, and Socioeconomics

The City's water service area population consists of people living in the City of Beverly Hills and people living in a portion of the City of West Hollywood.

The Southern California Association of Governments (SCAG) projects population and employment for the region 50 years into the future and Metropolitan has aggregated these projections by water supply agencies within their service area using census block data. Table 3-1B shows the current and projected population compiled by Metropolitan for the Beverly Hills water service area. Additionally, Table 3-1B shows employment numbers, household population, and occupied housing units separated by single family and multi-family residential use. Based on the data shown in Table 3-1B, the water service area population is projected to increase 7 percent between 2020 and 2045. Reporting Table 3-1 shows a summary of the current and projected population.

Table 3-1B –Demographic and Employment Forecast

Demographic and Employment Forecast							
	2019	2020	2025	2030	2035	2040	2045
Total Population	43,206	43,371	44,176	44,618	45,214	45,712	46,279
Household Population	43,122	43,282	44,059	44,499	45,095	45,591	46,158
Occupied Housing Units	20,661	20,845	21,764	22,077	22,418	22,820	23,206
Single Family	6,926	6,992	7,323	7,451	7,586	7,716	7,813
Multi-family	13,736	13,853	14,441	14,626	14,832	15,104	15,393
Persons Per Household	2.09	2.08	2.02	2.02	2.01	2.00	1.99
Urban Employment	88,545	88,602	88,990	91,656	94,394	98,025	100,466

Notes:

1. 2019 based on best available data from CA Department of Finance data and CA Employment Development Department.
2. 2020 is interpolated between 2019 and 2025.
3. 2025-2045 based on SCAG's 2020 Regional Transportation Plan/Sustainable Communities Strategy DRAFT growth forecast.
4. Urban Employment includes self-employed.

Table 3-2: Population – Current and Projected

Population Current and Projected						
Population Served	2020	2025	2030	2035	2040	2045
	43,371	44,176	44,618	45,214	45,712	46,279
NOTES: Population figure based on SCAG data and includes the West Hollywood portion of the water service area.						

The City of Beverly Hills is a high-rent area when compared to the greater Los Angeles region. Much of the north end of the City, above Sunset Boulevard, consists of estate-style properties. The central area, between Sunset and Santa Monica Boulevard, consists of higher-end residences. The south end of the City, below Santa Monica Boulevard, consists of condominiums and apartments, smaller single-family homes, and commercial uses. In 2018, the median household income was 70 percent higher than the County average. Approximately 27 percent of households earned less than $50,000 annually and 52 percent earned $100,000 or more with an occupant ownership rate of approximately 41 percent. Water use for lower income households is discussed in Section 4.6.

Based on data from SCAG, 2019 Profile of the City of Beverly Hills, the City has a dense urban population with approximately 6,043 persons per square mile compared to Los Angeles County density of 2,518 persons per square mile. The approximately 2.1 persons per household (Table 3-1A) is lower than the County average of 3.0. Approximately 71 percent of the housing product was built before 1970 with 37 percent of those built before 1939. These older housing products could have old water fixtures and increased potential for water savings.

3.5 Land Uses and Service Area

Water consumption is projected by understanding the type of use and customer type creating the demand. Developing local water use profiles helps to identify the quantity of water used, and by whom within the agency's service area. Knowledge of water use by customer type enables the City to develop more effective water conservation programs and to project the future benefit of those programs. Water consumption in this UWMP is evaluated by the following customer classes:

- Single-family Residential
- Multi-family Residential
- Commercial, Institutional, and Industrial (CII)

Of the City's 10,662 residential and CII water service connections in 2020, 8,849 (83%) were residential connections. Of the 8,849 residential connections, 6,832 (77%) were single family and 2,017 (23%) were multi-family. By far, the predominant land use in the City is single family residential; specifically, low-density residential, which has a maximum density of 1 dwelling unit (DU) per acre, and medium-density residential, which has a maximum density of 4 DU/acre; and high-density residential, which has a maximum density of 6 dwelling unit (DU) per acre.

To a much lesser extent, the next largest land uses are multi-family residential (22 to 50 DU/acre) and commercial, which are predominately located south of Santa Monica Boulevard. There is also some institutional and low density general and municipal land uses south of Santa Monica Boulevard.

Approximately 50 percent of the land use in the portion of West Hollywood located inside the City of Beverly Hills water service area is single-family or two-unit low density residential, and approximately 25 percent is multi-family high density residential. Approximately 10 to 15 percent of this area is zoned for commercial land use, with the remaining 10 to 15 percent of land use a mix of very low and medium residential and public land uses.

In 2020, the average number of people per dwelling unit inside the City of Beverly Hills was 2.3, according to DOF E-5 City/County Population and Housing Estimates, May 2020. Whereas the predominant land uses in the City are for lower-density residential, the predominant housing units are 2- to 4-unit residences and five plus units. Based on SCAG Local Housing Data for the City of Beverly Hills (August 2020), of the 16,446 housing units inside the City limits, 5,736 (34.9%) were single-detached houses, 291 (1.8%) were single-attached, 1,899 (11.5%) were 2- to 4-unit residences, and 8,475 were five plus units (51.5%). The vacancy rate in 2020 was 10.8 percent.

The water service area is built out, but there are infill and re-development projects on-going and planned for the future, especially in the portion of West Hollywood inside the City of Beverly Hills water service area. The City's IWRMP identified developments with processed "will-serve" requests within the last three years with projected average day demands greater than 50 gallons per minute (gpm). Smaller developments were not individually identified. The developments identified are at various stages of planning, construction, or initial occupancy but have not reached the full projected demand as identified in their "will-serve" applications. The full demands, which total 3.18 MGD, are assumed to be realized by 2025. Major development projects, such as One Beverly Hills, and other infill development based on incremental water demand projections from the IWRMP are therefore accounted for in the City's 2020 UWMP projected water demands.

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4 SYSTEM WATER USE CHARACTERIZATION

Southern California's urban water demand has been largely shaped by the efforts to comply with SBx7-7. This law requires all California retail urban water suppliers serving more than 3,000 acre-feet per year (AFY) or 3,000 service connections to achieve a 20 percent water demand reduction (from a historical baseline) by 2020. The City has been actively engaged in efforts to reduce water use in its service area and has met the final 2020 water use target. Meeting this target was critical to ensure the City's eligibility to receive future state water grants and loans.

In April 2015 Governor Brown issued an Executive Order as a result of one of the most severe droughts in California's history, requiring a collective reduction in statewide urban water use of 25 percent by February 2016, with each agency in the state given a specific reduction target by DWR. In response to the Governor's mandate, the City updated the Water Use Efficiency Regulations, establishing provisions against water waste and implementing higher (more restrictive) stages of water conservation in order to achieve its demand reduction target of 20 percent. The City met the mandated water use reduction from June 2015 through the end of 2016 with an average of 20.2%. Since 2015, the City has kept a rolling average reduction of 19.4%, which is a higher reduction than the State average. Much of the water savings has been due to a significant reduction of outdoor water use. The City continues to enforce efficient use of water with an average reduction of 20.4% obtained in 2020.

On May 9, 2016 Governor Brown issued Executive Order B-37-16 that builds on temporary statewide emergency water restrictions to establish longer-term water conservation measures, including permanent monthly water use reporting, new permanent water use standards in California communities and bans on clearly wasteful practices. Through a public process and working with partners such as urban water suppliers, local governments, and environmental groups, DWR and the SWRCB will develop new water use efficiency targets as part of a long-term conservation framework for urban water agencies. These targets go beyond the 20% reduction in per capita urban water use by 2020 that was embodied in SBx7-7 and will be customized to fit the unique conditions of each water supplier.

In 2018, Governor Brown signed into law the water conservation bills AB 1668 and SB 606. These bills were a result of an Executive Order from the Governor during the recent drought which required State agencies to develop and recommend a long-term water conservation framework to ensure adequate water supplies for the State now and in the future. The two bills establish guidelines for efficient water use and a framework for implementation and oversight of the new standards, which must be in place by 2022.

Through the implementation of water conservation ordinances and measures, the City of Beverly Hills has steadily decreased per-capita water use since 2010 and continues to reduce water use through a long-term conservation plan. Further discussion on the City's water conservation measures is covered in Chapter 8, Water Shortage Contingency Plan, and Chapter 9, Demand Management Measures. This section analyzes the City's current water demands by customer type, factors that influence those demands, and projections of future water demand for the next 25 years.

4.1 Recycled Versus Potable and Raw Water Demand

Historically, the City has obtained its water supply from two sources: imported surface water purchased from Metropolitan, and local groundwater extracted from the local Hollywood Groundwater Basin (Hollywood Basin). The imported water is treated by Metropolitan and the groundwater was treated at the City's Foothill water treatment plant (WTP), which is currently being re-constructed and retrofitted to include pre-treatment to treat water from the Hollywood and unadjudicated Central Basins, before being distributed to the City's water system. The City has not utilized groundwater since 2015 due to the treatment plant rehabilitation which is expected to be completed by September 2021.

The City of Beverly Hills is working with the City of Los Angeles Bureau of Sanitation and LADWP on a regional recycled water distribution system to potentially provide Beverly Hills and other communities with recycled water produced at the Los Angeles Hyperion Water Reclamation Plant, or alternatively, develop a form of credit resulting from the use of Beverly Hills' wastewater in the development/allocation of the recycled water from Hyperion. This effort is in conjunction with the City of Los Angeles One Water Plan and to meet their Sustainability Plan. However, currently, the City has no recycled water supply and no indirect recycled water use. With no projected time frame for when such supplies would become available, recycled water is not included as a source of supply within the near future.

4.2 Water Use by Sector

4.2.1 Water Use Sectors Listed in Water Code

The following sections of this UWMP provide an overview of the City's water consumption by customer account type as follows:

- Single-family Residential
- Multi-family Residential
- Commercial, Institutional, and Industrial (CII)
- Non-Revenue Water

Non-residential uses are combined based on billing designation to include commercial and institutional demand. These uses include a mix of commercial entities (markets, restaurants, etc.), public entities (schools, fire stations and government offices), office complexes, and limited industrial use. Non-revenue water, including temporary fire use, is identified as a separate water use sector. There is no agricultural use category within the City's service area and the City does not sell or exchange water to other agencies.

4.2.2 Non-Revenue Water

Non-revenue water is defined by the International Water Association (IWA) and American Water Works Association (AWWA) as the difference between distribution systems input volume (i.e. production) and billed authorized consumption. Non-revenue water consists of three components: unbilled authorized consumption (e.g. hydrant flushing and firefighting), real losses (e.g. leakage in mains and service lines), and apparent losses (unauthorized consumption and customer metering inaccuracies). In 2020, non-revenue water accounted for approximately 3.1% of the total water supply based on metered supply from Metropolitan and metered customer use. Refer to Section 4.3 for a detailed discussion of non-revenue water demands.

4.2.3 Past and Current Water Use

Historical metered and billed water use by customer sector is shown in Table 4-1A. Residential water use has accounted for approximately 75 percent of total system water use. Total water use decreased from 10,267 AFY in 2010 to 9,803 AFY in 2015; and to 9,273 AFY in 2020. At the same time, population has increased, resulting in a decrease in per-capita water use which is discussed in Chapter 5. City water system demands for 2020 are also shown in Section 4.5, Worksheets and Reporting Tables.

Table 4-1A: Historical Water Use

Historical Water Use (AFY)			
User Class	2010	2015	2020
Single-Family Residential	5,281	5,029	5,135
Multi-Family Residential	2,553	2,211	2,034
Total Residential	7,834	7,240	7,169
Population	42,179	43,189	43,371
CII	2,429	2,545	2,095
Fire	4	18	9
Total	10,267	9,803	9,273

The City purchased treated surface water from Metropolitan and this represented 100 percent of the water supply for the City's water service area in 2020. The City has historically pumped groundwater from the local Hollywood Basin, which is then treated at the City's Foothill WTP before being distributed to the City's water system. The Foothill WTP is currently out of service for rehabilitation and is anticipated to be online by the later part of 2021. City water use by customer sector plus system water loss represents 100 percent of the water demands for the City's water system.

4.3 Distribution System Water Losses

Distribution system water loss is to be quantified for each of the five years preceding the UWMP update. Losses are reported in accordance with a worksheet approved or developed by DWR through a public process. The water loss quantification worksheet is based on the water system balance methodology developed by the American Water Works Association (AWWA) and meets the requirements of SB 1420 that was signed into law in September 2014. Understanding and controlling water loss from a distribution system is an effective way for the City to achieve regulatory standards and manage their existing resources. The volume of water loss quantified in the City's Water Loss Audits for the past five years are summarized in Table 4-1B, with an average of 5 percent water loss over this period, which is well below industry standards, especially for a system with the number of pressure zones and age of its pipeline network. The water loss audit for 2020 has not been completed but the preliminary estimated loss is 3.1% based on billed use from Metropolitan and customer billing data.

Table 4-1B: Water Loss Audit Data

Water Loss Audit Data			
Reporting Period	Water Supplied	Volume of Water Loss	% Water Loss
CY 2015	10,432	498	4.8%
CY 2016	9,508	551	5.8%
CY 2017	10,001	758	7.6%
CY 2018	10,312	439	4.3%
CY 2019	9,517	235	2.5%

Table 4-4 in Section 4.5, Worksheets and Reporting Tables, includes the results of the five most recent annual AWWA Water Loss Audits completed for the City's drinking water distribution system ending December 31 of each year.

The City's pipeline replacement program helps to limit system water loss from pipeline leakage. The City recently completed design of a major pipeline replacement project including 13,400 feet of water main on Loma Vista Drive, 2,100 feet of main on San Ysidro Drive and 7,300 feet of main on Coldwater Canyon Drive that are aged from 60 to 90 years old. The construction contract totaling over $10.2 million was awarded in July of 2020 with over $9.5 million to be funded from the City's Water Enterprise Fund.

4.4 Projected Water Use

The City recently prepared its November 2020 IWRMP that includes the estimation of water demands out to 2025 as well as developing supply projections to match those demands. The IWRMP was approved by City Council on January 26, 2021.

Projected City water demand was determined by the anticipated new development and the equivalent amount of water that development will use. This incremental demand for new development was added to the demand from existing services. Adjustments for future conservation on existing demands can then be accounted for, if considered appropriate. And finally, an amount is added to account for water loss within the system (difference between billed water or demand and water production or supply requirement).

4.4.1 Characteristic Five-Year Water Use

The IWRMP developed annual demand projections by calendar year (CY) starting with an existing average day demand from 2019 of 8.28 million gallons per day (MGD) or 9,281 acre-feet per year (AFY). The City's 2005-2019 billing data was used to study historic demands and as a source for subsequent projected demand calculations in the IWRMP. This analysis took into consideration the City of Beverly Hills and the portion of the City of West Hollywood included in the City's water service area documented in detail in Appendix B of the IWRMP.

As part of the IWRMP, all the anticipated development and re-development projects within Beverly Hills and West Hollywood were inventoried from will serve letters and other information from the appropriate Planning Departments and demand projections were compiled for these projects. These demand projections are believed to be conservative as analysis of some of the earlier projects has shown that actual water use has been less than projected and stated in the Will Serve applications. It is also possible that some of these development projects will be delayed or not constructed at all.

The water demand for year 2020 of 9,273 AFY was 13% (1,335 AFY) less than the estimated demand from the IWRMP for the same period. The 2020 supply requirement of 9,565 AFY was approximately 3.1% higher than demand, accounting for estimated water losses. Therefore, rather than overstate the 2020 usage, the actual supply requirement or production of 9,565 AFY from 2020 was be used as the starting point. The IWRMP projected a demand increase of 448 AFY each year through 2025, with the exception of the first year. In keeping with the estimates developed in the IWRMP, and in order to be conservative, the incremental demand increase from the IWRMP is increased by 5% to account for water loss (resulting in a 488 AFY increase in the first year and a 470 AFY increase each of the following four years) and then added to the 2020 supply to develop the UWMP supply requirements out to 2025. Utilization of this methodology results in the incremental demand increases and total supply requirements by year shown in Table 4-1C.

Table 4-1C: Short-term Water Supply Projections

Short term Water Supply Projections (AF)						
Year	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Incremental Demand Increase[1]		465	448	448	448	448
Incremental Supply Requirement[2]		488	470	470	470	470
Total Supply Requirement[3]	9,565	10,053	10,523	10,993	11,463	11,933

1) From IWRMP, Appendix B. Represents the increase in water demand each year for five consecutive years.

2) Includes 5% water loss

3) Start with actual water production (supply) from CY 2020 and add Incremental Supply Requirement each year.

4.4.2 25-Year Planning Horizon

The IWRMP developed demand projections for only a five-year period to calendar year 2025. A requirement of the UWMP is to look out 20 years into the future. Since it will be five years until another UWMP is prepared, it is helpful for the projections to extend an additional five years so that if a Water Supply Assessment, which also has to look out 20 years into the future, is required for a development project within the next five years the projections in the UWMP can be used. Therefore, this 2020 UWMP includes demand projections in five-year increments out to Year 2045.

Local development projections are not available this far into the future so regional projections will be used. SCAG projects population and employment for the region 50 years into the future and Metropolitan has aggregated these projections by water supply agencies within their service area using census block data. Table 3-1B in Section 3.4 shows these projections compiled by Metropolitan for the Beverly Hills water service area. Based on this data, the incremental increase in population, single family units, multi-family units, and employment can be determined in five-year increments between 2025 and 2045 as shown in Table 4-1D.

Table 4-1D: Incremental Increase in Demographics and Employment

Incremental (5 year) Increase in Demographics and Employment					
Year	2025	2030	2035	2040	2045
Population Increase	805	442	596	498	567
Single Family Unit Increase	331	128	135	130	97
Multi-family Unit Increase	588	185	206	272	289
Employment Increase	388	2,666	2,738	3,631	2,441

Note: From SCAG data shown in Table 3-1B. Values represent 5-year increase (not totals).

The existing per unit demands for Single Family, Multi-family and Employment have been developed from a detailed breakdown of water meter data from CY 2019, which was available from that year's water loss audit. The 2019 data by user class is deemed appropriate to represent existing use as the water use distribution for 2020 was likely impacted by Covid-19. This data was segregated by customer billing type with the assumption that non-residential categories for fire meters and general categories are lumped in with the commercial category to determine per unit employment demand. Table 4-1E shows the results of the water use by unit (either per dwelling unit or employee).

Table 4-1E: Unit Demand from 2019 Water Billings

Unit Demand from 2019 Water Billings					
Use Category	Total Gallons	Total AF	Units (du or emp.)	Gallons/ Unit	Gallons/ Unit/Day
Single Family Residential	1,575,157,848	4,834	6,926	227,427	623
Multi-family Residential	661,382,348	2,030	13,736	48,150	132
Employment	783,405,084	2,404	88,545	8,848	24
Total	3,019,945,280	9,268			

Note: Employment includes Commercial, Fire and General Categories, Multi-family includes Duplex Category and Units are dwelling units (du) for Residential and employees for Employment. (1 AF = 325,851 gallons)

The Gallons/Unit for the annual water use from Table 4-1E was divided by 365 days to determine the daily demand (last column) and these values per dwelling unit for the residential categories and per employee are reasonable demand factors based on experience in water master planning. These unit demand factors were then multiplied by the incremental increase in dwelling units and employment from Table 4-1D (converted from gallons to AF) to obtain the incremental water demand out to 2045, as shown in Table 4-1F.

Table 4-1F: Long-term Incremental Demand Increase

Long term Incremental Demand Increase (AFY)				
Year	2030	2035	2040	2045
Single Family Residential	89.3	94.2	90.7	67.7
Multi-family Residential	27.3	30.4	40.2	42.7
Employment	72.4	74.3	98.6	66.3
Total	189	199	230	177

The long-term supply projections are shown in Table 4-1G. The demands through 2045 are developed by adding the 2025 demand from Table 4-1C to the total incremental increases calculated in Table 4-1F for each five-year projection and the supply requirements are determined by increasing demands by 5% to account for projected water losses.

Table 4-1G: Long-term Supply Projections

Long term Supply Projections (AFY)					
Year	2025	2030	2035	2040	2045
Incremental Demand Increase[1]		189	199	230	177
Incremental Supply Requirement[2]		198	209	242	186
Total Supply Requirement[3]	11,933	12,131	12,340	12,582	12,768

1) From MWD Demographic and Employment Forecast

2) Includes 5% water loss on Demand Increase

3) Incremental Supply Requirement plus Total Supply Requirement from Previous Period. Supply for 2025 from Table 4-1C.

4.4.3 Reduced Future City Water Use due to Existing and Future Conservation Measures

Through the implementation of City water conservation ordinances and measures discussed in Chapter 9, City water use has decreased since 2010, even with increases in population (shown in Table 4-1A). Greater reductions were seen between 2010 and 2015 due to severe drought conditions and related demand management measures but water demand reductions have continued through the present. Over the past five years, the City diligently promoted and enforced water use efficiency, reducing water use by an average of 19.4%, with a 20.4% average reduction achieved in 2020. To be conservative when planning for future demands, the current levels of conservation and corresponding unit water demands shown in Table 4-1E for 2019 are utilized in projecting future water demands through 2045.

Water conservation measures implemented by City customers have permanent effects on water use (reduction) into the future. The City's Advanced Meter Infrastructure (AMI) system helps to alert staff about various water issues, such as continuous water flows and excessive irrigation. The City's customer portal helps customers better manage their water use. With the assistance of staff, water flow issues are rectified promptly, and excessive water issues can be caught and corrected. This program has helped the City reduce usage by about 5% to 6% a year. Constant outreach and education are provided to all customers via flyers, postcards, emails, and social media. In addition, helpful programs, and devices like turf replacement with water-wise landscaping, conversion to weather-based irrigation controllers, rotating sprinkler heads, and upgrades to high-efficiency clothes washers and toilets. The existing per capita water use is anticipated to be sustainable into the future with the potential for additional reductions due to continuing conservation efforts.

More significant future per-capita water use reduction may occur for the City due to building codes and landscape ordinances for new residential developments compared with existing residential land use. California's green building code has a direct impact on new home building and water conservation in the State. The code aims to cut indoor water consumption by at least 20 percent, primarily through more efficient indoor water fixtures. For a three-bedroom house, the savings is estimated to be about 10,000 gallons of water per year, on average.

The California Green Building program also includes outdoor water conservation by reducing the area devoted to high-irrigation lawns and plants, emphasizing drought-tolerant plants, and the installation of weather-based irrigation controllers. This is consistent with the new Model Water Efficient Landscape Ordinance (MWELO), which was adopted by the State on July 15, 2015 and was adopted by the City on December 1, 2015, by default.

4.5 Worksheets and Reporting Tables

4.5.1 Submittal Table 4-1: Total Gross Water Demands by Sector - 2020

Table 4-1 contains a summary of the City's water demand by use type in year 2020 based on City billing data.

Table 4-1: Demands for Potable Water – Actual

Demands for Potable Water Actual			
Use Type	**2020 Actual**		
	Additional Description	Level of Treatment When Delivered	Volume (AFY)
Single-Family	-	Drinking Water	5,135
Multi-Family	-	Drinking Water	2,034
Commercial (CII)	CII (Comm/Institut, Indust)	Drinking Water	2,095
Other	Fire hydrant water	Drinking Water	9
Losses	-	Drinking Water	292
Total			9,565

4.5.2 Submittal Table 4-1: Gross Water Use by Sector - Projected

Projected City water demands for the planning period (2025-2045) by water use sector and water loss are shown in Table 4-2. The methodology for developing these projected demands is presented in Section 4-4.

Table 4-2: Demands for Potable Water – Projected

Use for Potable and Non Potable Water Projected (AFY)						
Use Type	**Additional Description**	**Projected Water Use**				
		2025	**2030**	**2035**	**2040**	**2045**
Single Family		5,913	6,002	6,096	6,187	6,255
Multi-Family		2,483	2,510	2,540	2,580	2,623
Commercial	CII (Comm/Institut, Indust), and fire/temp	2,940	3,012	3,086	3,185	3,251
Losses		597	607	618	630	639
	TOTAL	11,933	12,131	12,340	12,582	12,768
NOTES: Losses are assumed equal to 5% of supply based on the five-year average of historical Water Loss Audit data (2015 to 2019).						

4.5.3 Table 4-3: Total Gross Water Use (Potable and Non-Potable)

Total projected water demands for the City is shown in Table 4-3. All projected water demands are for potable water as there is no recycled or indirect recycled water use projected for the City.

Metropolitan models water demand projections for all of its member agencies, including Beverly Hills. Their models produce a range of output that allows for planning under a wide variety of future hydrology and demand conditions. The City has coordinated with Metropolitan and provided the demand projections as discussed in Section 4.4. The Metropolitan model produced maximum demand projections that are similar to the City's and within 4 percent for each of the 5-year increments.

Table 4-3: Total Water Demands

Total Water Demands (AFY)						
	2020	**2025**	**2030**	**2035**	**2040**	**2045**
Potable Water Demand	9,565	11,933	12,131	12,340	12,582	12,768
Recycled Water Demand	0	0	0	0	0	0
Total Water Demand	9,565	11,933	12,131	12,340	12,582	12,768

4.5.4 Table 4-4: Preceding Five-Year Water Loss Audit Reporting

In accordance with CWC, distribution system water losses are quantified in Table 4-4 using the values calculated in the AWWA worksheet and submitted to DWR for each of the five years prior to this UWMP update. The water loss quantification worksheet is based on the water system balance methodology developed by AWWA and approved by DWR through a public process. The individual water loss audit reports are included in Appendix C.

Table 4-4: Water Loss Audit Reporting

01/2015	498
01/2016	551
01/2017	758
01/2018	439
01/2019	235

Confirmation that future water savings and demands for lower income households are included in demand projections is provided in Table 4-5.

Table 4-5: Inclusion in Water Use Projections

Inclusion in Water Use Projections	
Are Future Water Savings Included in Projections?	Yes
	Chapter 9 2020 UWMP
Are Lower Income Residential Demands Included in Projections?	Yes

4.6 Water Use for Lower Income Households

The UWMP Act requires retail water suppliers to include water use projections for single-family and multi-family residential housing for lower income and affordable households. This will assist the City in complying with the requirement under Government Code Section 65589.7 granting priority for providing water service to lower income households. A lower income household is defined as a household earning below 80 percent of the median household income (MHI) for the County. MHI is also sometimes referred to as HAMFI (Housing Urban Development Area Median Family Income) or simply as AMI (Area Median Income). These terms were originally developed by the US Department of Housing and Urban Development.

For planning and funding purposes, the State Department of Housing and Community Development (HCD) categorizes households into the following five income groups based on the County Area Median Income (AMI):

- Extremely Low Income – up to 30 percent of AMI
- Very Low Income – 31 to 50 percent of AMI
- Low Income – 51 to 80 percent of AMI
- Moderate Income – 81 to 120 percent of AMI
- Above Moderate Income – Greater than 120 percent of AMI

Combined, extremely low, very low, and low-income households are often referred to as lower income households.

State Housing Element law requires that a local jurisdiction accommodate a share of the region's projected housing needs for the planning period. This share, called the Regional Housing Needs Allocation (RHNA), is important because State law mandates that a jurisdiction provide sufficient land to accommodate a variety of housing opportunities for all economic segments of the community. Compliance with this requirement is measured by the jurisdiction's ability in ensuring that an adequate amount of land allows adequate density and appropriate development standards to accommodate the RHNA. The Southern California Association of Governments (SCAG), as the regional planning agency, is responsible for allocating the RHNA to individual jurisdictions within the region.

The RHNA is an important component of a jurisdiction's update of the Housing Element of the General Plan. The RHNA not only identifies housing needs but also assesses households by income level using several major data sources including 2010 Census, 2013-2017 American Community Survey, California Department of Finance (DOF), California Employment Development Department (EDD), existing and General Plan land use, and SCAG growth forecasts. The sixth cycle of the RHNA covers the planning period of October 2021 to October 2029. SCAG adopted the RHNA Allocation Plan for this cycle on March 4, 2021. The California Department of Housing and Community Development reviewed the housing elements data submitted by jurisdictions in the SCAG region and concluded the data meets statutory requirements for the assessment of current housing needs and approved the plan on March 22, 2021.

Table 4-6A presents the household distribution for all households of various income levels in the City of Beverly Hills. Similarly, the percent of households by income level are reported for the portion of the City of West Hollywood within the City's service area. It was estimated that 24 percent of the total households by income level for the City of West Hollywood are located within the City's service area (based on the approximate percentage of West Hollywood population located within the service area). Altogether the City's service area has 6,623, or 34.1 percent, low-income housing units (SCAG, RHNA, September 2020).

Table 4-6A: Number of Households by Income

Number of Households by Income			
Income Level	**Beverly Hills**	**West Hollywood[1]**	**Total**
Extremely Low Income	1,895	1,020	2,915
Very Low Income	933	540	1,473
Lower Income	1,475	760	2,235
Moderate Income	954	466	1,420
Above Moderate Income	8,875	2,489	11,364
Total Households	**14,132**	**5,274**	**19,406**

(1) Assumes approximately 24 percent of total households by income based on the percent of West Hollywood, by population, within the City of Beverly Hills water service area. (https://scag.ca.gov/housing-elements)

SCAG assigned a RHNA of 1,688 lower income housing units to the City of Beverly Hills for the 2021-2029 planning period and 1,755 lower income housing units to the City of West Hollywood, of which 421 (24 percent) are assumed to be within the City's service area, for a total of 2,109 allocated lower income housing units. These allocations include existing need (approximately 62% of the total RHNA) and projected need including housing growth, vacancy, and replacement.

Table 4-6B provides the projected water needs for lower income households based on existing income distribution shown in Table 4-6A. The projected lower income water demands shown here represent 34.1 percent of the projected water demand for the single-family and multi-family categories provided in Table 4-2 above.

Table 4-6B: Projected Water Demands for Low Income Households (AF)

Low Income Households Demand (AFY)					
Water Use Sector	Year Ending				
	2025	2030	2035	2040	2045
Total Residential Demand	8,396	8,512	8,636	8,767	8,878
Residential Demand-Low Income Households	2,863	2,903	2,945	2,990	3,027

4.7 Climate Change Considerations

Changing climate patterns are expected to shift precipitation patterns and affect water supply. Unpredictable weather patterns will make water supply planning more challenging. The areas of concern for California include a reduction in Sierra Nevada Mountain snowpack, increased intensity and frequency of extreme weather events, and rising sea levels causing increased risk of Delta levee failure, seawater intrusion of coastal groundwater basins, and potential cutbacks on the SWP and Central Valley Project (CVP). The major impact in California is that without additional surface storage, the earlier and heavier runoff (rather than snowpack retaining water in storage in the mountains), will result in more water being lost to the ocean. A heavy emphasis on storage is needed in the State of California.

Legal, environmental, and water quality issues may have impacts on MWD supplies, however, it is anticipated that climatic change will have a greater impact. Climatic conditions have been projected based on historical patterns, but severe pattern changes are still a possibility in the future. Metropolitan's 2020 UWMP provides details on the factors that affect the ability to estimate existing and future water delivery reliability including climate change. Metropolitan continues to incorporate current climate change science into its planning efforts. Metropolitan has developed a Robust Decision Making (RDM) approach which is a comprehensive technical process to identify key vulnerabilities to regional reliability. This approach has been incorporated into the IRP process and Metropolitan's forecast modeling. Metropolitan assembled a panel of climate change experts to translate how specific climate change impacts would be quantified and to what degree in the IRP scenario approach. A wide range of water management strategies are evaluated to develop robust and adaptive plans that will ultimately perform under a wide range of future conditions. As such, climate change has been incorporated within the availability of supplies to the City from Metropolitan and is thus incorporated into supply reliability and the drought risk assessment provided in Chapter 7.

The Sacramento-San Joaquin River Delta (Delta) is key to the SWP's ability to deliver water to its agricultural and urban contractors. All but five of the 29 SWP contractors receive water deliveries below the Delta (pumped via the Harvey O. Banks or Barker Slough pumping plants). However, the Delta faces many challenges concerning its long-term sustainability such as climate change posing a threat of increased variability in floods and droughts. Sea level rise complicates efforts in managing salinity levels and preserving water quality in the Delta to ensure a suitable water supply for urban and agricultural use. Furthermore, other challenges include continued subsidence of

Delta islands, many of which are below sea level, and the related threat of a catastrophic levee failure as the water pressure increases, or as a result of a major seismic event.

The Colorado River Basin supplies have been inconsistent since about the year 2000 with the U.S. Bureau of Reclamation estimating the 19-year period from 2000 to 2018 as the driest period in more than 100 years of record keeping. Climate models are predicting a continuation of this pattern whereby hotter and drier weather conditions will result in continuing lower runoff.

Other important issues of concern due to global climate change include:

- Effects on local supplies such as groundwater;
- Changes in urban and agricultural demand levels and patterns;
- Impacts to human health from water-borne pathogens and water quality degradation;
- Declines in ecosystem health and function; and
- Alterations to power generation and pumping regimes.

Details on Metropolitan’s climate change considerations and planning can be found in their 2020 UWMP.

Beverly Hills is in the process of developing its own Climate Action and Adaptation Plan (CAAP). The CAAP is one of the essential master plans that supports the City’s sustainability goals to reduce the city-wide greenhouse gas (GHG) emissions. The CAAP establishes the City’s GHG reduction goals by implementing community-wide measures and activities that would reduce GHG emissions from municipal operations, energy use and energy source, building standards, and sustainable and efficient mobility. Implementation includes the City leading by example by investing and completing sustainability projects related to energy efficiency and source, water resources and conservation, fleet, building, and mobility. The City will also need its residents and businesses to implement best GHG reduction practices mentioned above.

The overall goal of the CAAP is to achieve community-wide carbon neutrality on or before the State’s goal of 2045. The State’s climate action goals are in support of the Paris Climate Accord Agreement of 2050. The CAAP will include a tier level approach that will help the City decide its pace towards carbon neutrality and its ability to be leaders in climate action. To help with this determination, a fiscal impact analyses will be provided for each tier level approach.

The CAAP also allows the City to respond to, withstand and efficiently recover from adverse climate scenarios such as long periods of drought, extreme heat, wildfires, and power outages.

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5 SBX7-7 BASELINES AND TARGETS

The Water Conservation Act of 2009, also known as Senate Bill (SB)x7-7, signed into law on February 3, 2010, requires the State of California to reduce urban water use by 20 percent by the year 2020. The City must determine baseline water use during their baseline period and water use targets for the years 2015 and 2020 to meet the State's water reduction goal. The City may choose to comply with SBx7-7 individually or as a region in collaboration with other retail water suppliers. The City is not part of a regional alliance and is required to comply with SBx7-7 individually or demonstrate they have a plan or have secured funding to be in compliance to be eligible for water related state grants and loans.

In the 2015 UWMP, the City demonstrated compliance with its 2015 water use target to indicate that they were on track to meeting the 2020 water use target. The City also revised their baseline per capita water use calculations using 2010 U.S. Census data in the 2015 UWMP. Changes in the baseline calculations also resulted in updated per capita water use targets. This 2020 UWMP will use the baseline and target data calculated in the 2015 UWMP and demonstrate compliance with the final 2020 water use target.

DWR also requires the submittal of SBx7-7 Compliance Forms, a set of standardized tables to demonstrate compliance with the Water Conservation Act in this 2020 UWMP. These are included in Appendix G.

5.1 Baseline Water Use

The baseline water use is the City's gross water use divided by its service area population, reported in gallons per capita per day (GPCD). Gross water use is a measure of water that enters the distribution system of the supplier over a 12-month period with certain allowable exclusions. These exclusions are:

- Recycled water delivered within the service area
- Indirect recycled water
- Water placed in long term storage
- Water conveyed to another urban supplier
- Water delivered for agricultural use
- Process water

Water suppliers must report baseline water use for two baseline periods, the 10- to 15-year baseline (baseline GPCD) and the five-year baseline (target confirmation).

5.1.1 Ten- to Fifteen-Year Baseline Period (Baseline GPCD)

The first step to calculating the City's water use targets is to determine its base daily per capita water use (baseline water use). This baseline water use is essentially the City's gross water use divided by its service area population, reported in GPCD. The baseline water use is calculated as a continuous (rolling) 10-year average during a period, which ends no earlier than December 31, 2004 and no later than December 31, 2010. Water suppliers whose recycled water made up 10 percent or more of their 2008 retail water delivery can use up to a 15-year average for the calculation. The City did not have recycled water use in 2008; therefore, a 10-year baseline period is used.

The most advantageous sequence of years for calculating per-capita water use is the sequence that generates the highest per-capita water use, making subsequent water conservation easier to achieve. Accordingly, the 10-year period 1996 through 2005 was selected as the average per-capita water use baseline from the 2015 UWMP, which is the same baseline period used in this 2020 UWMP. The City's 10-year baseline water use is 292 GPCD.

5.1.2 Five-Year Baseline Period (Target Confirmation)

Water suppliers are required to calculate water use, in GPCD, for a five-year baseline period. This number is used to confirm that the selected 2020 target meets the minimum water use reduction requirements. Regardless of the compliance option adopted by the City, it will need to meet a minimum water use target of 5 percent reduction from the five-year baseline water use. This five-year baseline water use is calculated as a continuous five-year average during a period, which ends no earlier than December 31, 2007 and no later than December 31, 2010.

A 5-year minimum water use reduction baseline period between 2003 through 2007 was selected to calculate the most advantageous 5-year minimum water use reduction target. The minimum 5-year water use reduction baseline period is used to calculate the legislation's minimum water use reduction requirement. The City's five-year baseline water use is 286 GPCD.

5.1.3 Service Area Population

The City's water service area consists of the City of Beverly Hills and a portion of the City of West Hollywood, which is 10.4 percent of the City's total water service area. The City's water service area population consists of the population for the City of Beverly Hills and the population for the portion of West Hollywood in the City's water service area.

DWR developed a "Population Tool" that uses Geographic Information Systems (GIS) and Census data to calculate population within the water supplier's service area. The Population Tool utilizes US Census data and electronic maps of the agency's service area. Using the historic and current number of agency residential service connections, the tool will calculate the population for the non-census years. There was an unusual non-population related change in City water service connections in 2005. Therefore, for the 2015 UWMP the City received permission from DWR to use an alternative method to their Population Tool for calculating the SBx7-7 populations and targets for the City's water service area.

State Department of Finance (DOF) population estimates and Census data were used to determine City of Beverly Hills population figures from 1990 through 2015. An electronic boundary of the portion of West Hollywood inside the City of Beverly Hills water service area was input into the DWR Population Tool along with service connection data for this area to determine the population for this area, which was then added to the City of Beverly Hills population (from DOF estimates) to determine the total service area population for the years 1990 through 2015.

Since the population growth for the portion of West Hollywood inside the City of Beverly Hills water service area from 2010 to 2015 could not be determined, the overall percentage of growth for the entire City of West Hollywood as determined from DOF projections was added to the portion in the water service area. The portion of West Hollywood within the water service area was approximately 23.5 percent of the City of West Hollywood's total population based on 2010 census data. Assuming this percentage to remain constant, future populations for the City's water service area were estimated using the SCAG Regional Transportation Plan (RTP) 2016 population projections for the City of Beverly Hills and the City of West Hollywood.

5.1.4 Gross Water Use

For the 10-year baseline and 5-year minimum baseline periods, 97 percent and 91 percent, respectively, of City gross water use was supplied with Metropolitan imported water and the remaining demands were supplied by City groundwater production. The City has no recycled water supply; no indirect recycled water use; no water placed in long-term storage; no water delivered to another urban supplier; no water delivered for agricultural use; and no significant process water use. Gross water use, population, and daily per capita water use for the baseline and minimum baseline periods are shown in Table 5-1A and 5-1B, respectively. As shown in Table 5-1A, the baseline per-capita water use is calculated to be 291.7 GPCD. As shown in Table 5-1B, the minimum baseline per-capita water use is calculated to be 286.3 GPCD.

Table 5-1A: Baseline Daily Per-Capita Water Use

Baseline Daily Per Capita Water Use				
Sequence Year	**Calendar Year**	**Water Service Area Population**	**Daily System Gross Water Use (AFY)**	**Annual Daily Per Capita Water Use (gpcd)**
1	1996	40,147	13,253	294.9
2	1997	40,356	14,102	311.9
3	1998	40,642	13,124	288.3
4	1999	41,022	13,737	298.9
5	2000	41,697	13,940	298.4
6	2001	42,199	13,166	278.5
7	2002	42,416	13,787	290.2
8	2003	42,644	13,717	287.2
9	2004	42,741	13,879	289.9
10	2005	42,620	13,297	278.5
Baseline Daily Per Capita Water Use:				291.7

Table 5-1B: Minimum Baseline Daily Per-Capita Water Use

Minimum Baseline Daily Per Capita Water Use				
Sequence Year	Calendar Year	Water Service Area Population	Daily System Gross Water Use (AFY)	Annual Daily Per Capita Water Use (GPCD)
1	2003	42,644	13,717	287.2
2	2004	42,741	13,879	289.9
3	2005	42,620	13,297	278.5
4	2006	42,363	13,475	284.0
5	2007	42,267	13,821	291.9
Minimum Baseline Daily Per Capita Water Use:				286.3

5.2 SBx7-7 Water Use Targets

In the 2020 UWMP, the City may update its 2020 water use target by selecting a different target method than what was used in 2015. The target methods and determination of the 2020 target are described below.

5.2.1 SBx7-7 Target Methods

DWR has established four target calculation methods for urban retail water suppliers to choose from. The City is required to adopt one of the four methods to comply with SBx7-7 requirements. These methods are:

- *Method 1* requires a simple 20 percent reduction from the baseline by 2020 (with 10 percent by 2015).
- *Method 2* employs a budget-based approach by requiring an agency to achieve a performance standard based on three metrics
    - Residential indoor water use of 55 GPCD
    - Landscape water use commensurate with the Model Landscape Ordinance
    - 10 percent reduction in baseline CII water use
- *Method 3* is to achieve 95 percent of the applicable state hydrologic region target as set forth in the State's 20x2020 Water Conservation Plan.
- *Method 4* requires the subtraction of Total Savings from the baseline GPCD:
    - Total savings includes indoor residential savings, meter savings, CII savings, and landscape and water loss savings

The City selected to comply with Method 1, consistent with the 2015 UWMP.

5.2.2 2020 Target

Under Compliance Method 1, with the simple 20 percent reduction, the City's 2020 target is 233.4 GPCD as summarized in Table 5-1. The 2020 target of 233.4 GPCD meets the minimum of 5 percent reduction from the five-year baseline of 286.3 GPCD.

Table 5-1: Baselines and Targets Summary

Baselines and Targets Summary				
Baseline Period	Start Year	End Year	Average Baseline (GPCD)	Confirmed 2020 Target (GPCD)
10-15 year	1996	2005	291.7	233.4
5 Year	2003	2007	286.3	
NOTES: From SB X7-7 Verification Form.				

5.2.3 2020 Compliance

Table 5-2 compares the City's 2020 water use target to its actual 2020 consumption. Based on this comparison, the City is in compliance with the 2020 water use target. The City's 2020 water service area population was compiled by Metropolitan using SCAG and census block data as discussed in Section 3.4. The volume of water entering the distribution system for 2020 is based on metered supply data from Metropolitan. The SBx7-7 Compliance Forms are included in Appendix G.

Table 5-2: 2020 Compliance

2020 Compliance *Retail Agency*		
Actual 2020 GPCD*	2020 Target GPCD*	Did Supplier Achieve Targeted Reduction for 2020? Y/N
197	233	Yes
**All values are in Gallons per Capita per Day (GPCD)*		
NOTES: From SB X7-7 Compliance Form		

5.3 Regional Alliance

The City is not participating in a regional alliance and is submitting their 2020 UWMP and SBx7-7 compliance individually.

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6 WATER SUPPLY CHARACTERIZATION

The City obtains its water supply from two sources: imported surface water purchased from Metropolitan and local groundwater extracted from the local Hollywood Basin and, with the construction of a new well by 2022, the La Brea Subarea of the Central Groundwater Basin. The imported water is treated by Metropolitan and the groundwater is treated at the City's Foothill WTP before being distributed to the City's water system. The Foothill WTP is currently offline and in the construction phase for a pretreatment system with plans to be online by late 2021. As such, current water demands are being met by imported water from Metropolitan.

The City possesses appropriative local groundwater rights dating back to the early 1900's. The City began purchasing water from Metropolitan in 1941-42 as a supplementary supply to City groundwater production. In 1970, Metropolitan water purchases began to exceed the City's groundwater production, a trend that has continued to this day. In 1976, the City ceased operating its original groundwater treatment plant and all of its wells. The wells remained out of service until 2003 when a new groundwater treatment plant and four wells were placed into operation.

City water supply for the years 1996 through 2020 is shown in Table 6-1A. From 1996 through 2003, all City water supply came from imported water purchased from Metropolitan, which has averaged 96.1 percent of the City's total demand since 1996. From 2004, the year the WTP was placed into service, through 2014, the City purchased an average of 91.9 percent of its water from Metropolitan, with the remaining 8.5 percent coming from its own groundwater production. The WTP was again taken out of service in 2015 and expected to come online again in 2021. As a result, there is no groundwater production to report since the 2015 UWMP.

Metropolitan's available supplies have adequately met its member agency's needs for the past 20 years. However, to cautiously preserve its supplies, Metropolitan imposed allocations in 2009 and again in 2015 to address concerns stemming from the ongoing drought. Additionally, in the event of a severe emergency or a failure to agree on an allocation plan, Metropolitan's Administrative Code requires allocations to be generally distributed based on "preferential rights" or cumulative fixed-fees paid. Metropolitan's total minimum supply, absent impacts of a major earthquake or other natural or man-made disaster, is approximately 1.2 Million AFY. Beverly Hills' preferential rights share of that total supply is about 11,800 AFY.

The City has relied on Metropolitan to supply most of its water since 1970 because Metropolitan water was more cost-effective than the combined cost of pumping and treating groundwater. However, even if groundwater pumping and treatment were more cost-effective, the City's existing wells are not capable of reliably meeting more than 10 percent of the City's existing water demand. With the addition of new wells and treatment, groundwater will become a more significant source supply. The City's IWRMP also identifies conservation as a source of supply. The IWRMP projects a water supply portfolio of 20% conservation, 23% groundwater, and 57% imported water by year 2025. UWMP reporting does not include conservation as a source of supply, but rather a reduction in demand. Using this approach, 25 to 30 percent of projected demands, including conservation, will be supplied by groundwater with the remaining 70 to 75 percent supplied from imported water.

Table 6-1A: City Water Supply 1996 – 2020

City Water Supply 1996 2020						
Year	**Imported Water/ Metropolitan (AFY)**	**%**	**Treated Groundwater (AFY)**	**%**	**Total Water Supply (AFY)**	**%**
1996	13,368	100	0	0	13,368	100
1997	13,659	100	0	0	13,659	100
1998	13,139	100	0	0	13,139	100
1999	13,545	100	0	0	13,545	100
2000	14,093	100	0	0	14,093	100
2001	13,598	100	0	0	13,598	100
2002	13,598	100	0	0	13,598	100
2003	13,178	97	405	3	13,583	100
2004	12,188	86.8	1,854	13.2	14,042	100
2005	11,918	89.7	1,362	10.3	13,280	100
2006	12,144	91.4	1,142	8.6	13,286	100
2007	12,775	91.2	1,231	8.8	14,007	100
2008	12,179	90.5	1,273	9.5	13,453	100
2009	11,801	93.3	852	6.7	12,653	100
2010	10,474	90.6	1,088	9.4	11,562	100
2011	10,249	92.6	819	7.4	11,068	100
2012	10,495	91.7	944	8.3	11,439	100
2013	11,114	93.4	779	6.6	11,893	100
2014	11,632	94.8	637	5.2	12,269	100
2015	10,389	99.6	43	0.4	10,432	100
2016	9,508	100	0	0	9,508	100
2017	10,001	100	0	0	10,001	100
2018	10,312	100	0	0	10,312	100
2019	9,517	100	0	0	9,517	100
2020	9,565	100	0	0	9,565	100
Average 1996-2020	**11,778**	**96.1**	**497**	**3.9**	**12,276**	**100**
Average 2004-2014	**11,679**	**91.9**	**1,032**	**8.1**	**12,711**	**100**

Although Metropolitan's water supply has proven to be reliable and cost effective relative to local groundwater production over the years, the ongoing threat of drought and climate change has increased the need for the City to develop additional water supply reliability. Priorities related to the City's water supply were established during stakeholder workshops during the preparation of the IWRMP and include the following:

- Prioritizing conservation and the efficient use of water – The most cost-effective factor in the water supply scenario is conservation and the efficient use of water. The City has responded proactively to the requirements of Senate Bill x7-7 that set goals for water use reduction. The City has also implemented water conservation ordinances and programs under the leadership of the Water Conservation Administrator.
- Optimizing existing local water supplies – Existing water supplies include imported water from MWD, and groundwater wells in the Hollywood Basin and the La Brea Subarea. Proper maintenance and rehabilitation are needed to ensure long-term operability and production capability.
- Developing new local water supplies – The City has near-term and long-term local water supply goals. To achieve those goals, the City must construct new local water supply facilities. The IWRMP identifies projects to support local water supply goals.
- Keeping an eye toward long-term opportunities – It is important that the City take effective near-term steps to accomplish long-term goals. The City will engage in regional efforts now to be in position for future opportunities.
- Reducing the use of imported water from Metropolitan – The City's imported water supply from Metropolitan will always be a significant portion of the water supply portfolio. However, focusing on the above priorities will allow the City to increase local control of their water supply by reducing reliance on imported water from Metropolitan.

The City's water supply priorities are to increase reliability though conservation, local water, and other opportunities align with Metropolitan's priorities as described in their 2020 IWRMP.

6.1 Purchased Imported Water

The City's primary source of water supply is water purchased from Metropolitan, a wholesale water agency serving 19 million people in six Southern California counties. Metropolitan was formed in 1928 and is composed of 26 member agencies including both cities and water districts. The City is one of 11 founding members and provides one of the 38 Directors who govern Metropolitan. Metropolitan provides water from the Colorado River and the State Water Project (San-Joaquin River Delta), and also obtains additional supplies from numerous storage, water transfers, exchanges, water banking, and fallowing projects.

Metropolitan has a legal entitlement to receive water from the Colorado River under a permanent service contract with the Secretary of the Interior. The Colorado River Aqueduct (CRA) transports water from Lake Havasu, at the border of the states of California and Arizona, approximately 242 miles to its terminus at Lake Mathews in Riverside County. The CRA is owned and operated by Metropolitan and has a capacity of 1.2 MAF a year.

Metropolitan also receives water from the San-Joaquin River Delta (Delta) in northern California via the 444-mile-long California Aqueduct (State Water Project or SWP), which is managed by the Department of Water Resources (DWR). The SWP provides imported water to the Metropolitan service area and has provided from 25 to 50 percent of Metropolitan’s water supplies. In accordance with its contract with the DWR, Metropolitan has a Table A allocation of 1,911,500 AF per year under contract from the SWP.

As a wholesale agency, Metropolitan distributes imported water to its 26 member agencies throughout Southern California. The City of Beverly Hills is one of 15 retail agencies served by Metropolitan. The City has two connections (BH-1 and BH-2) to the Metropolitan Santa Monica Feeder System, each having an operational capacity of 53 cfs or approximately 30,700 AFY (at 80% capacity). The City's Tier 1 rate allocation is 13,380 AFY.

Metropolitan’s total minimum supply, absent impacts of a major earthquake or other natural or man-made disaster, is approximately 1.2 Million AFY. Beverly Hills’ preferential rights share of that total supply is about 11,800 AFY.

6.1.1 Colorado River Supplies

The Colorado River was Metropolitan’s original source of water after Metropolitan’s establishment in 1928. The CRA, which is owned and operated by Metropolitan, transports water from the Colorado River to its terminus at Lake Mathews in Riverside County. The actual amount of water per year that may be conveyed through the CRA to Metropolitan’s member agencies is subject to the availability of Colorado River water for delivery.

The CRA includes supplies from the implementation of the Quantification Settlement Agreement (QSA) and related agreements to transfer water from agricultural agencies to urban uses. The 2003 QSA enabled California to implement major Colorado River water conservation and transfer programs, stabilizing water supplies for 75 years and reducing the state’s demand on the river to its 4.4 million acre-feet (MAF) entitlement. Colorado River transactions are potentially available to supply additional water up to the CRA capacity of 1.25 MAF on an as-needed basis. Water from the Colorado River or its tributaries is available to users in California, Arizona, Colorado, Nevada, New Mexico, Utah, and Wyoming, as well as to Mexico. California is apportioned the use of 4.4 MAF of water from the Colorado River each year plus one-half of any surplus that may be available for use collectively in Arizona, California, and Nevada. In addition, California has historically been allowed to use Colorado River water apportioned to but not used by Arizona or Nevada. Metropolitan has a basic entitlement of 550,000 AFY of Colorado River water, plus surplus water up to an additional 662,000 AFY when the following conditions exists (Metropolitan, 2020 UWMP):

- Water unused by the California holders of priorities 1 through 3
- Water saved by the Palo Verde land management, crop rotation, and water supply program
- When the U.S. Secretary of the Interior makes available either one or both:
    - Surplus water is available
    - Colorado River water is apportioned to but unused by Arizona and/or Nevada

Approximately 40 million people rely on the Colorado River and its tributaries for water with 5.5 million acres of land using Colorado River water for irrigation. Climate change will affect future supply and demand as increasing temperatures may increase evapotranspiration from vegetation along with an increase in water loss due to evaporation in reservoirs, therefore reducing the available amount of supply from the Colorado River and exacerbating imbalances between increasing demands from rapid growth and decreasing supplies.

The Colorado River Basin experienced a severe 5-year drought from 2000 to 2004 with below average precipitation and runoff. Average precipitation has been near normal since that time while runoff has been less than average in two out of every three years. This change in the precipitation to runoff relationship is indicative of a drying trend that is characterized as a long-term drought. For example, in 2020 the Upper Colorado River Basin snowpack reached a level of 107 percent of the median. However, runoff was observed from April through July was just 52 percent of the average due to hot and dry conditions. This drying trend over the past 21-years has resulted in Lake Mead and Lake Powel storage at 40 and 42 percent of capacity (Metropolitan, 2020 UWMP).

The coordinated operation of Lake Powel and Lake Mead was provided for in the 2007 Interim Guidelines and the Intentionally Created Surplus (ICS) program that allows Metropolitan to store water in Lake Mead. These stored supplies will help ensure that Metropolitan can deliver up the CRA capacity of 1.25 MAF. Additionally, the Lower Basin Drought Contingency Plan (DCP) was signed in 2019 to incentivize storage in Lake Mead. This program helps maintain water levels and increases Metropolitan's flexibility to both store water and take delivery of stored water.

With the long-term challenges of water demand exceeding available supply from the Colorado River, and additional uncertainties due to climate change, Metropolitan has developed a number of supply and conservation programs to increase the amount of supply available from the Colorado River. These are discussed in Chapter 3 of the Metropolitan 2020 UWMP which also quantifies the volume of water available through these programs to meet expected CRA deliveries equal to its annual capacity of 1.25 MAF. The amount of supplies available to Metropolitan for the 2020 UWMP planning period will be based on USBR modeling expected to be released in early 2021.

6.1.2 State Water Project Supplies

The SWP consists of a network of pump stations, reservoirs, aqueducts, tunnels, and power plants operated by DWR and is an integral part of the effort to ensure that business and industry, urban and suburban residents, and farmers throughout much of California have sufficient water. The SWP is the largest state-built, multipurpose, user-financed water project in the United States. Nearly two-thirds of residents in California receive at least part of their water from the SWP with approximately 70 percent of SWP's contracted water supply going to urban users and 30 percent to agricultural users. The primary purpose of the SWP is to divert and store water during wet periods in northern and central California and distribute it to areas of need in northern California, the San Francisco Bay area, the San Joaquin Valley, the Central Coast, and Southern California.

The availability of water supplies from the SWP can be highly variable. A wet water year may be followed by a dry or critically dry year and fisheries issues can restrict the operations of the export pumps even when water supplies are available.

The Sacramento-San Joaquin River Delta (Delta) is key to the SWP's ability to deliver water to its agricultural and urban contractors. All but five of the 29 SWP contractors receive water deliveries below the Delta (pumped via the Harvey O. Banks or Barker Slough pumping plants). However, the Delta faces many challenges concerning its long-term sustainability such as climate change posing a threat of increased variability in floods and droughts. Sea level rise complicates efforts in managing salinity levels and preserving water quality in the Delta to ensure a suitable water supply for urban and agricultural use. Furthermore, other challenges include continued subsidence of Delta islands, many of which are below sea level, and the related threat of a catastrophic levee failure as the water pressure increases, or because of a major seismic event.

Ongoing regulatory restrictions, such as those imposed by federal biological opinions (Biops) on the effects of SWP and the federal Central Valley Project (CVP) operations on certain marine life, also contributes to the challenge of determining the SWP's water delivery reliability. In dry, below-normal conditions, Metropolitan has increased the supplies delivered through the California Aqueduct by developing flexible CVP/SWP storage and transfer programs. The goal of the storage/transfer programs is to develop additional dry-year supplies that can be conveyed through the available Harvey O. Banks pumping plant capacity to maximize deliveries through the California Aqueduct during dry hydrologic conditions and regulatory restrictions. In addition, the California State Water Resources Control Board (SWRCB) has set water quality objectives that must be met by the SWP including minimum Delta outflows, limits on SWP and CVP Delta exports, and maximum allowable salinity level.

"Table A" water is the maximum entitlement of SWP water for each water contracting agency. Currently, the combined maximum Table A amount is 4.17 MAFY. Of this amount, 4.13 MAFY is the maximum Table A water available for delivery from the Delta pumps as stated in the State Water Contract. However, deliveries commonly are less than 50 percent of the Table A.

SWP contractors may receive Article 21 water on a short-term basis in addition to Table A water if requested. Article 21 of SWP contracts allows contractors to receive additional water deliveries only under specific conditions, generally during wet months of the year (December through March). Because an SWP contractor must have an immediate use for Article 21 supply or a place to store it outside of the SWP, there are few contractors like Metropolitan that can access such supplies.

Carryover water is SWP water allocated to an SWP contractor and approved for delivery to the contractor each year but not used by the end of the year. The unused water is stored in the SWP's share of San Luis Reservoir, when space is available, for the contractor to use in the following year.

Turnback pool water is Table A water that has been allocated to SWP contractors that has exceeded their demands. This water can then be purchased by another contractor depending on its availability.

SWP Delta exports are the water supplies that are transferred directly to SWP contractors or to San Luis Reservoir storage south of the Delta via the Harvey O. Banks pumping plant. Estimated average annual Delta exports and SWP Table A water deliveries have generally decreased since 2005, when Delta export regulations affecting SWP pumping operations began to become more restrictive due to the Biops.

Metropolitan's 2020 UWMP provides details on the factors that affect the ability to estimate existing and future water delivery reliability. In summary, they include water availability at the source, water rights with priority of the SWP, climate change, regulatory restrictions on SWP Delta exports, ongoing environmental and policy planning efforts, and Delta levee failure. Metropolitan estimated SWP supplies using the 2019 SWP Delivery Capability Report distributed by DWR in August 2020. The Delivery Capability Report presents the current estimate of the amount of deliveries for current (2020) conditions and conditions 20 years in the future.

An urban water supplier that anticipates participating in or receiving water from a proposed project (covered action) in the Delta should provide information in their 2015 and 2020 UWMP's that can be used to demonstrate consistency with the Delta Plan Policy WR P1, *Reduced Reliance on the Delta Through Improved Regional Water Self-Reliance*. A covered action includes projects such as a conveyance facility or new diversion that involves transferring water through, exporting water from, or using water in the Delta. Appendix H to this UWMP provides the analysis and documentation to demonstrate the City of Beverly Hill's measurable reduction in reliance on Delta water supplies and improved regional self-reliance, consistent with Delta Plan Policy, to support a certification of consistency for a future covered action.

6.1.3 Storage

Storage is a major component of Metropolitan's dry year resource management strategy. Metropolitan's likelihood of having adequate supply capability to meet projected demands, without implementing its Water Supply Allocation Plan (WSAP), is dependent on its storage resources. Under some conditions, Metropolitan may choose to implement the WSAP to preserve storage reserves for a future year rather than using the full supply capability.

Lake Oroville is the SWP's largest storage facility, with a capacity of about 3.5 MAF. The water is released from Oroville Dam into the Feather River as needed, which converges with the Sacramento River while some of the water at Bethany Reservoir is diverted from the California Aqueduct into the South Bay Aqueduct. The primary pumping plant, the Harvey O. Banks pumping plant, pumps Delta water into the California Aqueduct, which is the longest water conveyance system in California.

6.2 Groundwater

The City is located within the Coastal Plain of the Los Angeles Groundwater Basin which is divided into multiple groundwater subbasins. The City overlies three of these subbasins (referred to as basins), specifically the Hollywood Groundwater Basin (GWB), the La Brea Subarea of the Central GWB, and the Crestal Subarea of the Santa Monica GWB. Most of the City overlies the Hollywood GWB, with smaller portions overlying the other two basins. The groundwater pumping rights in the three basins underlying the City have not been adjudicated by the Courts.

The City has a history of groundwater production from both the Hollywood GWB and the adjacent portion of the La Brea Subarea of the Central GWB as a secondary source of water supply behind imported water. The City's Foothill WTP was taken out of service in 2015 and is expected to come online again in 2021. As a result, there is no groundwater production to report since the 2015 UWMP.

The City's secondary source of water supply behind imported surface water purchased from Metropolitan has been groundwater pumped from the Hollywood GWB, which is bounded on the north by the Santa Monica Mountains and the Hollywood fault, on the east by the Elysian Hills, on the west by the Inglewood fault zone, and on the south by the La Brea High, formed by an anticline that brings impermeable rocks close to the surface. The City has been and continues to be the only municipal-supply producer of groundwater in the Hollywood GWB, owning and operating six active wells to supply local groundwater to its customers. A new municipal-supply well was constructed in 2020 to supply local groundwater from the La Brea Subarea. No City infrastructure currently exists in the Santa Monica GWB.

Groundwater occurrence within the GWBs that underlie the City exists primarily within Pleistocene-aged sand and gravel aquifer systems. The formations include unconsolidated and semi-consolidated marine and alluvial sediments deposited over time. The San Pedro Formation (Jefferson, Lynwood, Silverado, and Sunnyside) and the shallower aquifers of the Lakewood Formation (Exposition and Gage) are the major production aquifers. The Gage aquifer is the major water-bearing aquifer of the basin. However, aquifers are not highly transmissive and do not yield significant amounts of groundwater except in the deeper aquifers of the San Pedro Formation. The depth below ground surface and thickness of the water-bearing strata vary between each of the three GWBs.

Percolation from precipitation, surface stream flows, and subsurface inflows from the Santa Monica Mountains naturally replenish the groundwater system. Direct percolation has decreased significantly due to urbanization, and natural replenishment to the water-bearing formations is limited to only a small portion of basin soils. The GWBs do not receive any artificial recharge through injection wells or spreading basins, and groundwater production is limited by low safe-yield limits.

6.2.1 Hollywood GWB

Six municipal-supply wells provide local groundwater supply for the City from the Hollywood GWB. Four are considered “deep” wells constructed between 1994 and 2000 that extract groundwater between the approximate depths of 400 feet below ground surface (ft bgs) and 700 ft bgs (Hollywood Basin Wells #2, #4, #5, and #6); and two are relatively “shallow” wells, constructed in 2016, that extract groundwater between the approximate depths of 70 ft bgs and 200 ft bgs (Maple Yard Wells #1 and #2).

Groundwater flow in the Basin is generally from the Santa Monica Mountains to the north and out towards the Central Basin to the south. The USGS has estimated groundwater outflows of about 5,900 AFY to the Central Basin, but there are no formal agreements regarding this outflow. The total Hollywood Basin storage is estimated to be approximately 200,000 acre-feet (AF) and the natural perennial yield is estimated to be about 3,000 AFY. As the Basin does not receive artificial recharge, the actual annual pumping limits are equal to the natural yield of 3,000 AFY.

Groundwater levels in the Basin are generally at or above mean sea level (MSL) and aquifers in the western portion of the Basin, which is the main groundwater producing zone, are estimated up to 660 feet in depth. The water bearing thickness ranges from 60 to 175 feet.

Seawater intrusion is not a risk to the City's groundwater supply due to its distance from the ocean and because the Newport-Inglewood uplift restricts outflows from the Santa Monica Basin, which has a higher risk of seawater intrusion. Accordingly, there are no seawater intrusion barriers in the Hollywood Basin.

Since the Hollywood GWB is unadjudicated, the City manages the Basin through municipal ordinances that regulate the production of groundwater, prohibit waste, protect water quality, and require dewatering activities to mitigate adverse impacts on the Hollywood GWB. The California Department of Health Services provides additional oversight of the Basin's groundwater quality and help monitor contaminant levels.

The City pumps groundwater from the Hollywood GWB to the City’s Foothill WTP via City Well Nos. 2, 4, 5 and 6. Groundwater was not extracted from the Basin from 2016 through 2020 because the Foothill WTP is currently under renovation. It is anticipated that the treatment plant improvements will be completed in the last quarter 2021 and local groundwater extraction and supply will commence and continue into the foreseeable future.

6.2.2 La Brea Subarea of the Central GWB

The City historically extracted groundwater from the La Brea Subarea utilizing multiple wellfields owned by the City both within the City boundaries and within the City of Los Angeles boundaries. Groundwater extractions were ceased in approximately 1975-76 when the City destroyed all remaining wells within the Subarea and sold off most of the well sites owned by the City at that time. There is one existing known actively producing well in the La Brea Subarea used for irrigation supply by a private well owner. There is limited published data available related to the perennial yield of the La Brea Subarea but it is estimated to be approximately 4,300 AFY (2020 IWRMP).

The City has one production well that was recently constructed in the La Brea Subarea and is anticipated to be equipped by early 2022. This new well (La Cienega Well No. 1, LCW-1), is the first production well constructed in the Subarea since the City's former wells were destroyed in the 1970s. Based on the hydrogeologic evaluation and pump testing for the well in 2020, it will have a maximum pumping capacity on the order of 500 to 700 gpm with a recommended long-term operational pumping capacity of 500 gpm. Groundwater pumped from the new well will be transmitted via a new transmission pipeline to the Foothill WTP, currently under construction. Construction of the transmission main is anticipated to be completed in March/April 2021.

6.2.3 Groundwater Treatment

All groundwater supplies to be used for water system distribution are to be treated at the Foothill WTP. The Foothill WTP consists of a single reverse osmosis (RO) train and its associated pre-treatment and post-treatment systems. The Foothill WTP is planned to be expandable at a future date to achieve an ultimate production capacity of 4.7 MGD. Treatment expansion will be necessary to utilize two additional proposed groundwater wells in the La Brea Subarea along with the existing Hollywood GWB wells. The current plant improvements are providing 2.7 MGD of raw groundwater treatment to the ultimate capacity. The 2.7 MGD raw groundwater capacity would comprise of the existing 6 Hollywood GWB wells and 1 La Brea Well currently under construction.

6.2.4 Sustainable Groundwater Management Act of 2014

Historically, California has never managed its groundwater supplies on a state-wide basis. That has now changed. As of January 1, 2015, the Sustainable Groundwater Management Act (SGMA), signed by Governor Edmund G. Brown in September 2014, will regulate the use of groundwater on a more universal scale. The SGMA's emphasis on local groundwater management should provide an unprecedented opportunity to shape California's future, for those whose livelihoods and involvement in the larger economy are fundamentally dependent on access to the state's groundwater resources.

Until the SGMA, the right to use groundwater in California had been viewed as a property right attached to overlying surface lands. In *City of Pasadena v. City of Alhambra,* for example, the California Supreme Court stated that the "overlying right," or right of the owner of the land to take water from the ground underneath for use on his overlying land "…is based on ownership of the land and is appurtenant thereto." Under the doctrine of correlative rights, landowners had a common right to the beneficial use of percolating waters underlying their property. When an underlying aquifer became overdrawn, courts could allocate pumping rights among overlying landowners through an adjudicatory procedure.

The SGMA adopts a fundamentally different strategy for managing the State's groundwater resources. At the heart of the new law is a requirement to implement sustainability plans for most groundwater basins throughout the state, including many on which California's agricultural community are highly dependent. These plans can vary from simple basin-wide plans developed and implemented by individual local agencies, to multiple plans by different local agencies operating in the same basin, to state-imposed plans where no sufficient local plan exists.

While sustainability plans must contain a number of specific requirements, by far the most significant is that they be designed to meet what the SGMA calls the "sustainability goal" within 20 years of implementation. The sustainability goal is, in short, a stated objective to "achieve sustainable groundwater management" by ensuring that a given basin is "operated within its sustainable yield." In other words, the basin must be operated in such a way as not to cause "undesirable results.” Many of these standards leave a great deal of interpretive work to regulatory agencies and ultimately to the courts. Disputes over the on-the-ground, practical meaning of key terms such as "sustainable groundwater management," "sustainable yield," and "undesirable results," for example, almost certainly will wind up in litigation.

The SGMA also contains procedural requirements for plan development and implementation, and exempts many activities involved in that process from the environmental review requirements of the California Environmental Quality Act ("CEQA").

While the SGMA will regulate California's groundwater on a statewide basis for the first time, it does not cover every groundwater basin within the state's jurisdiction, nor will it impacts be felt immediately. The statute generally does not apply to specified basins that have already been adjudicated under existing law, for example, and it does not require sustainability plans from basins considered to be low priority. Moreover, sustainability plans need not be implemented for several years, and affected basins are not required to attain sustainability goals until approximately 2040.

The Central Basin had initially been designated as “high priority” under SGMA which would require the formation of a Groundwater Sustainability Agency (GSA) and a Groundwater Sustainability Plan (GSP). The Central Basin is largely adjudicated, however the La Brea Subarea, where the City of Beverly Hills is planning a well field, was excluded from the adjudication. The adjudicated portion of the Central Basin is exempt from the SGMA. The unadjudicated La Brea Sub Basin, that was originally required to form a GSA and a GSP under the high priority status, has since been re-designated as “low priority”. The City had already entered a Memorandum of Understanding (MOU) with basin stakeholders and developed an alternative plan in lieu of a full GSP which was submitted to the State WRCB. The stakeholders included the Water Replenishment District of Southern California (WRD) as the lead, the City of Beverly Hills, Culver City, Los Angeles Department of Water and Power (LADWP), and Golden State Water Company. When the unadjudicated area of the Central Basin was changed to low priority the City of Beverly Hills opted to withdraw from the MOU but agreed to cooperate with the remaining MOU members and continue to share information regarding the City’s plan to develop the La Brea Subarea. The alternative plan was also withdrawn by the remaining stakeholders since it was no longer needed for the low priority basin.

Hollywood GWB was designated as low priority and therefore is not subject to SGMA regulations. The Santa Monica GWB is subject to SGMA regulations. The City does not have wells in the small portion of the City that overlies a portion of the Santa Monica GWB but joined the City of Santa Monica and other stakeholders in a MOU to form the Santa Monica Basin GSA with Santa Monica as the lead agency. Other stakeholders include LADWP, Culver City, and the County of Los Angeles. The City’s intent is to participate as part of the Santa Monica Basin GSA, but presently does not have plans to develop any local sources within that GWB. The GSP for high- and medium-priority basins is required to be completed and submitted to the State Water Board by January 31, 2022.

6.3 Surface Water

The City does not use, or plan to use, self-supplied surface water as part of its water supply.

6.4 Stormwater

The City of Beverly Hills is regulated by a National Pollution Discharge Elimination System (NPDES) permit to manage its urban runoff to Ballona Creek. The City is implementing a regional Enhanced Watershed Management Program (EWMP) where it is required to manage 87 acre-feet of dry and wet weather urban runoff to achieve its water quality obligations. The City adopted a Stormwater and Urban Runoff Ordinance that requires implementation of many stormwater programs which includes Low Impact Development (LID) requirements for development and infrastructure improvement projects. LID requires these projects to capture, infiltrate and on treat, in that order, of the first inch of runoff of a storm event. Runoff from these projects can be captured and infiltrated for groundwater recharge or re-used for non-potable use. Due to the general clay soil condition within the city limits, private development projects have often captured the first inch of runoff and re-used it for non-potable use, primarily for irrigation. Thus far, the private development projects have captured 6.8 acre-feet of urban runoff.

For infrastructure improvement projects, the City thus far has managed 11.6 acre-feet of urban runoff.

The City has two future regional LID projects that are expected to add to its stormwater management portfolio. The Burton Way Median Green Streets and Water Efficient Landscape has a total volume capacity of 10.6 acre-feet of which it has the potential to recharge the groundwater basin by 96 AFY and reduce potable water irrigation by 16 AFY.

The La Cienega Park Regional Project will be designed to divert stormwater runoff from a 461-acre drainage area into a 21 acre-feet underground reservoir. The captured runoff will be treated and discharged to the sanitary sewer system that will eventually be treated at the Hyperion Water Reclamation Plant, further increasing the region’s recycled water source. The City will be investigating the feasibility of capturing urban runoff and using the water for irrigation in public medians and parks. This is a control measure prescribed to meet stormwater quality regulations. Capturing urban runoff from large drainage areas has the potential to offset hundreds of acre-feet of park and median irrigation per year. A potential project to divert dry-weather flows from the storm drain system has been identified at the City’s Roxbury Park. Based on initial evaluation, the volume of flow available for diversion may be on the order of approximately 150 gpm (over 200,000 gpd), which would more than meet the irrigation demands at the park of between 20,000 and 29,000 gpd.

The City will continue to schedule the construction of additional urban runoff projects to meet its 87 acre-feet obligation as funding becomes available. The City will continue to refine its LID policies in private development and infrastructure improvement projects to increase the use of captured urban runoff for irrigation and increase opportunities for groundwater recharge within the city-limits.

Pumping groundwater for foundation dewatering currently occurs in various locations within the City. Discharges are released into the storm drain system and ultimately into the Ballona Creek. Consideration has been given to utilize dewatering flows generated from subterranean structures within the City for beneficial use, thus offsetting equivalent potable water demands. This consideration has been codified with the adoption of a dewatering ordinance in Beverly Hills. The dewatering ordinance requires dewatering properties to use its water beneficially or be subject to a replenishment fee. Revenue collected from the replenishment fee will be used for additional groundwater development.

6.5 Wastewater and Recycled Water

The City collects sanitary wastewater flows within the City via a City sewer system that conveys the flows to trunk sewers operated and maintained by the Los Angeles Bureau of Sanitation (L.A. Bureau of Sanitation). The trunk sewers convey the wastewater to the Hyperion Water Reclamation Plant that is owned by the City of Los Angeles and operated by the L.A. Bureau of Sanitation. Initially built as a raw sewage discharge plant into the Santa Monica Bay, Hyperion has been upgraded over the years to secondary and full secondary treatment. Hyperion's full treatment capacity is 450-800 MGD and secondary treatment capacity is 450 MGD. Under the City of Los Angeles's Sustainability Plan and One Water Plan, the City of Los Angeles is planning to further upgrade Hyperion Plant to produce recycled water for the Los Angeles region. The City of Los Angeles has invited all potential stakeholders, including Beverly Hills, to gauge interest in receiving recycled water produced at Hyperion. Currently, the City of Los Angeles aims to complete the Hyperion Plant upgrade by 2035 and a recycled distribution system will be planned concurrently.

West Basin Municipal Water District, a water wholesaler that provides imported and recycled water to 17 cities in the Los Angeles region, purchases secondary effluent from Hyperion for treatment at the Edward C. Little Water Recycling Facility, where most of the water is treated to meet California Code of Regulations Title 22 tertiary standards for uses as recycled water including groundwater replenishment, injection into the seawater intrusion barrier, industrial use, irrigation, and other reuse purposes. Approximately 40,500 acre-feet of secondary treated water was delivered from Hyperion to Edward C. Little Water Recycling Facility for treatment to Title 22 recycled water standards in fiscal year 2019/20 (LADWP Draft 2020 UWMP). The plant produces approximately 40 million gallons of useable water every day.

The current average dry weather flow generated within the City limits, based on flow monitoring data, is approximately 3.5 MGD (IWRMP, 2020). This flow is projected to increase with future dry-weather stormwater projects that would be diverting urban runoff to the sewer system. Additional feasibility studies will be conducted to determine the increase in the sewer system. The City's system also conveys sewer flow generated outside of the City boundary, primarily flows from the City of Los Angeles and the City of West Hollywood. Sewer flows generated outside of City limits are "pass-through" only and are not generated by customers of the City. The City of Los Angeles reports wastewater flows for the City of Beverly Hills annually in accordance with their wastewater service agreement. The reporting period covers a "Flow Year" for the period from April to March. The City's reported net wastewater flow, after subtracting out the "pass-through" flows, for Flow Year 2019-2020 was 3.69 MGD (4,130 AFY).

City wastewater characteristics are shown in Table 6-2. Hyperion Water Reclamation Plant characteristics are shown in Table 6-3. Hyperion is located outside of the City's service area and no wastewater is treated or disposed of within the service area.

Table 6-2: Wastewater Collected Within Service Area in 2020

Wastewater Collected Within Service Area in 2020					
Wastewater Collection			**Recipient of Collected Wastewater**		
Wastewater Collection Agency	Wastewater Volume Metered or Estimated?	Volume of Wastewater Collected in 2020 (AFY)	Wastewater Treatment Agency	Treatment Plant Name	Is WWTP Located Within UWMP Area?
L.A. Bureau of Sanitation	Metered	4,130	L.A. Bureau of Sanitation	Hyperion	No
Total		4,130			
NOTES: Volume based on average flow rate reported by City of Los Angeles to City of Beverly Hills for April 2019 through March 2020 as part of annual reporting in accordance with the wastewater service agreement.					

Table 6-3: Wastewater Treatment and Discharge

Wastewater Treatment and Discharge							
Wastewater Treatment Plant Name	Method of Disposal	Does This Plant Treat Wastewater Generated Outside the Service Area?	Treatment Level	**2020 Volumes**			
				Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area
Hyperion Water Reclamation Plant	Ocean outfall	Yes	Full Secondary	288,000	247,300	0	40,800
			Total	288,000	247,300	0	40,800
NOTES: Volume data from LADWP 2020 UWMP. Hyperion is located outside of the City's service area. No wastewater is treated or disposed of within the City's service area.							

The City currently does not have a recycled water system or receive any recycled water supply. There is currently no regional recycled water supply available to the City or anywhere near the City. The nearest regional recycled water systems are located near the Tillman Water Reclamation Plant (Van Nuys), Los Angeles-Glendale Water Reclamation Plant (Glendale), and Hyperion Water Reclamation Plan (LAX area). Policy changes described below could significantly affect the potential use of recycled water for irrigation purposes in the Los Angeles County region.

Recycled Water from the Hyperion Wastewater Treatment Plant

Mayor Eric Garcetti has set a goal of 100% recycled water recovery for the City's wastewater treatment facilities including Hyperion, Tillman, Glendale, and its Terminal Island Plant in San Pedro by 2035. The City of Los Angeles presented this goal at "The Vision – 100% Recycling at the Hyperion Water Reclamation Plant, A Titan of Local Water Supply" (The Vision) on October 7, 2019 and identified the transition from recycled water for irrigation to Direct Groundwater Injection and future Direct Potable Reuse (DPR). It was noted that the Vision project would include future Direct Raw Water Augmentation and future DPR water supplies passing westerly of Beverly Hills;

through facilities planned to also serve the San Fernando Valley, a potential for up to 320 MGD may become available to Beverly Hills when the distribution system is built nearby the City.

Recycled Water from the Regional Recycled Water Program (MWD/LACSD)

MWD and LACSD held a Workshop on October 3, 2019 to unveil their Regional Recycled Water Program (RRWP) which also incorporates a policy change for its recycled water deliveries to preclude irrigation uses and only include future Direct Groundwater Injection and DPR purposes.

The RRWP expects to produce up to 150 MGD of purified water to be delivered for Direct Groundwater Injection and future DPR to serve more than 500,000 homes and industries in the region. Expected to take eleven years to complete, it would deliver supplemental water supplies to area in the Central GWB and the Upper San Gabriel Valley GWB for groundwater augmentation. Advanced Treatment and DPR supplies to MWD's Weymouth and Diemer Water Treatment Plants would be provided for domestic supply. Opportunities could evolve to potentially participate financially in the RRWP to allow for supplies to Beverly Hills through MWD's transmission system through a Wheeling Agreement.

6.6 Desalination Water Opportunities

The City currently does not participate in desalination water supply projects. The potential to participate in capacity within a desalination plant through a water exchange/wheeling agreement could be feasible in the long-term. The City would need to buy into the desalination plant and pay for a wheeling rate through MWD. Potential desalination projects currently in the planning stages are the West Basin Municipal Water District's (WBMWD) plant in Redondo Beach and the Orange County Water District's (OCWD) plant in Huntington Beach.

6.7 Exchanges or Transfers

The City currently does not participate with other water agencies on water exchanges or transfers into or out of the City's water service area and none are planned for the future at this time.

6.8 Future Water Projects

The City's 2020 IWRMP has evaluated the water supply portfolio and the potential for future sources of supply, some of which have been addressed in the preceding sections. The City's IWRMP priorities are to provide the following:

- Water Supply Reliability – Increasing flexibility of the City's water supply by increasing local water supply, which includes alternative water resources, and reducing imported water form MWD
- Emergency Resiliency – Implementing projects that make systems more resilient to emergencies
- Addressing Aging Infrastructure – Taking a proactive approach to replacing aging infrastructure
- Accounting for Growth Needs – Ensuring the City's systems are adequately addressing growth within the service area

Potential water supply projects have been identified for expansion of the City's groundwater supplies with the goal of increasing the redundancy and reliability. Additional wells allow the flexibility to remove wells from service temporarily for maintenance and repair, creates more operational scenarios for groundwater production if there is a benefit to shifting pumping from one basin or area to another, and greater production capacity in both the shallow and deep aquifers to allow tailored operation based wet or dry year hydrology. Locations for potential new wells are identified in the City's IWRMP. To develop new groundwater supplies the following near-term projects have been identified with details and locations provided in the City's IWRMP:

- One (1) La Brea Subarea Well to be located at the City owned Coffee Bean and Tea Leaf site (La Cienega Well No. 1, LCW-1)
- Two (2) La Brea Subarea Well to be located at a location to be determined

La Cienega Well No. 1 in the La Brea Subarea is being equipped and will come online in 2022. The City is actively looking for locations for the two additional well sites in the La Brea Subarea. One will likely be located at the City owned property called the Sand Pit site.

The following are potential long-term well projects identified in the IWRMP:

- One (1) Hollywood Groundwater Base Well located at Santa Monica Boulevard and Foothill Road
- One (1) Hollywood Groundwater Base Well located at 3rd Street and Foothill Road
- One (1) Santa Monica Groundwater Basin Well located at Roxbury Park to supply the local irrigation demand

All groundwater supplies to be used for water system distribution must be treated at the Foothill WTP. The Foothill WTP consists of a single reverse osmosis (RO) train and its associated pre-treatment and post-treatment systems. A proposed expansion of the Foothill WTP can increase plant capacity from 2.3 to 4.7 MGD to accommodate the additional groundwater supplies. Details of the plant expansion are included in the City's IWRMP. It is anticipated that the Foothill WTP improvements will be completed by 2021 with local groundwater comprising approximately 24 percent of the City's water supply. By 2025, it is expected that local groundwater will increase to 29 percent of the total water supply.

An analysis was conducted as part of the IWRMP to evaluate potential long-term alternative sources and non-potable demands. Potential alternative source projects and multi-benefit projects have been identified and include the following:

- Roxbury Park – stormwater diversion, treatment, and distribution for irrigation supply (Section 6.4)
- Subterranean Structures – shallow groundwater diversion, treatment, and distribution for irrigation supply (Section 6.4)
- Desalination – buying into a desalination plant and delivery through MWD (Section 6.6)

Detailed descriptions of these projects can be found in the City's 2020 IWRMP along with a list of specific capital improvement projects and associated costs.

6.8.1 Increased Water Conservation

Conservation and the efficient use of water is of the highest priority to the City. Conservation represents water that is controlled locally and, from a water supply perspective, reduces imported water volumes thus increasing reliability. Conservation also has environmental benefits of reducing energy usage for treatment and delivery.

The City has responded proactively to the requirements of Senate Bill X7-7 of 2009 that set goals for water use reduction. The City has also implemented water conservation ordinances and programs under the leadership of the Water Conservation Administrator. The City's water conservation programs include smart metering, conservation pricing, public outreach, water loss reduction, and conservation staff. These are discussed in Chapter 9.

6.9 Summary of Existing and Planned Sources of Water

The City obtains its water supply from two sources: imported surface and local groundwater. The imported water is treated by Metropolitan and the groundwater is treated at the City's Foothill WTP before being distributed to the City's water system. Local groundwater supplies have not been available since 2015 due to the shutdown of the Foothill WTP for rehabilitation. Prior to the shutdown of the Foothill WTP, groundwater accounted for approximately 8 percent of the City's total water supply with the remainder coming from imported water.

Although Metropolitan's water supply has proven to be reliable and cost effective relative to local groundwater production over the years, the ongoing concerns of drought and climate change has increased the need for the City to develop additional water supply reliability. Accordingly, the City is developing additional groundwater supplies and has identified potential alternate sources of supply as part of its 2020 IWRMP.

The City currently does not receive any recycled water supply. If existing recycled water supply were to extend closer to the City or proposed projects discussed in Section 6.5 were to become available, then recycled water may become more economically feasible. For this 2020 UWMP, future recycled water supply is not counted upon.

A summary of future approved water supply projects for the City are shown in Table 6-7. The remainder of potential future projects described in Section 6.8 may be considered at a future date but are not included in planned supplies for this UWMP planning cycle. The City's actual water supplies for 2020 and projected normal year supplies for 2025 through 2045 are shown in Table 6-8 and Table 6-9, respectively.

Table 6-7: Expected Future Water Supply Projects or Programs

Expected Future Water Supply Projects or Programs					
Name	Joint Project with other agencies?	Description	Year Planned	Planned Year- Type	Expected Supply
One (1) well in La Brea Subarea of Central Basin	No	Constructed and ready to be equipped	2022	All Year Types	600 - 800
Two (2) wells in La Brea Subarea of Central Basin	No	Locations to be determined	2025	All Year Types	900 - 1200
NOTE: Implementation year of 2025 for two (2) La Brea Subarea wells is estimated. Locations of well sites are still to be determined.					

Table 6-8: Water Supplies — Actual

Water Supplies Actual			
		2020	
Water Supply	Additional Detail on Water Supply	Actual Volume	Water Quality
Purchased or Imported Water	Treated Metropolitan	9,565	Drinking Water
Groundwater	Local Basins	0	Drinking Water
Total		**9,565**	
NOTE: Volume from Metropolitan billing data for 2020.			

Table 6-9: Water Supplies — Projected

Water Supplies Projected						
Water Supply	Additional Detail	**Projected Water Supply**				
		2025	2030	2035	2040	2045
Purchased or Imported Water	Treated Metropolitan	8,981	8,804	9,013	9,255	9,441
Groundwater	Local Basins	2,952	3,327	3,327	3,327	3,327
Total		**11,933**	**12,131**	**12,340**	**12,582**	**12,768**

6.10 Energy Intensity

New to this 2020 UWMP, suppliers must provide information that can be used to calculate the energy intensity of their water service. Energy intensity is a ratio of energy consumed per unit volume of water supplied. Required information is limited to that which is readily obtainable by the supplier for their operations which includes acquiring, treating, and distributing water supplies. The City's wells and treatment plant were offline in 2020, therefore, the energy use within the water system is attributed to pump stations used in the distribution of water supplies. Southern California Edison (SCE) provided the City's billing records with energy use for 2020.

The distribution of water through pump stations is the only system process using energy, therefore, the energy usage intensity is calculated using the total utility approach as described in Appendix O of the DWR's UWMP Guidebook. Table 6-10A shows the energy usage intensity for the City's water system. The energy intensity reporting table along with metered energy use is included in Appendix I.

Table 6-10A: Energy Intensity – Total Utility Approach

Energy Intensity Total Utility Approach	
Water Management Process	Total Utility
Volume of Water Entering Process (AF/MG)	*9,565/3,117*
Energy Consumed (kWh)	*1,225,525*
Energy Intensity (kWh/AF)	*128.1*
Energy Intensity (kWh/MG)	*393.2*
NOTE: Based on metered water and energy use for CY2020	

The City joined the Clean Power Alliance (CPA) in December 2017. The CPA is a locally operated electricity provider across Los Angeles and Ventura counties, offering renewable energy at competitive rates. The CPA purchases clean power and SCE delivers it. Currently, the City uses approximately 50% renewable energy. An adjustment for renewable energy in the reporting table is only allowed if it is generated by the supplier. As such, this energy savings in not reflected in Table 6-10A.

7 WATER SUPPLY RELIABILITY ASSESSMENT

7.1 Overview

Every urban water supplier is required to assess the reliability of their water service to its customers under normal, dry, and multiple dry water years. Two of the most significant constraints on water supply for the City and for Southern California in recent years have been drought and Sacramento-San Joaquin River Delta ecosystem issues that affect imported water supply from the State Water Project. The City depends largely on imported water from Metropolitan with additional supply from local groundwater. With the projects and programs implemented by Metropolitan and the City, these water supplies are projected to meet full-service demands.

Metropolitan's 2020 UWMP finds that Metropolitan can meet, full-service demands of its member agencies from 2020 through 2045 during normal years, single dry years, and five consecutive dry years.

Metropolitan's 2020 UWMP was developed as part of the 2020 Integrated Water Resources Plan (IRP) planning process. The IRP represents Metropolitan's comprehensive blueprint for long-term water reliability, including key supply development and water use efficiency goals. Though the 2020 IRP document has not been released, the planning and agency coordination for both the UWMP and IRP are carried out concurrently. The information included in Metropolitan's 2020 UMWP represents the most current and available planning projections of supply capability and demand forecasts.

Metropolitan's 2020 UWMP and IRP update develop the core water resources that will be used to meet full-service demands at the retail level under foreseeable hydrologic conditions from 2020 through 2045. The foundation of Metropolitan's resource strategy for achieving regional water supply reliability has been to develop and implement water resources programs and activities through its IRP preferred resource mix. This preferred resource mix includes conservation, local resources such as water recycling and groundwater recovery, Colorado River supplies and transfers, SWP supplies and transfers, in-region surface reservoir storage, in-region groundwater storage, out-of-region banking, treatment, conveyance, and infrastructure improvements.

As documented in Metropolitans 2020 UWMP, the 2020 IRP incorporates an explicit scenario planning step with the purpose of understanding plausible, yet uncertain, future conditions affecting both supplies and demands, including climate change. This approach is an improvement over the single outcome approach used in previous IRP updates and in the UWMP requirements. Metropolitan's UWMP assumptions fall within the plausible future outcomes; however, the IRP goes beyond these requirements to prepare Metropolitan and its member agencies for a wider range of future conditions.

The City's water supply priorities of increasing reliability through conservation, local water, and other opportunities align with Metropolitan's priorities as described in their UWMP and IRP planning documents. Metropolitan addresses the changing water supply portfolio of their member agencies, including the City, as they see the reliance on imported water decreasing and member agencies continuing to prioritize conservation and local supplies. The benefit of this changing portfolio includes strengthening Metropolitan's emergency storage, thus providing increased reliability to its member agencies.

7.2 Factors Impacting Reliability

The Act requires a description of water supply reliability to seasonal or climatic shortage. Factors impacting the reliability of the City's imported and groundwater supplies are discussed in Chapter 6. The following are additional factors that may have an impact on the reliability of Metropolitan and local supplies.

7.2.1 Environment

Endangered species protection needs in the Delta have resulted in operational constraints to the SWP system, as discussed previously in the State Water Project Supplies Section 6.1.2. Metropolitan incorporates restrictions on both SWP and CVP operations in its water supply forecasting based on water quality objectives established by the State Water Resources Control Board, the biological opinions of the U.S. Fish and Wildlife Service and National Marine Fisheries Service issued on October 21, 2019, and the Incidental Take Permit issued by the California Department of Fish and Wildlife on March 31, 2020.

7.2.2 Regulatory

The addition of more species under the Endangered Species Act and new regulatory requirements could impact SWP operations by requiring additional export reductions, releases of additional water from storage or other operational changes impacting water supply operations.

An urban water supplier that anticipates participating in or receiving water from a proposed project (covered action) in the Delta should provide information in their 2015 and 2020 Urban Water Management Plans that can be used to demonstrate consistency with the Delta Plan Policy WR P1, Reduced Reliance on the Delta Through Improved Regional Water Self-Reliance.

The City receives water from the Delta through Metropolitan and could benefit from a future covered action. As such, Appendix H provides the analysis and documentation to demonstrate the City's improved regional self-reliance and measurable reduction in reliance on Delta water supplies, consistent with Delta Plan Policy WR P1, to support a certification of consistency for a future covered action. This appendix is also included as an addendum to the 2015 UWMP.

7.2.3 Climate Change Impacts

Water supply planning has largely been based on historical hydrological data as a foundation for both the severity and frequency of drought conditions and the frequency and abundance of above-normal rainfall years. Climate change threatens to shift weather patterns and thus adds uncertainty to water supply planning. Research has identified areas of concern regarding California water supply that include reduced Sierra Nevada snowpack, increased intensity of extreme weather events, prolonged drought periods, changes in runoff patterns, rising sea levels, and changes in water demand levels and patterns.

The City is considering the impacts of climate change on its water resources as an integral part of its long-term water supply planning. Though it is not possible to measure the risk associated with climate change, water supply reliability is more secure with a long-term plan that recognizes such risk and provides the development of resources to offset that risk.

Though groundwater provides a local source of supply, the City depends primarily on imported water from Metropolitan. Metropolitan continues to incorporate current climate change science into its planning efforts. Metropolitan has developed a Robust Decision Making (RDM) approach which is a comprehensive technical process to identify key vulnerabilities to regional reliability. This approach has been incorporated into the IRP process and Metropolitan's forecast modeling. Metropolitan assembled a panel of climate change experts to translate how specific climate change impacts would be quantified and to what degree in the IRP scenario approach. A wide range of water management strategies are evaluated to develop robust and adaptive plans that will ultimately perform under a wide range of future conditions. As such, climate change has been incorporated within the projected demands and availability of supplies to the City from Metropolitan.

In addition to Metropolitan's planning, increasing local sources will allow added flexibility to manage water supplies under varying climate conditions. Climate change impacts to the City and Metropolitan water supplies, including Metropolitan's activities related to climate change concerns, are also discussed in Section 4.7.

7.2.4 Water Quality

Imported Water

Metropolitan is responsible for providing high quality potable water throughout its service area. Regular water quality tests are performed on Metropolitan's water to test for regulated contaminants and additional contaminants of concern to ensure the safety of its waters. Metropolitan's supplies originate primarily from the CRA and from the SWP. A blend of these two sources, proportional to each year's availability of the source, is then delivered throughout Metropolitan's service area.

Metropolitan's primary water sources face individual water quality issues of concern. The CRA water source contains higher total dissolved solids (TDS) and the SWP contains higher levels of organic matter, lending to the formation of disinfection byproducts. To remediate the CRA's high level of salinity and the SWP's high level of organic matter, Metropolitan blends CRA and SWP supplies and has upgraded all its treatment facilities to include ozone treatment processes. In addition, Metropolitan has been engaged in efforts to protect its Colorado River supplies from threats of uranium, perchlorate, and chromium VI while also investigating the potential water quality impact of emerging contaminants, N-nitrosodimethylamine (NDMA), and pharmaceuticals and personal care products (PPCP). While unforeseeable water quality issues could alter reliability, Metropolitan's current strategies ensure the deliverability of high-quality water.

The presence of Quagga mussels in water sources is a water quality concern. Quagga mussels are an invasive species that was first discovered in 2007 at Lake Mead, on the Colorado River. This species of mussels forms massive colonies in short periods of time, disrupting ecosystems and blocking water intakes. They can cause significant disruption and damage to water distribution systems. Controlling the spread and impacts of this invasive species within the CRA requires extensive maintenance and results in reduced operational flexibility. It also resulted in Metropolitan eliminating deliveries of CRA water into Diamond Valley Lake (DVL) to keep the reservoir free from Quagga mussels.

Groundwater

Groundwater from the City's wells will be treated at the Foothill WTP before being distributed to the water system. The Foothill WTP is currently offline and in the construction phase for a pretreatment system with plans to be online by Fall 2021. The City has coordinated with the State Division of Drinking Water (DDW) in the rehabilitation of the Foothill WTP. DDW's primary involvement will be during plant startup when water treatment compliance and sampling results are verified by their staff, prior to issuance of the Permit To Operate. The treated groundwater will then be blended with imported water from Metropolitan. The City conducts extensive water quality sampling and testing to ensure the water supply meets all state and federal water quality standards.

The most recent detailed discussion on groundwater quality for City-owned wells is by Geotechnical Consultants Inc (GTC 1975). At that time, GTC obtained data from then-current and previously-destroyed wells in both Hollywood Basin and the La Brea Subarea to the south. This data is included in the Technical Memorandum by Richard C. Slade and Associates (RCS 2020) in Appendix D of the IWRMP.

7.3 Water Service Reliability

7.3.1 Normal-Year Reliability Comparison

There are three water-year types that must be included in the water service reliability assessment for the UWMP: normal year, single-dry year, and a five-consecutive-year drought. Metropolitan developed and evaluated estimates of future demands and supplies based on a record of 96 years (1922-2017) of historic hydrology. In their Draft 2020 UWMP dated April 2021, Metropolitan estimated supply capability and projected demands for an average (normal) year based on an average of hydrologies for the years 1922 to 2017; for a single dry-year based on a repeat of the single driest year hydrology of 1977; and for a five-consecutive-year drought period based on a repeat of the hydrology of 1988 to 1992, representing the driest 5-year historical sequence in Metropolitan water supply.

Metropolitan's member agencies, including the City of Beverly Hills, provide Metropolitan with projected demands and local sources of supply, including local groundwater. Regional water demands and local supplies for the three water-year types are then modeled by Metropolitan for the UWMP planning period and are summarized in Tables 2-1, 2-2, and 2-3 of their 2020 UWMP. Metropolitan modeling takes into consideration historical drought hydrology, projected supplies and demands under climate change conditions, and anticipated regulatory changes. The resulting demands on Metropolitan and their supply capabilities are summarized in Tables 2-4, 2-5, and 2-6 of their 2020 UWMP for each of the water-year types through 2045. Metropolitan supply capability tables are included in Appendix D of this report for reference.

Tables 2-3 and 2-6 from Metropolitan's 2020 UWMP summarize the regional demand and demonstrate reliable water supply capability under normal water year conditions through year 2045. As shown in Table 2-6, Metropolitan projects surplus supply through the entire UWMP planning period.

The City is 100 percent reliable for normal year demands from 2025 through 2045. The City has entitlements to receive imported water from Metropolitan via connections to Metropolitan's regional distribution system. Although pipeline and connection capacity rights do not guarantee the availability of water, per se, they do guarantee the ability to convey water when it is available to the Metropolitan distribution system. All imported water supplies are assumed available to the City from existing water transmission facilities. The projected City supplies also include local groundwater supplies that are available from City wells.

7.3.2 Single-Dry Year Reliability Comparison

A single-dry year is defined as a single year of minimal rainfall within a period that average precipitation is expected to occur. Table 2-1 from Metropolitan's 2020 UWMP summarizes the regional demand and local sources of supply and for the single dry-year (1977) hydrology, while Table 2-4 shows the Metropolitan's supply capability to under single dry-year conditions through year 2045. As seen in Table 2-4, Metropolitan projects surplus supply under single dry-year conditions through the entire UWMP planning period.

Metropolitan also provided the model output of the reliability forecast for Beverly Hills which is used in this UWMP. Based on a comparison of the City's normal year and single-dry year demand data provided by Metropolitan, the single dry-year demand (1977 hydrology) is equal to 100 percent of the normal year demand as provided in Table 7-1 below. The City is 100 percent reliable for single dry-year demands from 2025 through 2045 with significant reserves held by Metropolitan, local groundwater supplies, and conservation.

7.3.3 Five Consecutive Dry Years Reliability Comparison

The multiple-dry years evaluation for the 2020 UWMP is defined as five consecutive years with minimal rainfall within a period of average precipitation. Metropolitan modeled various hydrologic conditions for its service area, including individual member agencies, based on hydrology for the period from 1922 through 2017. The driest five consecutive year period within this time period was from 1988 through 1992. Metropolitan provided the reliability forecast data for Beverly Hills which is used in this UWMP to evaluate five-consecutive dry years. Metropolitan shows 100% supply reliability to the City of Beverly Hills with the percent of normal year supply and demand for each year provided in Table 7-1 below.

Metropolitan's UWMP Table 2-5 shows regional supply reliability for five-consecutive-dry year periods through 2045 . These tables show that the region can provide reliable water supplies under multiple dry year conditions with projected surplus in each of the five-year periods.

The City is capable of meeting all customers' demands with significant reserves held by Metropolitan, local groundwater supplies, and conservation in multiple dry years from 2025 through 2045 with multiple dry-year reliability based on Metropolitan's five consecutive dry year hydrology. In actuality, demands would likely decrease toward the end of a five-year dry period due to potential mandated conservation. The assumptions used in the multiple dry-year analysis are conservative to demonstrate the reliability of supplies. The basis of the water year data is displayed in Table 7-1. The available supply shown in Table 7-1 does not include Metropolitan-estimated surplus but is rather the supply to meet projected demands based on projected 100 percent reliability.

Table 7-1: Basis of Water Year Data

Basis of Water Year Data			
Year Type	**Base Year**	**Available Supplies if Year Type Repeats**	
		☐	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location ____________
		☑	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
			% of Average Supply
Average Year	1922-2017		100%
Single-Dry Year	1977		100%
Consecutive Dry Years 1st Year	1988		101%
Consecutive Dry Years 2nd Year	1989		102%
Consecutive Dry Years 3rd Year	1990		103%
Consecutive Dry Years 4th Year	1991		99%
Consecutive Dry Years 5th Year	1992		100%
NOTES: Based on hydrology provided in Metropolitan's 2020 UWMP			

7.3.4 Supply Diversification

As previously stated herein, the City has historically relied primarily on imported water supply, with groundwater production used as a secondary supply source. Although imported water has proven to be reliable and cost effective relative to local groundwater production, and is projected to remain reliable as evidenced by the projected supply surpluses estimated by Metropolitan (see Table 7-2A), the ongoing concern of drought and climate change has increased the need for the City to develop additional water supply reliability through improved and increased groundwater production.

For projected supplies, local groundwater production within the City is being expanded by the renovation of the Foothill WTP and the construction of new wells. When the Foothill WTP was operating between 2004 and 2014, groundwater supply averaged 8 percent of the total supply. After the enhancements to groundwater production facilities, future groundwater supply is expected to increase to 25 percent of the total supply by 2025. The City's projected groundwater supplies are within the safe yield of the groundwater basins and are considered reliable under projected hydrologic conditions. The City continues to investigate and pursue increased groundwater production and other options to expand local water supply sources as described in Chapter 6.

Metropolitan's Integrated Resources Planning (IRP) process guides their water resources strategy from the initial adoption in 1996 to the latest update in 2020. Metropolitan's efforts in developing a diverse resource mix and long-term reliability focus on the following:

- Continuing water conservation
- Developing water supply management programs outside of the region
- Developing storage programs related to the SWP and the Colorado River
- Developing storage and groundwater management programs within the Southern California region
- Increasing water recycling, groundwater recovery, stormwater, and seawater desalination
- Pursuing long-term solutions for the ecosystem, regulatory and water supply issues in the California Bay-Delta

Metropolitan has supply capabilities to meet projected demands during various hydrologic conditions as presented in Sections 2.3 and 2.4 of their 2020 UWMP. As shown in their water reliability assessment, Metropolitan anticipates being able to meet water demands with adequate supplies across the single driest year and droughts lasting five consecutive year through 2045 as summarized in Table 7-2A. Metropolitan's Drought Risk Assessment anticipates no water service reliability concerns or shortfall mitigation measures will be needed over the next five years under a repeat of the historic driest five-year sequence of Metropolitan's water supply.

Table 7-2A: Metropolitan Supply Capability and Projected Demands (AFY)

Metropolitan Supply Capability and Projected Demands (AFY)					
Single Dry Year MWD Supply Capability and Projected Demands (1977 Hydrology)					
Fiscal Year	**2025**	**2030**	**2035**	**2040**	**2045**
Capability of Current Supplies	2,696,000	2,760,000	2,435,500	2,759,000	2,479,500
Projected Demands	1,597,000	1,548,000	1,505,000	1,524,000	1,551,000
Projected Surplus	1,099,000	1,212,000	930,500	1,235,000	928,500
Projected Surplus %(a)	69%	78%	62%	81%	60%
Supplies under Development	0	0	0	0	0
Potential Surplus	1,099,000	1,212,000	930,500	1,235,000	928,500
Potential Surplus %(a)	69%	78%	62%	81%	60%
Multiple Dry Year MWD Supply Capability and Projected Demands (1988 1992 Hydrology)					
Fiscal Year	**2025**	**2030**	**2035**	**2040**	**2045**
Capability of Current Supplies	2,161,800	2,214,000	2,236,000	2,259,000	2,239,000
Projected Demands	1,629,000	1,610,000	1,575,000	1,568,000	1,591,000
Projected Surplus	532,800	604,000	661,000	691,000	648,000
Projected Surplus %(a)	33%	38%	42%	44%	41%
Supplies under Development	0	0	0	0	0
Potential Surplus	532,800	604,000	661,000	691,000	648,000
Potential Surplus %(a)	33%	38%	42%	44%	41%
Average Year MWD Supply Capability and Projected Demands (1922 2017 Hydrology)					
Fiscal Year	**2025**	**2030**	**2035**	**2040**	**2045**
Capability of Current Supplies	3,863,000	3,892,000	3,888,000	3,867,000	3,883,000
Projected Demands	1,469,000	1,420,000	1,379,000	1,394,000	1,418,000
Projected Surplus	2,394,000	2,472,000	2,509,000	2,473,000	2,465,000
Projected Surplus %(a)	163%	174%	182%	177%	174%
Supplies under Development	13,000	13,000	13,000	13,000	13,000
Potential Surplus	2,407,000	2,485,000	2,522,000	2,486,000	2,478,000
Potential Surplus %(a)	164%	175%	183%	178%	175%

(a) As a percentage of projected demand

(b) Total demands are adjusted to include IID-SDCWA transfer and exchange and canal lining. These supplies are calculated as local supplies but shown for CRA capacity limit calculations

Source: 2020 Draft Metropolitan Urban Water Management Plan (April 2021)

7.4 Supply and Demand Assessment

A comparison between the supply and demand for projected normal years between 2025 and 2045 is shown in Table 7.2. The City's projected normal-year supplies and demands shown in Table 7-2 are developed in Table 6-9 and Table 4-3, respectively.

Table 7-2: Normal Year Supply and Demand Comparison

Retail: Normal Year Supply and Demand Comparison (AFY)					
	2025	**2030**	**2035**	**2040**	**2045**
Supply totals ***(autofill from Table 6-9)***	11,933	12,131	12,340	12,582	12,768
Demand totals ***(autofill from Table 4-3)***	11,933	12,131	12,340	12,582	12,768
Difference	0	0	0	0	0

A comparison between the supply and the demand in a single dry year and multiple dry years are shown in Tables 7-3 and 7-4, respectively. Demands are estimated for single dry-year and multiple dry-year supply scenarios by multiplying normal year demand by the percentages provided in Table 7-1.

Table 7-3: Single Dry Year Supply and Demand Comparison

Single Dry Year Supply and Demand Comparison (AFY)					
	2025	**2030**	**2035**	**2040**	**2045**
Supply totals	11,933	12,131	12,340	12,582	12,768
Demand totals	11,933	12,131	12,340	12,582	12,768
Difference	0	0	0	0	0
NOTES: Supply and demand equal to percentage shown in Table 7-1 for single-dry year times normal year values shown in Table 7-2.					

Table 7-4: Multiple Dry Years Supply and Demand Comparison

Multiple Dry Years Supply and Demand Comparison (AFY)						
		2025	**2030**	**2035**	**2040**	**2045**
First year	Supply totals	12,064	12,264	12,476	12,720	12,908
	Demand totals	12,064	12,264	12,476	12,720	12,908
	Difference	0	0	0	0	0
Second year	Supply totals	12,219	12,422	12,636	12,884	13,074
	Demand totals	12,219	12,422	12,636	12,884	13,074
	Difference	0	0	0	0	0
Third year	Supply totals	12,255	12,459	12,673	12,922	13,113
	Demand totals	12,255	12,459	12,673	12,922	13,113
	Difference	0	0	0	0	0
Fourth year	Supply totals	11,826	12,022	12,229	12,469	12,653
	Demand totals	11,826	12,022	12,229	12,469	12,653
	Difference	0	0	0	0	0
Fifth year	Supply totals	11,969	12,167	12,377	12,620	12,806
	Demand totals	11,969	12,167	12,377	12,620	12,806
	Difference	0	0	0	0	0
NOTES: Supply and demand equal to percentages shown in Table 7-1 for each year times normal year values shown in Table 7-2.						

City demands during single dry-year and multiple dry-year supply scenarios are projected to be met with imported water and groundwater supplies as shown in Table 7-4A, with available Metropolitan surplus supplies as shown in Table 7-2A. Supplies from groundwater remain the same for dry years as under normal year conditions with any variation in supply met by Metropolitan. The five-consecutive drought years are averaged in Table 7-4A as a summary of the prolonged drought condition.

Table 7-4A: Projected City Water Supplies

Projected City Water Supplies						
Water Supply	Additional Detail	Projected Water Supply (AFY)				
		2025	2030	2035	2040	2045
Projected Normal-Year Supplies						
Imported Water	Metropolitan	8,981	8,804	9,013	9,255	9,441
Groundwater	Local Basins	2,952	3,327	3,327	3,327	3,327
Total		11,933	12,131	12,340	12,582	12,768
Projected Single-Dry Year						
Imported Water	Metropolitan	8,981	8,804	9,013	9,255	9,441
Groundwater	Local Basins	2,952	3,327	3,327	3,327	3,327
Total		11,933	12,131	12,340	12,582	12,768
Projected Five Consecutive Drought Years						
Imported Water	Metropolitan	9,115	8,940	9,151	9,396	9,584
Groundwater	Local Basins	2,952	3,327	3,327	3,327	3,327
Total		12,067	12,267	12,478	12,723	12,911
NOTES: Projected five consecutive drought years is equal to the five-year average.						

7.5 Drought Risk Assessment

CWC requires every urban water supplier to include, as part of its UWMP, a drought risk assessment (DRA) for its water service as part of information considered in developing its demand management measures and water supply projects and programs. The DRA allows suppliers to consider how to manage water supplies during dry hydrologic conditions in relation to variations in demand. This process helps a supplier evaluate its WSCP and anticipate appropriate shortage response actions prior to an actual extended drought period.

The CWC requires the DRA to be based on the driest five-year historic sequence for the agency's water supply. The Water Code also requires that the analysis consider plausible changes in projected supplies and demands due to climate change, anticipated regulatory changes, and other applicable criteria.

The five-year drought period for the DRA is estimated in the same manner as the multiple dry year analysis in the supply and demand assessment presented in Section 7.4. The drought is represented based on the five driest years using hydrology from Metropolitan shown in Table 7-1. Metropolitan modeling takes into consideration historical drought hydrology, projected supplies and demands under climate change conditions, and anticipated regulatory changes. The dry year unconstrained demand is estimated as a percentage of the normal year demand for the same period. The normal year demand forecast is described in Chapter 4 and is based on local agency and SCAG demographic projections and existing baseline conservation. The normal year demand for the intermediate years between 2020 and 2025 were calculated as discussed in Chapter 4 and shown in Table 4-1D.

Water supply characterization and reliability is discussed in Chapter 6. Groundwater supplies are anticipated to come online beginning in 2022 with production increasing through the DRA planning period to 2025. The increase in local groundwater will allow for a reduction in imported supplies from Metropolitan. Table 7-5A shows the summary of supply and demand for the DRA period from 2021 to 2025.

Table 7-5A: DRA Supply & Demand by Source

DRA Supply & Demand by Source					
Demand	**2021**	**2022**	**2023**	**2024**	**2025**
Normal Year Demand	10,053	10,523	10,993	11,463	11,933
Dry-year hydrology	101.1%	102.4%	102.7%	99.1%	100.3%
DRA Demand	10,164	10,776	11,290	11,360	11,969
Supply	**2021**	**2022**	**2023**	**2024**	**2025**
Groundwater	0	1,771	2,576	2,576	2,952
Imported Water	10,164	9,005	8,714	8,784	9,017
DRA Supply	10,164	10,776	11,290	11,360	11,969

Metropolitan projects sufficient supply to meet demands over the next five years under both normal conditions and drought conditions. The Metropolitan DRA demonstrates surplus supply over the five-year period. The City’s DRA is presented in Table 7-5 which demonstrates water supply reliability during the long-term drought scenario that occurs over the next five years. No water shortage is projected that would trigger Water Shortage Contingency Plan Actions (discussed in Chapter 8). This DRA will be modified as needed during interim periods between each UWMP should information become available that changes the forecasted supply.

Table 7-5: Five-Year Drought Risk Assessment

Five Year Drought Risk Assessment	
2021	**Total**
Gross Water Use	10,164
Total Supplies	10,164
Surplus/Shortfall w/o WSCP Action	0
Planned WSCP Actions	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	0
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	0%
2022	**Total**
Gross Water Use	10,776
Total Supplies	10,776
Surplus/Shortfall w/o WSCP Action	0
Planned WSCP Actions	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	0
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	0%
2023	**Total**
Gross Water Use	11,290
Total Supplies	11,290
Surplus/Shortfall w/o WSCP Action	0
Planned WSCP Actions	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	0
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	0%
2024	**Total**
Gross Water Use	11,360
Total Supplies	11,360
Surplus/Shortfall w/o WSCP Action	0
Planned WSCP Actions	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	0
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	0%
2025	**Total**
Gross Water Use	11,969
Total Supplies	11,969
Surplus/Shortfall w/o WSCP Action	0
Planned WSCP Actions	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	0
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	0%

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8 WATER SHORTAGE CONTINGENCY PLANNING

Water supplies may be interrupted or reduced by droughts, earthquakes, and power outages which hinder a water agency's ability to effectively deliver water. Drought impacts increase with the length of a drought, as supplies in reservoirs and other storage programs are depleted and water levels in groundwater basins decline. The ability to manage water supplies in times of drought or other emergencies is an important part of water resource management for a community. In anticipation of such water supply challenges; the Water Code requires suppliers to prepare and adopt a Water Shortage Contingency Plan (WSCP), which includes water shortage response actions that they would take in response to six standard levels of water shortage. This WSCP describes the water supply shortage policies the City has in place to respond to events including reductions and catastrophic interruption in water supply.

8.1 Water Supply Reliability Analysis

The City obtains its water supply from two sources: imported surface water purchased from Metropolitan and local groundwater extracted from the local Hollywood Basin and, with the construction of a new well by 2022, the La Brea Subarea of the Central Groundwater Basin. The imported water is treated by Metropolitan and the groundwater is treated at the City's Foothill WTP before being distributed to the City's water system. The Foothill WTP is currently offline and in the construction phase for a pretreatment system with plans to be online by late 2021. As such, current water demands are being met by imported water from Metropolitan.

Every urban water supplier is required to assess the reliability of their water service to its customers under normal, dry, and five consecutive dry water years. There are various factors that may impact reliability of supplies such as environmental, regulatory, water quality and climatic, which are discussed in Section 7.2 of the 2020 UWMP.

Imported water supplies are subject to demand increases and reduced supplies during dry years. However, Metropolitan modeling in its draft 2020 UWMP, as referenced in Section 7, results in 100 percent reliability for full-service demands through the year 2045 for all climatic conditions. Based on the conditions described above, the City anticipates the ability to meet water demand for all climatic conditions for the near future. In addition, the natural replenishment of the local groundwater basins from surface and subsurface flows (in addition to percolation from precipitation) and available groundwater storage provide a local source of supply and moderate dry season supply protection.

The combination of projects and programs implemented by Metropolitan and the City provide for reliable water supplies that are projected to meet full-service demands. The long-term supply and demand assessment to year 2045 is included in Section 7.3 of the UWMP with the results summarized in Table 8-1A below (UWMP Submittal Tables 7.2, 7.3, and 7.4). As shown, the City anticipates being able to meet water demand with adequate supplies through the year 2045 under normal, single dry, and multiple dry year conditions. The Drought Risk Assessment (DRA) for the next five years is included in Section 7.5 of the UWMP with the results of the analysis summarized in Table 8-1B. There are no shortages projected if a drought were to occur over the next five years, thus it is anticipated that shortfall mitigation measures will not be needed.

8.2 Annual Water Supply and Demand Assessment Procedures

Beginning in 2022, each supplier is required to prepare and submit to DWR an Annual Water Supply and Demand Assessment (Annual Assessment) on or before July 1 of each year. The Annual Assessment and associated reporting are to be conducted based on procedures outlined in this section.

8.2.1 Decision-Making Process

The Annual Assessment will be prepared by the City's Water Utility and presented to the Director of Public Works and the City Public Works Commission for approval. A presentation will be given of the assessment and any recommended shortage response actions resulting from the assessment.

During the Annual Assessment, or any unexpected water shortage period, the Water Utility will determine the extent of the conservation required based on water supply availability from its groundwater and imported water sources. As a Metropolitan member agency, the City will also follow Metropolitan's adopted WSDM Plan. Depending on the severity of the water shortage, the Department will recommend the adoption of a water reduction plan in the City's Emergency Water Conservation Plan, last updated by Ordinance 20-O-2819 (effective October 16, 2020) that is necessary to address the level of water shortage. The Emergency Water Conservation Ordinance was adopted and updated by the City Council to address the 2014 and 2015 State-mandated water conservation regulations. The water shortage stages are described in Section 8.4. The City Public Works Commission will be requested to vote to approve the Annual Assessment and any associated actions.

By the month of June, Metropolitan staff will present its completed Annual Assessment for approval by Metropolitan's Board of Directors along with any recommended specific shortage response actions resulting from the assessment. As a member agency, the City will incorporate Metropolitan's analysis and response actions into its Annual Assessment if the information is available prior to the approval deadline by the Public Works Commission for delivery to DWR by July 1.

The Annual Assessment process will begin in January with the evaluation of supply and demand data and of current water supply conditions. The analysis will be reviewed by the Water Utility to determine any necessary shortage response actions by the end April. The Annual Assessment Report will be completed and presented to the City Public Works Commission for approval by June for submittal to DWR by the July 1 deadline. See Table 8-1A below for procedures and timeline.

Table 8-1A: Annual Assessment Timeline and Procedures

Annual Assessment Timeline and Procedures	
Month(s)	**Activities**
Data Phase	
Jan-Feb	Collect water supply by source for current year: Describe and quantify sources by provider along with any current constraints and related adjustments
Jan-Feb	Determine unconstrained water demand for current year: Describe and quantify demand and any influencing factors on demand along with related adjustments
Jan-Mar	Quantify "Dry Year" supplies and demands based on historical hydrologic data and input from Metropolitan and OCWD/MWDOC
Feb-Mar	Calculate the water supply reliability by comparing expected dry year supplies and demands to identify potential shortage.
Feb-Apr	Determine any shortage and related actions
Decision Phase	
Apr	If shortages are determined, use WSCP to activate protocol: water shortage response actions based on shortage level
May	Draft Annual Assessment Report including water shortage response actions as needed
Jun	Present report and shortage response actions to City Public Works Commission for approval
1-Jul	Send Final Annual Assessment Report to DWR
As Needed	Implement water shortage response actions as required

8.2.2 Data and Methodologies

The purpose of the Annual Assessment is to evaluate the water supply reliability for the coming year by conservatively assuming conditions will be dry and to determine how a perceived shortage may relate to WSCP shortage stage response actions. This information will be based on information available to the City at the time of the analysis. The Annual Assessment will utilize information from Metropolitan and current groundwater conditions for the expected supply of imported water and groundwater, respectively. The assessment will also consider the unconstrained water demand, planned water use, and infrastructure conditions. The analysis will look at current year water supply and demand conditions and assumed dry year conditions for the following year. The conditions of what defines a dry year will be determined based on current information from Metropolitan and will likely involve historic hydrology as is typically used in the dry-year analysis for the UWMP. The balance between projected water supplies and anticipated demand will be used to determine, what, if any, shortage stage is expected under the WSCP framework.

The following steps outline the procedures for completing the Annual Assessment:

1. Water Supply - Quantify water supply by each source for the current year and anticipated supply for the subsequent year. The City will rely on coordination with Metropolitan for projected imported supply availability.

2. Unconstrained Water Demands - Quantify unconstrained customer demand for the current year and one year to follow. Use current year water demand by sector (available from monthly billing data) and adjust as needed to account for weather, prior-year conditions, anticipated new demands for the coming year, and any other factors pertinent to the land use and customer use patterns.

3. Subsequent Dry Year Analysis - Determine how the following year's supply and demand quantities will be impacted anticipating that the year will be dry. Determine dry year conditions using methods similar to those used in the UWMP which consider historical hydrology, data from Metropolitan, and any additional sources available at the time.

4. Infrastructure Considerations - Evaluate infrastructure capabilities and any constraints within the City, Metropolitan, and groundwater supplies that may affect the ability to deliver supplies to meet expected demand in the coming year, including anticipated capital improvement projects.

5. Other Factors - Address any other applicable factors that can influence or disrupt supplies.

6. Evaluation - Compare the anticipated supply and demand that have been calculated for the following year assuming dry conditions to determine any potential shortage in supply and the appropriate response action as developed in the WSCP.

The steps above will be documented with supporting text including coordination with other agencies, sources of data, and assumptions.

8.3 Six Standard Water Shortage Levels

The WSCP is framed around six standard shortage levels that correspond to progressive ranges of up to 10, 20, 30, 40, and 50 percent shortages, and greater than 50 percent shortages. Each of the six shortage levels represents an increasing gap between the City's estimated supplies and the unconstrained demand as determined in the Annual Assessment or the gap between supply and demand at any time due to an unforeseen event that interrupts water supplies. A supplier's existing water shortage contingency plan that uses different water shortage levels may comply with these six levels by developing a cross-reference relating the existing categories to the six standard water shortage levels. The City has five existing shortage level categories, included in its Emergency Water Conservation Plan, that will be utilized in this WSCP and cross-referenced to the standard six levels. Table 8-1B shows a graphic of the City's adopted water shortage levels and their relationship to the six standard water shortage levels prescribed by the Water Code.

Table 8-1B: Cross-reference of City and State Standard Shortage Levels

Water Shortage Contingency Plan Levels				
State Standard Levels		**Beverly Hills Corresponding Shortage Levels**		
Shortage Level	Percent Shortage Range	Beverly Hills Shortage Level	Supply Reduction	Water Supply Condition
1	Up to 10%	A	5%	A stage A shortage shall be declared when the city manager determines that a five percent (5%) reduction in potable water use is required
		B	10%	A stage B shortage shall be declared when the city manager determines that a ten percent (10%) reduction in potable water use is required
2	Up to 20%	C	20%	A stage C shortage shall be declared when the city manager determines that a twenty percent (20%) reduction in potable water use is required
3	Up to 30%	D	30%	A stage D shortage shall be declared when the city manager determines that a thirty percent (30%) or higher reduction in potable water use is required.
4	Up to 40%			
5	Up to 50%	E	50%	A stage E shortage shall be declared when the city manager determines that a catastrophic interruption of potable water supply has occurred or is foreseen
6	>50%	E & ERP	>50%	A stage E shortage plus activation of Emergency Response Plan

8.4 Shortage Response Actions

CWC directs that the WSCP contain shortage response actions that align with the defined shortage levels, and include:

- Supply Augmentation Actions
- Demand Reduction Actions
- Operational Changes
- Additional, mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions and appropriate to the local conditions
- An estimate of the extent to which the gap between supplies and demand will be reduced by implementation of each action

8.4.1 Metropolitan Water Shortage Contingency Plan

The City relies on imported water from Metropolitan. Metropolitan's WSCP describes preparedness and response actions for droughts and other impacts on water supplies and outlines the measures to manage and mitigate water shortage. A copy of Metropolitan's WSCP is included in Appendix 4 of their 2020 UWMP. As a member agency, the City will coordinate and cooperate with programs implemented by Metropolitan in response to water shortages.

Table 8-1C (Table A.4-5, Metropolitan WSCP) indicates Metropolitan's shortage responses to meet the circumstance for the six shortage levels defined by DWR. Metropolitan's planning involves a complex mix of variables. To determine specific actions at each standard shortage level, Metropolitan will evaluate conditions specific to cost, timing, distribution needs and capabilities, and other variables that include SWP allocation, Colorado River conditions, demand reduction measures, supply program take capacities, and storage balances.

Table 8-1C: Metropolitan Water Shortage Contingency Plan Shortage Levels

Metropolitan WSCP Shortage Stages and Response Actions			
Shortage Stage	Shortage Percentage	Shortage Response	
1	Up to 10%	Take from Storage Execute Flexible Supplies Implement Voluntary Demand Reduction Implement Water Supply Allocation Plan	• 0 to 100% met by Storage • 0 to 100% met by Flexible Supplies • 0 to 20% of total retail water use met by implementing Communication Plan • 0 to 50% of total base demand met by WSAP supply allocation
2	10% to 20%	Take from Storage Execute Flexible Supplies Implement Voluntary Demand Reduction Implement Water Supply Allocation Plan	• 0 to 100% met by Storage • 0 to 100% met by Flexible Supplies • 0 to 20% of total retail water use met by implementing Communication Plan • 0 to 50% of total base demand met by WSAP supply allocation
3	20% to 30%	Take from Storage Execute Flexible Supplies Implement Voluntary Demand Reduction Implement Water Supply Allocation Plan	• 0 to 100% met by Storage • 0 to 100% met by Flexible Supplies • 0 to 20% of total retail water use met by implementing Communication Plan • 0 to 50% of total base demand met by WSAP supply allocation
4	30% to 40%	Take from Storage Execute Flexible Supplies Implement Voluntary Demand Reduction Implement Water Supply Allocation Plan	• 0 to 100% met by Storage • 0 to 100% met by Flexible Supplies • 0 to 20% of total retail water use met by implementing Communication Plan • 0 to 50% of total base demand met by WSAP supply allocation
5	40% to 50%	Take from Storage Execute Flexible Supplies Implement Voluntary Demand Reduction Implement Water Supply Allocation Plan	• 0 to 100% met by Storage • 0 to 100% met by Flexible Supplies • 0 to 20% of total retail water use met by implementing Communication Plan • 0 to 50% of total base demand met by WSAP supply allocation
6	More than 50%	Take from Storage Execute Flexible Supplies Implement Voluntary Demand Reduction Implement Water Supply Allocation Plan	• 0 to 100% met by Storage • 0 to 100% met by Flexible Supplies • 0 to 20% of total retail water use met by implementing Communication Plan • 0 to 50% of total base demand met by WSAP supply allocation • Take from emergency storage during a catastrophic event

Metropolitan's WSCP is designed to be consistent with their previously adopted Water Surplus and Drought Management (WSDM) and Water Supply Allocation Plan (WSAP) described below.

Metropolitan Water Surplus and Drought Management Plan

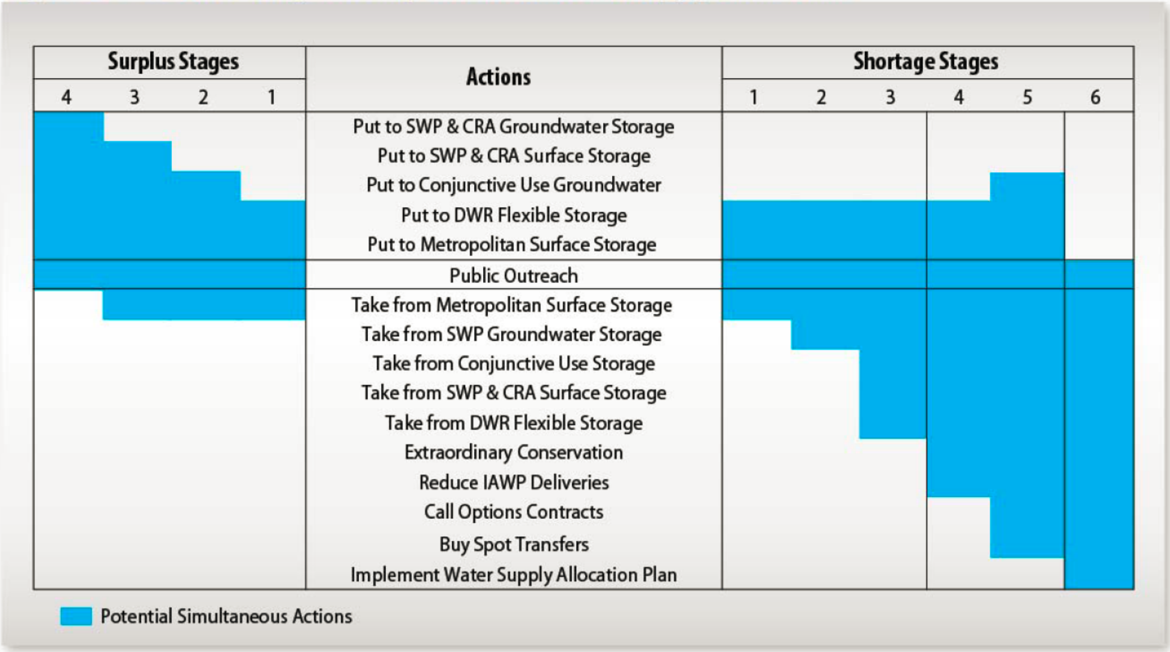
Metropolitan evaluates the level of supplies available and existing levels of water in storage to determine the appropriate management stage annually. Each stage is associated with specific resource management actions to avoid extreme shortages to the extent possible and minimize adverse impacts to retail customers should an extreme shortage occur. The sequencing outlined in the WSDM Plan reflects anticipated responses towards Metropolitan's existing and expected resource mix.

Surplus stages occur when net annual deliveries can be made to water storage programs. Under the WSDM Plan, there are four surplus management stages that provides a framework for actions to take for surplus supplies. Deliveries in Diamond Valley Lake (DVL) and in SWP terminal reservoirs continue through each surplus stage provided there is available storage capacity. Withdrawals from DVL for regulatory purposes or to meet seasonal demands may occur in any stage.

The WSDM Plan distinguishes between shortages, severe shortages, and extreme shortages. The differences between each term is listed below.

- Shortage: Metropolitan can meet full-service demands and partially meet or fully meet interruptible demands using stored water or water transfers as necessary
- Severe Shortage: Metropolitan can meet full-service demands only by using stored water, transfers, and possibly calling for extraordinary conservation
- Extreme Shortage: Metropolitan must allocate available supply to full-service customers

There are six shortage management stages to guide resource management activities. These stages are defined by shortfalls in imported supply and water balances in Metropolitan's storage programs. When Metropolitan must make net withdrawals from storage to meet demands, it is considered to be in a shortage condition. Figure 8-2 gives a summary of actions under each surplus and shortage stage as well as when an allocation plan is necessary to enforce mandatory cutbacks. The goal of the WSDM Plan is to avoid Stage 6, an extreme shortage. Metropolitan supply is only reduced under extreme shortage conditions.



Surplus Stages				**Actions**	**Shortage Stages**					
4	3	2	1		1	2	3	4	5	6
🟦				Put to SWP & CRA Groundwater Storage						
🟦	🟦			Put to SWP & CRA Surface Storage						
🟦	🟦	🟦		Put to Conjunctive Use Groundwater					🟦	
🟦	🟦	🟦	🟦	Put to DWR Flexible Storage	🟦	🟦	🟦	🟦	🟦	
🟦	🟦	🟦	🟦	Put to Metropolitan Surface Storage	🟦	🟦	🟦	🟦	🟦	
🟦	🟦	🟦	🟦	Public Outreach	🟦	🟦	🟦	🟦	🟦	🟦
	🟦	🟦	🟦	Take from Metropolitan Surface Storage	🟦	🟦	🟦	🟦	🟦	🟦
				Take from SWP Groundwater Storage		🟦	🟦	🟦	🟦	🟦
				Take from Conjunctive Use Storage			🟦	🟦	🟦	🟦
				Take from SWP & CRA Surface Storage			🟦	🟦	🟦	🟦
				Take from DWR Flexible Storage			🟦	🟦	🟦	🟦
				Extraordinary Conservation				🟦	🟦	🟦
				Reduce IAWP Deliveries				🟦	🟦	🟦
				Call Options Contracts					🟦	🟦
				Buy Spot Transfers					🟦	🟦
				Implement Water Supply Allocation Plan						🟦

🟦 Potential Simultaneous Actions

Figure 8-2: Metropolitan Resource Stages, Anticipated Actions, and Supply Declarations

Metropolitan's Board of Directors adopted a Water Supply Condition Framework in June 2008 to communicate the urgency of the region's water supply situation and the need for further water conservation practices. The framework has four conditions, each calling for increasing levels of conservation. Descriptions for each of the four conditions are listed below:

- Baseline Water Use Efficiency: Ongoing conservation, outreach, and recycling programs to achieve permanent reductions in water use and build storage reserves
- Condition 1 Water Supply Watch: Local agency voluntary dry-year conservation measures and use of regional storage reserves
- Condition 2 Water Supply Alert: Regional call for cities, counties, member agencies, and retail water agencies to implement extraordinary conservation through drought ordinances and other measures to mitigate use of storage reserves
- Condition 3 Water Supply Allocation: Implement Metropolitan's WSAP

As noted in Condition 3, should supplies become limited to the point where imported water demands cannot be met, Metropolitan will allocate water through the WSAP.

Metropolitan Water Supply Allocation Plan

Metropolitan's Board of Directors adopted the WSAP in February 2008 to fairly distribute a limited amount of water supply and applies it through a detailed methodology to reflect a range of local conditions and needs of the region's retail water consumers.

Metropolitan's WSAP was developed in consideration of the principles and guidelines in Metropolitan's 1999 WSDM Plan with the core objective of creating an equitable "needs-based allocation". The WSAP's formula seeks to balance the impacts of a shortage at the retail level while maintaining equity on the wholesale level for shortages of Metropolitan supplies of up to 50 percent. The formula takes into account a number of factors, such as the impact on retail customers, growth in population, changes in supply conditions, investments in local resources, demand hardening aspects of water conservation savings, recycled water, extraordinary storage and transfer actions, and groundwater imported water needs.

In order to implement the WSAP, Metropolitan's Board of Directors makes a determination on the level of the regional shortage, based on specific criteria, typically in April. The criteria used by Metropolitan includes, current levels of storage, estimated water supplies conditions, and projected imported water demands. The allocations, if deemed necessary, go into effect in July of the same year and remain in effect for a 12-month period. The schedule is made at the discretion of the Board of Directors.

8.4.2 City of Beverly Hills

During a water shortage period, the Water Utility will determine the extent of the conservation required based on water supply availability from its groundwater and imported water sources. As a Metropolitan member agency, the City will follow Metropolitan's adopted WSCP and required actions. Depending on the severity of the water shortage, the Department will recommend to the City Manager the adoption of a water reduction plan, as detailed in Ordinance 20-O-2819, that is necessary to address the level of water shortage.

In 1992, the Beverly Hills City Council adopted an Emergency Water Conservation Ordinance (Ordinance 92-O-2139) last updated in 2020 by Ordinance 20-O-2819, which establishes five stages of water shortage severity based on predicted or actual water supply reductions as shown in Table 8-1D. The City implements certain initiatives to optimize water supply during water shortages or drought conditions. The City will manage water supplies to minimize the social and economic impacts of water shortages. Additionally, in an emergency which leads to catastrophic supply interruption, the City has an emergency response plan in place to respond to catastrophic interruption.

Table 8-1D: City Stages of Water Shortage

City Stages of Water Shortage		
Stage	**Supply Reduction**	**Water Supply Condition**
A	5%	A stage A shortage shall be declared when the city manager determines that a five percent (5%) reduction in potable water use is required.
B	10%	A stage B shortage shall be declared when the city manager determines that a ten percent (10%) reduction in potable water use is required.
C	20%	A stage C shortage shall be declared when the city manager determines that a twenty percent (20%) reduction in potable water use is required.
D	30% or higher	A stage D shortage shall be declared when the city manager determines that a thirty percent (30%) or higher reduction in potable water use is required.
E	50%	A stage E shortage shall be declared when the city manager determines that a catastrophic interruption of potable water supply has occurred or is foreseen.

The Water Conservation Ordinance is designed to provide the amount of conservation needed for various conditions. This ranges from a minor drought (Stage A) to the occurrence of an unforeseen catastrophic interruption of potable water supply (Stage E). The City's two potable water sources are local groundwater and imported deliveries through Metropolitan. Rationing stages may be triggered by a shortage in one source or a combination of sources, and shortages may trigger a stage at any time. In the event of a shortage, the City Manager will declare the appropriate water conservation stage by resolution.

Table 8-1 includes the City’s water shortage response actions classified at the State’s six standard shortage levels. The response actions correspond to the City’s established stages of water shortage as shown previously in Table 8-1B and also the City’s Emergency Response Plan for shortage levels above 50 percent. The shortage response actions are further detailed below and in Table 8-2.

Table 8-1 Water Shortage Contingency Plan Levels

Water Shortage Contingency Plan Levels		
State Shortage Level	**Percent Shortage Range**	**Shortage Response Actions** **(*Narrative description)***
1	Up to 10%	City manager declares a Stage B shortage: All users reduce to 90 percent of baseline water use, restaurants serve water upon request only, customers must repair leaks and breaks in a timely manner.
2	Up to 20%	City manager declares a Stage C shortage: All restrictions of Stage B and users reduce to 80 percent of baseline water use.
3	Up to 30%	City manager declares a Stage D shortage: All restrictions of Stage C, users reduce to 70 percent of baseline water use, limit landscape irrigation days, pool filling allowed only when appropriate cover is in place, restrict water feature use, prohibit potable use for vehicle washing, construction, dust control, and washing hard surfaces.
4	Up to 40%	City manager declares a Stage D: All restrictions of Stage D, users further reduce use to 60 percent of baseline.
5	Up to 50%	City manager declares a Stage E shortage: All restrictions of Stage D, users reduce to 50 percent of baseline water use, prioritize water use to health and safety needs, subsequent water use is prioritized to maintain commerce, then enhance aesthetic, and last to facilitate construction.
6	>50%	City manager declares a Stage E shortage and activates Emergency Response Plan: All restrictions of Stage D, ERP standardized response and recovery protocol, contact planning partnerships as part of Mutual Aid Agreements to respond to catastrophic supply interruption.

Supply Augmentation Actions

The City has two primary sources of supply, imported water from Metropolitan and local groundwater. The reliability of these supplies and the response to shortages has been integrated into the City's normal water management planning. The reliability of these water supplies under normal and dry conditions is documented in Chapter 7 of the 2020 UWMP.

If there is a specified shortage in supply as shown in Table 8-1, then it is assumed that one or both sources are limited to the extent to cause such a shortage. As no alternative sources are available, supply is not a response triggered by the WSCP's shortage level, but already represented in the determination of any gap between supply and customer water use.

Demand Reduction Actions

When a water reduction plan is not in effect, the City encourages all customers within the service area to use water efficiently by avoiding wasteful activities as specified in the Article 2 of the City's

Water Use Efficiency Regulations, Section 9-4-201: Permanent Water Use Restrictions and Waste Prevention. The City's Emergency Water Conservation Plan adopted priorities for making water available from highest to lowest are as follows:

1. Health and Safety including consumption and sanitation for all water users; fire suppression; hospitals, emergency care, nursing and other convalescent homes and other similar health care facilities; shelters and water treatment
2. Institutions, including government facilities and schools such as public safety facilities, essential government operations, public pools, and recreation areas
3. All non-essential commercial and residential water uses
4. Landscaped areas of significance, including parks, open spaces, and government-facility landscaped areas
5. New water demand

The City has developed various restrictions and prohibitions on end uses for each of the five stages indicated in Table 8-2. Water conservation measures become more restrictive with each progressive stage in order to address the increasing differential between water supply and demand. These prohibitions and restrictions include the following type of areas where these prohibitions or restrictions would be imposed:

- Landscape Irrigation
- Commercial, Industrial, and Institutional
- Water Features
- Swimming Pools and Spas
- Other

Table 8-2 presents the restrictions or prohibitions that would be implemented with each conservation stage. The City will also work in conjunction with Metropolitan to implement water shortage plans on a regional level.

Table 8-2: Restrictions and Prohibitions on End Uses

Demand Reduction Actions				
State Shortage Level	**Demand Reduction Actions**	**How much is this going to reduce the shortage gap?**	**Additional Explanation or Reference *(optional)***	**Penalty, Charge, or Other Enforcement?**
1	Other	5%	Stage A 5% system-wide reduction is required	No
1	Expand Public Information Campaign		Enhances effectiveness of other actions	No
1	Improve Customer Billing	1%		No
1	Provide Rebates on Plumbing Fixtures and Devices	1%		No
1	Reduce System Water Loss	1%		No
1	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	3% to 5%		Yes
1	Other	5%	Stage B 10% system-wide reduction is required	Yes
2	Other	10%	All restrictions and prohibitions of Stage B (Level 1)	Yes
2	Other	10%	Stage C 20% system-wide reduction is required	Yes
2	Landscape – Limit irrigation to specific days	5%	Limit to specific days and times	Yes
3	Other	20%	All restrictions and prohibitions of Stage C (Level 2)	Yes
3	Other	5% - 20%	Stage D 30% or more system-wide reduction is required	Yes
3	Other water feature or swimming pool restriction	1%	Allow filling of swimming pools only if needed for health and safety	Yes
3	Other - Prohibit use of potable water for washing hard surfaces	2%	Limit to specific situations. Includes buildings. Details in City's Emergency Water Conservation Plan	Yes
3	Other	1%	Prohibit use of hydrant water and flushing. Limit use to firefighting only	Yes
4	Other	30% or more	Same as Level 3: Stage D system-wide reduction is required	Yes
5	Other	30% or more	All restrictions and prohibitions of Stage D (Levels 3 & 4)	Yes
5	Other	10% to Unknown	All users to reduce to 50% or percent needed due to interruption in supply	Yes

Demand Reduction Actions (cont.)

State Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap?	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement?
5	Landscape - Prohibit all landscape irrigation	20% to 50%	Priority to health and safety needs. Subsequent water uses are prioritized to maintain and expand commerce, then to enhance the aesthetics of the environment, and then to facilitate construction activities.	Yes
6	Other	50% +	All restrictions and prohibitions of Stage E (Level 5)	Yes
6	Other	Ration water supplies as needed	ERP response and recovery protocol to catastrophic supply interruption	Yes

NOTES: (1) Reduction percentages are estimated based on experience with existing DMMs and are subject to refinement after monitoring observed outcomes. (2) Reduction Actions are selected from a DWR drop down list. These are the only categories that are accepted for online submittal. See Additional Explanation for “Other.” (3) Shortage Level based on State’s six standard levels which can be mapped to the City’s Shortage Stages using UWMP Table 8-1B.

The City has developed a number of consumption reduction program methods that include:

- Public Information Campaign
- Enhancement of City’s Advanced Meter Infrastructure (AMI) Customer Portal Program
- Customer Billing
- Frequency of Meter Reading
- Water Use Landscape Audits
- Rebates or Giveaways of Plumbing Fixtures and Devices
- Rebates for Landscape Irrigation Efficiency
- Reduction of Water System Loss

Table 8-3A presents the various consumption reduction methods employed by the City that are not quantifiable as far as percentage of closing the shortage gap but supplement the shortage response actions shown in Table 8-2.

Table 8-3A: Consumption Reduction Methods

Consumption Reduction Methods by Conservation Stage		
Conservation Stage	**Consumption Reduction Methods**	**Additional Explanation or Reference**
All Stages	Offer Water Use Audits	The City's water audits are aimed at developing residential customer water use efficiency for both landscape and indoor water use.
All Stages	Provide Rebates on Plumbing Fixtures and Devices	The City's residential, commercial, industrial, & institutional plumbing retrofit programs involve providing customers with water efficient plumbing devices such as low-flow showerheads, high-efficiency washing machines, and low-flush toilets.
All Stages	Expand Public Information Campaign	These programs provide the public information to promote water conservation and water conservation-related benefits.
All Stages	Improve Customer Billing	Through this program, the City provides economic incentives to customers to use water efficiently.
All Stages	Reduce System Water Loss	System water audits, leak detection and repair conducted by water operations/maintenance staff; these programs aim at reducing water losses through a water agency's system.
All Stages	Other	City's Water Conservation Administrator works with other City staff to enhance water conservation measures.
All Stages	Other	The City has deployed SMART timers and drip irrigation systems used in City landscaped areas to improve water use efficiency.

The following consumption reduction methods, also discussed in Chapter 9 (Demand Management Measures), have been undertaken by the City to reduce water demand within their service area:

8.4.3 Public Information Campaign

The City maintains a website titled BHsaves.org which provides information regarding:

- Methods to reduce water use;
- Watering restrictions;
- Fines and surcharges associated with violation of watering restrictions;
- Water rebates for installing certain water saving devices;
- Individual water metering monitoring; and
- Other frequently asked questions regarding water use and conservation.

In addition, the City has hired a Water Conservation Coordinator to assist in the public information campaign to educate the public on water conservation. Moreover, the City has partnered with Metropolitan in school education outreach programs that provide information to children to learn the importance of water conservation.

8.4.4 Customer Billing

The City has developed conservation pricing to provide economic incentives to customers to use water efficiently. In addition, the City has installed SMART water meters that allow individual residential customers to view their water usage on a daily basis through the City’s website BHsaves.org.

8.4.5 Frequency of Meter Reading

The City employs an Advanced Metering Infrastructure (AMI). The AMI uses new Neptune Water Meters that are SMART meters that can detect a suspected leak if it is on the customer’s property. The new water meters use a fixed network system where the water meter sends the water meter reading hourly to a Data Collection Unit. The Data Collection Unit calls into the network computer each morning around 2:00 A.M. These meters will determine if there is an apparent leak on the customer’s property. If there is a continuous usage of water over a 24-hour period, the system will send out an alarm (noting the address) to the City’s Customer Service Representative who can notify the customer that they have a suspected leak on their property.

8.4.6 Water Use Surveys

The City has developed water survey programs for both single and multi-family residential customers. The City's water surveys are aimed at developing residential customer water use efficiency for both landscape and indoor water use.

8.4.7 Rebates or Giveaways of Plumbing Fixtures and Devices

The City maintains a residential plumbing retrofit program that involves providing customers with rebates for water efficient plumbing devices such as low-flow showerheads, ultra-low flush toilets, high-efficiency washing machines, and rain-collection barrels.

8.4.8 Reduction of Water System Loss

The City regularly conducts water system audits, leak detection and repairs as part of its overall operations. These activities are conducted by water operations/maintenance staff and are aimed at reducing water losses through the City’s water mains.

8.4.9 Implementation of Drought Rate Structure or Surcharge

The City has developed a tiered rate pricing structure which incorporates drought rates into the overall rate structure. The quantity charge under non-drought conditions varies depending on the amount of metered use in each billing period with tiered or increasing block rates across four use volume tiers. The City of Beverly Hills Water Rate Study (January 2019) describes the City’s rate structure and water storage revenue stabilization factors that may be put into effect during water shortages. The City may implement water shortage revenue stabilization factors during periods of water use restrictions to allow rate adjustments on quantity charges based on the level of restriction as specified in the WSCP. This rate structure is in the City’s Water Regulations, Title 9, Chapter 4

Article 3. Water Supply Shortage Response Plan and Conservation Stages and was adopted by City Council in 2020.

8.4.10 Other

In early 2016, the City hired a full time Water Conservation Administrator who is responsible for the City's water conservation programs including water and landscape audits, public education on water efficiency and the overall water conservation efforts of the City of Beverly Hills and the portion of West Hollywood the City serves.

In addition, the City's Parks Department has deployed SMART timers and drip irrigation systems for landscaped areas for many of the City-owned properties within the City's service area. Moreover, the City is revising its overall landscape strategy for the City's parks and medians to incorporate water conservation methods using drought tolerant vegetation and upgrading water features including high-efficiency filters, sensors, pumps, and other devices to reduce overall water loss.

8.5 Catastrophic Supply Interruption

Given the great distances that imported supplies travel to reach Southern California, the region is vulnerable to interruptions along hundreds of miles aqueducts, pipelines and other facilities associated with delivering the supplies to the region. Additionally, the infrastructure in place to deliver supplies are susceptible to damage from earthquakes and other disasters.

8.5.1 Metropolitan

Metropolitan has comprehensive plans for stages of actions it would undertake to address a catastrophic interruption in water supplies through its WSDM Plan and WSAP. In addition, Metropolitan's Emergency Storage Objective is the regional planning estimate for emergency storage and is based on the potential for a major earthquake that would damage all supply aqueducts, thus isolating southern California from its imported water sources or a similar disaster. In 2019, Metropolitan and its member agencies completed a process to update the planning estimate of Metropolitan's Emergency Storage Objective. This represents the amount of water that Metropolitan would store for the region in preparation for catastrophic damage to aqueducts. The emergency storage allows Metropolitan to deliver reserve supplies to the member agencies to supplement local production and avoid severe water shortages. Seismic risk assessment is also addressed in Metropolitan's seismic resiliency reports in Appendix 9 to their 2020 UWMP.

Metropolitan staff routinely participate in emergency response training exercises that are often based on a postulated seismic event. In 2019, Metropolitan started a new five-year emergency exercise plan that will allow all member agencies to participate in at least one of Metropolitan's annual emergency exercises. The first of these exercises was a tabletop exercise for the Orange County member agencies on August 29, 2019, which focused on a hypothetical incident at the Diemer Water Treatment Plant (Metropolitan, 2020 UWMP).

Metropolitan is working with the State to implement a comprehensive improvement plan to address catastrophic occurrences outside of the southern California region, such as a maximum probable seismic event in the Delta that would cause levee failure and disruption of SWP deliveries. Details on Metropolitan's planned responses to catastrophic interruption can be found in Metropolitan's 2020 UWMP.

8.5.2 City of Beverly Hills

The City of Beverly Hills Potable Water Emergency Response Plan (ERP) includes a standardized response and recovery protocol to prevent, minimize, and mitigate injury and damage resulting from emergencies or disasters caused by man, natural, or of dependency/proximity origin.

The goals of this ERP are to:

- Minimize negative impacts on public health and employee safety
- Provide emergency public information concerning customer service
- Rapidly restore water service after an emergency
- Ensure adequate water supply for fire suppression
- Minimize water system damage
- Minimize impact and loss to customers

The ERP describes how the City of Beverly Hills will respond to potential threats or actual scenarios identified in the vulnerability assessment, as well as additional emergency response situations. Included in the ERP are specific action plans that will be used to respond to events and incidents. As part of the overall ERP planning process, the City has developed Planning Partnerships with other parties who have agreed to help the utility in an emergency situation. In addition, the City has developed Mutual Aid Agreements with both internal and external agencies and organizations in the event of a disaster or event that cause a catastrophic supply interruption.

The planning process also includes a vulnerability assessment and the development of Disaster Events or Scenarios and associated specific action plans. The action plans would include:

- Initiation and Notification Requirements
- Required Equipment
- Specific Activities that would be performed
    - Assess the problem
    - Isolation of the problem and fixing
    - Monitoring of the problem
    - Recovery from the problem and return to normal operations
    - Reporting of findings

Due to the sensitive nature of the information contained in the ERP, distribution of the document is limited to those individuals directly involved in the emergency planning and response activities for the City.

8.5.2.1 City Emergency Connections

The City of Beverly Hills has three emergency water supply connections with the City of Los Angeles' Department of Water and Power (LADWP). The metered connections have design capacities of 2.6 MGD, 13.5 MGD, and 4.8 MGD. City staff must contact the City of Los Angeles to request the activation of either connection. Activation of the connection(s) is dependent upon and subject to the prior needs of the LADWP customers and availability of surplus water. In accordance with the water transfer agreement, both agencies are required to meet in the field at each connection and agree to the volumetric reading of the meter prior to activation.

8.5.2.2 Electrical Outages

Metropolitan has also developed contingency plans that enable it to address both planned and unplanned electrical outages. These plans include the following key points:

- In event of power outages, water supply can be maintained by gravity feed from Diamond Valley Lake, Lake Mathews, Castaic Lake, and Silverwood Lake
- Maintaining water treatment operations is a key concern. As a result, all Metropolitan treatment plants have backup generation sufficient to continue operating in event of supply failure on the main electrical grid
- Valves at Lake Skinner (Riverside) can be operated by the backup generation at the Lake Skinner treatment plant
- Metropolitan owns mobile generators that can be transported quickly to key locations if necessary

8.5.3 Seismic Risk Assessment and Mitigation Plan

The Disaster Mitigation Act of 2000 required state and local governments to develop hazard mitigation plans by November 2004. The Beverly Hills City Council approved the development of such a plan which was adopted and approved by FEMA in 2004. As required by FEMA, the Plan must be updated every five years, so in August 2010 the required update was adopted by the City council and approved by FEMA in March 2011. The City's Local Hazard Mitigation Action Plan provides a list of activities that may assist the City in reducing risk and preventing loss from future hazard events. The strategies address multi-hazard issues, as well as activities for specific hazard events including earthquakes.

The Hazard Mitigation Action Plan identified earthquakes and wildfires as high risk and the most likely and most devastating hazards to occur within the City. The City is located in a region that is subject to high seismic activity. There are several active faults in or near the City. Due to the City's proximity to active faults, the area is likely to be impacted by future earthquakes, however the strength and timing of these earthquakes is unknown. A major earthquake occurring on any one of these faults could result in a substantial number of deaths and injuries and extensive damage to both public and private property. The economic impact in direct and indirect costs will be billions of dollars. Listed among the critical infrastructure in the Hazard Mitigation Action Plan are the water treatment plant and public works facilities.

Lifelines, including water infrastructure, will be damaged by ground shaking. Disruption to transportation makes it especially difficult to make repairs and bring in supplies and services. The Hazard Mitigation Action Plan includes the development of a plan for the water storage and distribution system during the event of infrastructure failure which can occur during an earthquake. This study is to be carried out by the Public Works Department and is associated with the Office of Emergency Management. The Public Works subcommittee meets to develop policy recommendations on a variety of issues such as reviewing and recommending modifications to stages of emergency, water storage capacity, and making recommendations with staff to take back to the Commission for review of recommendations. This mitigation project is funded and ranked as high priority. Also included is an inter-jurisdictional coordination plan to continue to coordinate with and support Los Angeles County departments in carrying out inspections and emergency response.

Among existing mitigation activities are the seismic modifications for water system reservoirs and pump stations. The City constructed 5 new steel tank reservoirs and pump stations to meet seismic requirements. The final reservoir was constructed and placed into service in 2015. The City's Local Hazard Mitigation Action Plan in included in Appendix K.

One of the priorities of the City's IWRMP is Emergency Resiliency, or ensuring the City is implementing projects that make systems more resilient to emergencies. The primary focus of the analysis was emergency storage for the water system. The emergency storage goal is 7-days of emergency storage during summer months. The analysis considered the conditions with the Foothill WTP both online and offline. With the Foothill plant offline, and assuming an emergency outage of Metropolitan water supply were to occur, the City has a maximum of 3.4 to 5.7 days of storage when the reservoirs are full. The IWRMP identified the following projects to increase emergency storage:

- Potable Water Cabrillo Reservoir located at Inactive Cabrillo Reservoir Site (4.3 MG)
- Reservoir 4C located at Reservoir 4B Site (1 MG)

Of these two projects, the City is currently moving forward with the Cabrillo Reservoir which is currently beginning the CEQA planning and design process. The Reservoir 4C project will be considered at a future date.

The IWRMP also recommends maximizing the City's groundwater supply to increase emergency storage duration. A groundwater well with backup power capability provides additional local supply and reduces reliance on Metropolitan.

As discussed in Section 8.5.2, the City has an ERP to provide the City of Beverly Hills with a standardized response and recovery protocol to prevent injury and damage resulting from emergencies and disasters. Due to the sensitive nature of the information contained in the ERP, distribution of the document is limited to those individuals directly involved in the emergency planning and response activities for the City.

The City of Beverly Hills assures that this emergency response plan incorporates the results of a vulnerability assessment for the water system and includes plans, procedures, and identification of equipment that can be implemented or used in the event of any and all hazards, including natural, caused by man, or due to dependency on or proximity to the water system. The City of Beverly Hills has also provided a copy of the ERP to the local State Water Resources Control Board (SWRCB) Division of Drinking Water (DDW) District 22 Angeles Office in Glendale, CA.

8.6 Communication Protocols

As outlined in Section 8.2, beginning in 2022 each supplier will be required to prepare and submit to DWR an Annual Water Supply and Demand Assessment on or before July 1 of each year. The Annual Assessment will be prepared by the City Water Utility and presented to the Public Works Commission for formal approval during or before June of each year beginning in 2022. A presentation will be given of the assessment and any specific shortage response actions triggered by the WSCP resulting from the assessment. The Commission will be requested to vote to approve the Annual Assessment and any associated actions. The 2020 UWMP and DRA found no shortages for the coming year, 2021, therefore no Shortage Response Action is needed at this time.

For any unexpected water shortage period that occurs outside of the Annual Assessment timeline, the Water Utility will determine the extent of the shortage and action required based on water supply availability from its groundwater and imported water sources. Depending on the severity of the water shortage, the department will recommend to City Council the adoption of a water reduction plan that is necessary to address the level of water shortage under the WSCP and Ordinance 20-O-2819, the Emergency Water Conservation Plan.

As a Metropolitan member agency, the City will also follow Metropolitan's adopted WSDM Plan. By the month of June, Metropolitan staff will present its completed Annual Assessment for approval by Metropolitan's Board of Directors along with any recommended specific shortage response actions resulting from the assessment. As a member agency, the City will incorporate Metropolitan's analysis and response actions into its Annual Assessment if the information is available prior to the approval deadline by the Public Works Commission for delivery to DWR by July 1.

The City will communicate any current or predicted water shortage, water shortage actions, and customer use restrictions to their customers and the general public through an expansion of the public education and outreach programs described in Section 9.1. Information will be provided using billing inserts and publications in newsletters, local newspapers, and the City's water conservation website (BHsaves.org). Water conservation information will be displayed in the City libraries, community centers, and police stations.

8.7 Compliance and Enforcement

The City maintains water meters on all residential, commercial, industrial, and institutional uses within the service area. Bimonthly billing cycle water use comparisons provided in units or acre-feet are often provided on the bi-monthly bills sent to the consumer. In addition, all customers can access information on their water usage via water.beverlyhills.org or through the City's BHsaves.org website. Through the City's customer portal program, customers can view their usage every hour, day, week, month, billing cycle or year. The customer portal also has an alert feature so customers can be alerted if there is abnormal water use occurring at their property.

In the event that the Emergency Water Conservation Plan is violated, the City reserves the right to impose penalties. Penalties will be imposed depending on the water conservation stage, as defined under City Municipal Code Section 9-4-304, and summarized in Table 8-4A.

Table 8-4A: Penalties and Fines for Violations in Each Conservation Stage

Penalties and Fines for Violations in Each Conservation Stage			
Conservation Stage	Monetary Fine	Possible Water Service Termination or Reduction	Imprisonment
A	No	No	No
B	Up to $100	No	No
C	Up to $500	No	No
D	Up to $1,000	Yes	No
E	Up to $1,000	Yes	Yes, 6 Months

The City's adopted Ordinance 20-O-2819 amending the City's municipal code regarding emergency water conservation provisions is included in the Appendix E.

8.8 Legal Authorities

The City has legal authority to implement and enforce its shortage response actions and emergency response actions. The City is authorized and directed to implement the applicable provisions of the City's Emergency Water Conservation Plan under Chapter 4 of Title 9 (Water Regulation) of the City of Beverly Hills Municipal Code. Under Article 9-4-301, the City Manager is authorized and directed to implement the applicable provisions to protect the public health, safety, and welfare of the public under an unforeseeable disaster such as an earthquake, reservoir failure or other major disruption in the water supply. In the event of a foreseeable water emergency, such as an extended drought, the City Manager is authorized to implement the applicable provisions of the ordinance after holding a public hearing before the City Council. The City Manager is authorized to determine and declare that a water shortage emergency exists and implement actions to relieve the shortage and the City Council may modify any determination by the City Manager.

The City will declare a water shortage emergency condition to prevail within the service area whenever it finds and determines that the ordinary demands and requirements of water consumers cannot be satisfied without depleting the water supply to the extent that there would be insufficient water for human consumption, sanitation, and fire protection. Additionally, the City shall coordinate with the City of Los Angeles and Los Angeles County for the possible proclamation of a local emergency under California Government Code, California Emergency Services Act.

8.9 Financial Consequences of WSCP

During prolonged shortages, customers are required to conserve or even ration their water use. A reduction in water consumption could result in loss of revenues needed to maintain and operate the water system. The City included Water Shortage Revenue Stabilization Adjustments within their Water Rates Ordinance whereby quantity charge rates are adjusted in conjunction with the reduction stages in the WSCP. The water shortage revenue stabilization factors are by water conservation stage and class and are implemented only during periods of declared shortages. At least 30 days prior to making the adjustment, notice will be provided to rate payers, which can be included in the customer's bills.

In addition, the City may elect to delay capital improvement projects to lower costs. The City's tiered water rate structure and revenue stabilization factor is designed to cover the total system costs of providing water to its customers and account for the impact of long-term conservation on revenue and reserves. Additional information on conservation rates and rate stabilization is provided in Appendix J, City of Beverly Hills 2019 Water Rate Study.

8.10 Monitoring and Reporting

The City's supply and demand data are recorded and reviewed daily. Month-end water meter readings are also collected and compiled into Monthly and FY to date water system reports. Data will be monitored and compared from week to week and used to measure the effectiveness of any water shortage contingency stage that may be implemented. Additionally, the City has a full time Water Conservation Coordinator that is responsible for the City's water conservation program including water system surveys, public education on water conservation, and the overall water conservation efforts of the City.

The City will follow Metropolitan's WSDM Plan and other regional guidelines as the City enters water shortage stages. If Metropolitan calls for extraordinary conservation, Metropolitan’s Drought Program Officer will coordinate public information activities directly with the City and monitor the effectiveness of ongoing conservation programs. Monthly reporting on estimated conservation water savings will be provided.

Metropolitan will provide each member agency with water use monthly reports that will compare each member agency’s current cumulative retail usage to their allocation baseline. Metropolitan will also provide quarterly reports on its cumulative retail usage versus its allocation baseline.

The City’s staff will also participate in regular groundwater monitoring to be aware of groundwater conditions on a timely basis.

8.11 WSCP Refinement Procedures

The WSCP is prepared and implemented as an adaptive management plan. Based on the monitoring and reporting program presented in Section 8.9, the City will evaluate the need to revise its WSCP. The WSCP will be refined as needed to ensure that the shortage response actions are effective and produce the desired results. If potential refinements or new actions are identified, the City will evaluate the effectiveness and incorporate them into the WSCP if deemed appropriate. The action will be identified and implemented at the appropriate water shortage level. Refinements to the WSCP will be presented by the Water Utility to the City Council for approval and adoption, including any necessary additions or revisions to the Municipal Code.

8.12 Special Water Feature Distinction

For purposes of this WSCP, water features that are not pools or spas are analyzed and defined separately from pools and spas. Non-pool and non-spa water features may use or be able to use recycled water, whereas pools and spas must use potable water for health and safety considerations. In this WSCP, the term ‘pool’ refers to both pools and spas that must use potable water and the term ‘water feature’ or ‘decorative water feature’ refers to non-pool and non-spa features. Any actions for these two classifications are designated separately in this WSCP.

8.13 Plan Adoption, Submittal and Availability

This WSCP was adopted and implemented with the 2020 UWMP. The adoption process included external coordination and outreach activities carried out by the City and their corresponding dates shown in Chapter 10 of the UWMP.

9 DEMAND MANAGEMENT MEASURES

The water conservation programs, also called demand management measures (DMMs), the City has implemented, is currently implementing, and plans to implement in order to meet its urban water use reduction targets are presented in this section.

The California Water Code addressing DMMs was significantly modified in 2014, based on recommendations from the Independent Technical Panel (ITP) to the legislature. The ITP was formed by DWR to provide information and recommendations to DWR and the Legislature on new demand management measures, technologies, and approaches to water use efficiency. In its report to the Legislature, the ITP recommended that the UWMP Act should be amended to simplify, clarify, and update the demand management measure reporting requirements. The ITP recommended, and the legislature enacted, streamlining the retail agency requirements from 14 specific measures to six more general requirements plus an “other” category which are discussed in Section 9.1.

9.1 Demand Management Measures for Retail Agencies

9.1.1 Water Waste Prevention Ordinances

A water waste ordinance explicitly states that the waste of water is to be prohibited. The ordinance may prohibit specific actions that waste water, such as excessive runoff from landscape irrigation, or use of a hose outdoors without a shut off nozzle. A water waste prevention ordinance is in place at all times and is not dependent upon a water shortage for implementation. However, a water waste ordinance may include increasingly restrictive prohibitions that may be implemented in response to shortages.

Section 9-4-201 of the Civil Code (Ordinance 18-O-2761, effective 11-16-2018), Permanent Water Use Restrictions and Water Waste Prevention, states the permanent water use restrictions that are in effect at all times. The following summarize the unlawful use of potable water:

- Watering or irrigation outside of the hours between 5:00 p.m. and 9:00 a.m.
- Watering that causes runoff onto non-irrigated areas or adjacent property
- Watering within 48 hours after measurable rainfall
- Allow the loss of water through breaks, leaks or other malfunction of the water user’s plumbing or distribution system (with a 7-day period to repair or make other arrangements with the public works department)
- Serving drinking water to restaurant customers other than upon request
- Failing to provide written notice to hotel patrons of their right to refrain from being provided with laundered tows and linens on a daily basis
- Failing to abide by any State law or regulation concerning water conservation
- Washing down buildings or sidewalks with certain exceptions for water efficient nozzles, water recycling, and health and safety considerations

9.1.1.1 Sustainability Plan

The City approved a Sustainability Plan which recognizes water conservation as one of the strategies towards achieving a sustainable city. The Sustainability Plan establishes guiding principles and goals that the City will use to develop and implement programs that focus on sustainability. The Sustainability Plan also provides an implementation framework and suggests a means of prioritization to assure that the most effective policies and programs are implemented first.

The Sustainability Plan sets forth specific activities related to the overall process. Specifically, the Sustainability Plan calls for:

- *Development of an implementation and monitoring program* – This puts the Plan into action and is based on the goals, objectives, policies, and framework provided
- *Compilation of baseline information on City operations* – This provides information on how the City is currently performing and identifies areas of improvement
- *Standardization of reporting* – This establishes a systematic means of providing information on program results
- *Identification of Measures* – This provides a means of assessing success at reaching the sustainability goals
- *Modification of City activities, operations, and programs* – This facilitates a move in current City processes towards more sustainable options
- *Initiation of new activities, operations, and programs* – This allows the City to introduce new activities, operations, and programs to further the sustainability goals.
- *Monitoring, periodically reporting and modifying City activities, operations, and programs* – This provides a means of periodically ensuring that the City is progressing towards reaching the sustainability goals

The Sustainability Plan addresses water conservation by indicating that *“Water is a precious and scarce resource in California.”* As such, the Sustainability Plan has developed a goal, objective, and policies related to sustainability of water use in the City. Specifically:

Goal - Reduce water use while maintaining a garden-like quality in the City.

Objective - Use water efficiently and effectively while managing storm and wastewater in a beneficial manner.

Policies

1. Minimize water consumption, particularly for landscaping through efficient irrigation and drought-tolerant landscaping
2. Maximize the availability and use of alternative water sources to provide adequate water supplies for present uses and future growth
3. Replenish groundwater to ensure its future availability and to filter storm water before entering local water bodies
4. Maintain and improve dry and wet weather storm water runoff quality to protect local water bodies such as Ballona Creek and Santa Monica Bay

5. Reduce the amount of dry and wet weather storm water runoff directly entering the storm water drainage system
6. Minimize the adverse effects to water quality from the sanitary sewer system

The City's process of sustainability is built on the concept that sustainability is an iterative process that requires regular and periodic evaluation at all levels. In this process, goals are set and existing policies, programs and actions are evaluated, modified, and implemented. At an established future date, the programs and actions are then re-evaluated based on how well they have met the established goals. If the programs and actions are not meeting the City's goals, they can be modified or enhanced and re- implemented. This process is then repeated until the City's goals have been met.

9.1.2 Metering

The City maintains water meters on all residential, commercial, industrial, and municipal connections to the City's water distribution system. As part of the City's water meter change out program, the City employed an Advanced Metering Infrastructure (AMI). The following discussion presents an overview of the SMART meter program.

9.1.2.1 SMART Meters

The City's Advanced Meter Infrastructure (AMI) program allows remote reading, billing, and monitoring of all approximately 10,662 customers within the water service area. The benefits of AMI include operational cost savings, billing accuracy, reduction in CO_2 emissions, and increased field service safety. AMI also allows the City's Water Conservation Administrator to monitor water use, detect continuous flow and/or excessive irrigation issues, and work with individual customers to promote efficient water usage on their property.

The City has Neptune water meters that are connected to Aclara's AMI devices which can detect a continuous flow issue on any property. These water meters use a fixed network system where the water meter sends an hourly read to a Data Collection Unit. The Data Collection Unit calls into the network computer several times a day. The AMI system can determine a continuous flow at a customer's property. If there is a continuous usage of water several days in a row, the customer's information will be added to the City's daily Continuous Flow residential or commercial Top 100 Flow List. The AMI program coupled with the City's customer portal program works to directly assist customers by alerting them via email or texts of issues at their property, often on the day they occur.

9.1.3 Conservation Pricing

The City currently uses a tiered water rate structure with higher water usage falling in higher price tiers. Single family and multi-family have a tiered water rate structure while commercial customers have a single tiered water rate. Irrigation is a significant component of total water use in the City, particularly among single family customers. The City has also implemented water shortage revenue stabilization factors which would be applied to rates during specific Council-adopted water shortage stages to offset the amount of revenue shortfall caused by conservation. The City of Beverly Hills 2019 Water Rate Study is included in Appendix J.

9.1.4 Public Education and Outreach

The City recognizes the importance of conservation and the use of public education and outreach to convey information. Public education programs and messaging is continually being conveyed at various City events and public forums. Examples of events include:

- Farmer’s Market
- Earth Day
- Team Beverly Hills
- Public Works Day

In addition, City staff has made numerous presentations to various community groups including but not limited to all Beverly Hills Commissions, City Council, Chamber of Commerce business partners, local businesses, and schools. The City also promotes the drought tolerant landscaping classes to its customers and partners with Metropolitan on such efforts. The City has promoted rebate programs related to turf removal and water efficient devices. Moreover, the City has partnered with Metropolitan in school education outreach programs that provide information to children to learn the importance of water conservation.

In past years, funding for conservation programs averaged about $30,000 per year. The Water Conservation Administrator and other city staff perform most of the work themselves in-house thereby reducing the program costs, but not the program efficacy. In 2015, prior to hiring a Water Conservation Administrator, the City expanded its efforts by spending approximately $737,000 on mailings, outreach materials, and supplementing rebate programs to promote conservation.

Additionally, in 2015, the City launched a conservation web portal to promote conservation. The website titled BHsaves.org provides information regarding:

- Methods to reduce water use;
- Watering restrictions;
- Fines and surcharges associated with violation of watering restrictions;
- Water rebates for installing certain water saving devices;
- Individual water metering monitoring; and
- Other frequently asked questions regarding water use and conservation

The City will continue to use Public Education and outreach programs to convey water conservation information and updates.

The City continues to implement and improve their customer portal program, Water Tracker, which makes it easy for customers to monitor their hourly, daily, weekly, or monthly water consumption. Customers can set up a Water Tracker account which will send email alerts if there are potential water issues. This is of particular use during periods of mandated water reductions. In addition, it will alert customers if there is continuous flow, which may be a running toilet or underground pipe leak. The City is also notified of continuous water flow issues on individual properties and will continue to notify and assist customers in identifying their water issues.

9.1.5 Programs to Assess and Manage Distribution System Real Loss

The City uses the SMART water meter technology to proactively identify potential leaks and notifies water customers so they can repair leaks in a timely manner and minimize water loss. The City also has an ongoing pipeline replacement program that helps to limit system water loss from pipeline leakage.

As discussed in Section 9.1.2, the City's Neptune water meters are SMART meters that can detect a leak. The new water meters use a fixed network system. This means the water meter sends the water meter reading hourly to a Data Collection Unit, then the Data Collection Unit calls into the network computer each morning around 2:00 A.M. These meters will determine if there is a leak on the customer's property. If there is a continuous usage of water over a 24-hour period, the system will send out an alarm noting the address so the City's Customer Service Representative can notify the customer that they have a suspected leak on their property.

As discussed in Section 9.1.4, the Water Tracker system will alert customers if there is continuous flow, which usually means there is a leak somewhere in the system. The City is also notified of leaks on individual properties and will notify and assist customers in identifying the leak.

9.1.6 Water Conservation Program Coordination and Staffing Support

As part of the City's long-term strategy to improve the City's water system reliability and water conservation, the City recognized the need to have a person specifically devoted to conservation efforts. During FY15-16, the City established a Water Conservation Administrator position to develop, oversee and manage programs to help the City achieve its conservation goals.

9.2 Implementation Over the Past Five Years

9.2.1 Water Waste Prevention Ordinances

The City implemented a water waste prevention ordinance (Ordinance 18-O-2761, effective 11-16-2018) that is in place at all times and is not dependent upon a water shortage for implementation.

9.2.2 Metering

Water usage information collected via the SMART meter technology allows the City to also develop an online tool for water customers to review and monitor their water usage with the goal to have water customers become more aware of their water usage and to encourage water conservation. The City continued to upgrade its SMART meter software and hardware systems, which will improve the ability for water customers to monitor their water usage on an hourly basis and be notified of continuous usage, which may be a sign of a water leak. A designated Water Meter Technician is assigned to monitor and maintain this SMART meter system. A second Water Meter Technician position was approved during FY15-16 budget cycle to maintain the City's SMART water meter system.

9.2.3 Conservation Pricing

The City updated its water rate structure based on the City of Beverly Hills Water Rate Study (January 2019). The water rate structure complies with Proposition 218 that requires fees and charges for water service not exceed the proportional cost of service. The updated rate structure allows the City to operate in a manner to recover both the variable and fixed costs associated with operating a water utility given the decreasing water sales related to conservation. Conservation pricing is incorporated into the overall rate structure along with the addition of a water shortage revenue stabilization factor to offset revenue shortfalls caused by conservation during WSCP water shortage stages.

9.2.4 Public Education and Outreach

In past years, funding for conservation programs has averaged about $30,000 per year.

9.2.5 Programs to Assess and Manage Distribution System Real Loss

The City's pipeline replacement program helps to limit system water loss from pipeline leakage. The City recently completed design of a major pipeline replacement project including 13,400 feet of water main on Loma Vista Drive, 2,100 feet of main on San Ysidro Drive and 7,300 feet of main on Coldwater Canyon Drive that are aged from 60 to 90 years old. The construction contract totaling over $10.2 million was awarded in July of 2020 with over $9.5 million to be funded from the City's Water Enterprise Fund.

9.2.6 Water Conservation Program Coordination and Staffing Support

During FY15-16, the City established a Water Conservation Administrator position to develop, oversee and manage programs to help the City achieve its conservation goals. The Water Conservation Administrator has been active to the current day.

9.3 Planned Implementation to Achieve Water Use Targets

9.3.1 Water Waste Prevention Ordinances

The City adopted a water waste prevention ordinance as described in Section 9.1.

9.3.2 Metering

The City will continue to use the SMART water meter technology to proactively identify potential leaks and notifies water customers so they can repair leaks in a timely manner and minimize water loss.

9.3.3 Conservation Pricing

The City has revised the rate pricing structure that incorporates conservation pricing as described in Section 9.1. Based on the 2019 Water Rate Study, rates will increase gradually through 2022. The City is creating an irrigation customer class that would require a separate meter for irrigation in accordance with the State's Model Water Efficient Landscape Ordinance (MWELO), Cal Green, and Beverly Hills Municipal Code. Irrigation meters would be required for various project types that include new residential and commercial development with landscape areas greater than or equal to 500 square feet. Landscape meters may also be required for rehabilitated landscape projects and new building projects as specified in the MWELO depending on the landscape area and project type. The addition of irrigation meters will allow the City to curtail irrigation use during periods of water shortage.

9.3.4 Public Education and Outreach

The City will continue with the public education and outreach programs as described in Section 9.1.4.

9.3.5 Programs to Assess and Manage Distribution System Real Loss

In 2020, non-revenue water accounted for approximately 3.1% of the total water supply based on metered supply from Metropolitan and metered customer use. The City will continue to use the systems that it has operated to manage and minimize the loss of water in the overall water distribution system, including Smart Meters. The continued monitoring and repair of leaks in the water distribution system will assist in minimizing the loss of water in the overall water system. Water system losses are tracked annually through the Water Loss Audit process.

9.3.6 Water Conservation Program Coordination and Staffing Support

The City will continue to add staff in support of their water conservation program.

9.4 Members of the California Water Efficiency Partnership

To conserve California's water resources, public water agencies, environmental groups, and other interested parties signed a Memorandum of Understanding (MOU) in 1991 to form the California Urban Water Conservation Council. The Council established voluntary best management practices for California water agencies in an effort to conserve water resources and document their progress. The Council membership voted to allow the organization to sunset, replacing it with the California Water Efficiency Partnership, or CalWEP. CalWEP’s mission is to maximize urban water efficiency and conservation throughout California by supporting and integrating innovative technologies and practices; encouraging effective public policies; advancing research, training, and public education; and building collaborative approaches and partnerships. As signatory to the MOU and continued member of CalWEP, the City of Beverly Hills has been actively committed to use good-faith efforts to implement demand management measures and maximize water efficiency and conservation.

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10 PLAN ADOPTION, SUBMITTAL, AND IMPLEMENTATION

10.1 Inclusion of all 2020 Data

The City's 2020 UWMP consists of water use and planning data for the entire year of 2020. The City is reporting on a 2020 calendar year basis. The UWMP contains the City's WSCP to be adopted concurrently.

10.2 Notice of Public Hearing

The City will hold a public hearing prior to adopting the 2020 UWMP and WSCP. The public hearing will provide an opportunity for the public to provide input on the plans before they are adopted. The City will consider all public input. There are two audiences to be noticed for the public hearing: 1) the general public, and 2) cities and counties which receive water supply from the City of Beverly Hills as shown in Table 10-1.

The City's public notice was sent out for public inspection on March 29, 2021. A copy of the public notice is included in Appendix F.

Table 10-1: Notification to Cities and Counties

Notification to Cities and Counties		
City Name	**60 Day Notice**	**Notice of Public Hearing**
Beverly Hills	Yes	Yes
West Hollywood	Yes	Yes
County Name	**60 Day Notice**	**Notice of Public Hearing**
Los Angeles County	Yes	Yes

10.3 Public Hearing and Adoption

As part of the public hearing, the City will provide information on their baseline values, water use targets, and implementation plan required in the Water Conservation Act of 2009. The public hearing on the UWMP and WSCP will take place before the adoption of the plans, which will allow the City the opportunity to modify the plans in response to public input before adoption. The City will formally adopt the UWMP and WSCP before submitting the plans to DWR. A copy of the City's adoption resolution is included in Appendix F.

10.4 Plan Submittal

The City's 2020 UWMP, including the WSCP, will be submitted to DWR within 30 days of adoption. UWMP submittal will be done electronically through WUEdata, an online submittal tool. After the UWMP has been submitted, DWR will review the plan and decide as to whether or not the UWMP addresses the requirements of the CWC. The DWR reviewer will contact the water supplier as needed during the review process. Upon completion of the Plan review, DWR will issue a letter to the agency with the results of the review.

No later than 30 days after adoption, the City will submit a CD or hardcopy of the adopted 2020 UWMP, including the adopted WSCP, to the California State Library. No later than 30 days after adoption, the City will also submit a copy of the adopted 2020 UWMP to the City of West Hollywood and Los Angeles County.

10.5 Public Availability

Not later than 30 days after filing a copy of its plan with DWR, the City will make the UWMP and WSCP available for public review. A copy of the plans will be available during normal business hours at the front desk of the City's Public Works office, located at the main entrance of the City's Public Works building at 345 Foothill Road, Beverly Hills 90210. A copy of the UWMP will also be posted for public viewing on the City's website.

10.6 Amending an Adopted UWMP

If the City amends the adopted UWMP, each of the steps for notification, public hearing, adoption, and submittal will also be followed for the amended plan. If revised, a copy of the WSCP will be submitted to DWR within 30 days of adoption.

REFERENCES

Hazen, November 2020. Beverly Hills Integrated Water Resources Master Plan. http://www.beverlyhills.org/departments/publicworks/utilities/waterservices/integratedwaterresourcesmasterplan/web.jsp

Beverly Hills, 2017. Local Hazard Mitigation Action Plan, 2017 – 2022. https://www.beverlyhills.org/cbhfiles/storage/files/308161150947855524/BeverlyHillsFinalLHMAP5.29.pdf

Beverly Hills Public Works Department, 2021. City of Beverly Hills Potable Water System Emergency Response Plan.

California Department of Water Resources, 2021. Urban Water Management Plan Guidebook 2020.

California Department of Water Resources. (2020b, August 26). The Final State Water Project Delivery Capability Report (DCR) 2019. https://data.cnra.ca.gov/dataset/state-water-project-delivery-capability-report-dcr-2019.

Metropolitan Water District of Southern California, 2021. Metropolitan Urban Water Management Plan 2020.

Metropolitan Water District of Southern California, 2021. Appendix 11 Addendum to Metropolitan 2015 Urban Water Management Plan, Quantifying Regional Self-Reliance, and Reduced Reliance on Water Supplies from the Delta Watershed.

Southern California Association of Governments, 2020. 6th Cycle Housing Element Updates Metadata. https://scag.ca.gov/housing-elements

Southern California Association of Governments, 2021. 6th Cycle Regional Housing Needs Assessment Final Allocation Plan. https://scag.ca.gov/sites/main/files/file-attachments/6th-cycle-rhna-final-allocation-plan.pdf?1616462966

Southern California Association of Governments, May 2019. Profile of the City of Beverly Hills. https://scag.ca.gov/sites/main/files/file-attachments/beverlyhills_localprofile.pdf?1605663947

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CITY OF BEVERLY HILLS
2020 UWMP
APPENDICES

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APPENDIX A

UWMP Checklist

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2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
Chapter 1	10615	A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities.	Introduction and Overview	Chapter 1
Chapter 1	10630.5	Each plan shall include a simple description of the supplier's plan including water availability, future requirements, a strategy for meeting needs, and other pertinent information. Additionally, a supplier may also choose to include a simple description at the beginning of each chapter.	Summary	Section 1.2
Section 2.2	10620(b)	Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.	Plan Preparation	Section 2.1
Section 2.6	10620(d)(2)	Coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.	Plan Preparation	Section 2.4
Section 2.6.2	10642	Provide supporting documentation that the water supplier has encouraged active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan and contingency plan.	Plan Preparation	Section 2.4.2
Section 2.6, Section 6.1	10631(h)	Retail suppliers will include documentation that they have provided their wholesale supplier(s) - if any - with water use projections from that source.	System Supplies	Section 2.4.1
Section 3.1	10631(a)	Describe the water supplier service area.	System Description	Sections 3.1 and 3.2
Section 3.3	10631(a)	Describe the climate of the service area of the supplier.	System Description	Section 3.3
Section 3.4	10631(a)	Provide population projections for 2025, 2030, 2035, 2040 and optionally 2045.	System Description	Section 3.4
Section 3.4.2	10631(a)	Describe other social, economic, and demographic factors affecting the supplier's water management planning.	System Description	Section 3.4
Sections 3.4 and 5.4	10631(a)	Indicate the current population of the service area.	System Description and Baselines and Targets	Section 3.4
Section 3.5	10631(a)	Describe the land uses within the service area.	System Description	Section 3.5
Section 4.2	10631(d)(1)	Quantify past, current, and projected water use, identifying the uses among water use sectors.	System Water Use	Sections 4.2 and 4.4
Section 4.2.4	10631(d)(3)(C)	Retail suppliers shall provide data to show the distribution loss standards were met.	System Water Use	Sections 4.3 and 4.5.4
Section 4.2.6	10631(d)(4)(A)	In projected water use, include estimates of water savings from adopted codes, plans and other policies or laws.	System Water Use	Section 4.4
Section 4.2.6	10631(d)(4)(B)	Provide citations of codes, standards, ordinances, or plans used to make water use projections.	System Water Use	Section 4.4
Section 4.3.2.4	10631(d)(3)(A)	Report the distribution system water loss for each of the 5 years preceding the plan update.	System Water Use	Sections 4.3 and 4.5.4
Section 4.4	10631.1(a)	Include projected water use needed for lower income housing projected in the service area of the supplier.	System Water Use	Section 4.6
Section 4.5	10635(b)	Demands under climate change considerations must be included as part of the drought risk assessment.	System Water Use	Sections 4.7, 7.3, and 7.5
Chapter 5	10608.20(e)	Retail suppliers shall provide baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.	Baselines and Targets	Chapter 5
Chapter 5	10608.24(a)	Retail suppliers shall meet their water use target by December 31, 2020.	Baselines and Targets	Section 5.2
Section 5.2	10608.24(d)(2)	If the retail supplier adjusts its compliance GPCD using weather normalization, economic adjustment, or extraordinary events, it shall provide the basis for, and data supporting the adjustment.	Baselines and Targets	N/A
Section 5.5	10608.22	Retail suppliers' per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use of the 5 year baseline. This does not apply if the suppliers base GPCD is at or below 100.	Baselines and Targets	Section 5.2
Section 5.5 and Appendix E	10608.4	Retail suppliers shall report on their compliance in meeting their water use targets. The data shall be reported using a standardized form in the SBX7-7 2020 Compliance Form.	Baselines and Targets	Appendix G
Sections 6.1 and 6.2	10631(b)(1)	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought.	System Supplies	Section 7.3
Sections 6.1	10631(b)(1)	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought, *including changes in supply due to climate change*.	System Supplies	Section 7.3
Section 6.1	10631(b)(2)	When multiple sources of water supply are identified, describe the management of each supply in relationship to other identified supplies.	System Supplies	Chapter 6
Section 6.1.1	10631(b)(3)	Describe measures taken to acquire and develop planned sources of water.	System Supplies	Chapter 6
Section 6.2.8	10631(b)	Identify and quantify the existing and planned sources of water available for 2020, 2025, 2030, 2035, 2040 and optionally 2045.	System Supplies	Section 6.9
Section 6.2	10631(b)	Indicate whether groundwater is an existing or planned source of water available to the supplier.	System Supplies	Section 6.2, 6.8, and 6.9
Section 6.2.2	10631(b)(4)(A)	Indicate whether a groundwater sustainability plan or groundwater management plan has been adopted by the water supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	System Supplies	Section 6.2
Section 6.2.2	10631(b)(4)(B)	Describe the groundwater basin.	System Supplies	Section 6.2
Section 6.2.2	10631(b)(4)(B)	Indicate if the basin has been adjudicated and include a copy of the court order or decree and a description of the amount of water the supplier has the legal right to pump.	System Supplies	Section 6.2
Section 6.2.2.1	10631(b)(4)(B)	For unadjudicated basins, indicate whether or not the department has identified the basin as a high or medium priority. Describe efforts by the supplier to coordinate with sustainability or groundwater agencies to achieve sustainable groundwater conditions.	System Supplies	Section 6.2.4
Section 6.2.2.4	10631(b)(4)(C)	Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years	System Supplies	Sections 6.2 and 6.9
Section 6.2.2	10631(b)(4)(D)	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	System Supplies	Sections 6.2 and 6.9
Section 6.2.7	10631(c)	Describe the opportunities for exchanges or transfers of water on a short-term or long- term basis.	System Supplies	Section 6.7
Section 6.2.5	10633(b)	Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	System Supplies (Recycled Water)	Section 6.5
Section 6.2.5	10633(c)	Describe the recycled water currently being used in the supplier's service area.	System Supplies (Recycled Water)	Section 6.5
Section 6.2.5	10633(d)	Describe and quantify the potential uses of recycled water and provide a determination of the technical and economic feasibility of those uses.	System Supplies (Recycled Water)	Section 6.5
Section 6.2.5	10633(e)	Describe the projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected.	System Supplies (Recycled Water)	Section 6.5
Section 6.2.5	10633(f)	Describe the actions which may be taken to encourage the use of recycled water and the projected results of these actions in terms of acre-feet of recycled water used per year.	System Supplies (Recycled Water)	Section 6.5
Section 6.2.5	10633(g)	Provide a plan for optimizing the use of recycled water in the supplier's service area.	System Supplies (Recycled Water)	Section 6.5
Section 6.2.6	10631(g)	Describe desalinated water project opportunities for long-term supply.	System Supplies	Section 6.6
Section 6.2.5	10633(a)	Describe the wastewater collection and treatment systems in the supplier's service area with quantified amount of collection and treatment and the disposal methods.	System Supplies (Recycled Water)	Section 6.5
Section 6.2.8, Section 6.3.7	10631(f)	Describe the expected future water supply projects and programs that may be undertaken by the water supplier to address water supply reliability in average, single-dry, and for a period of drought lasting 5 consecutive water years.	System Supplies	Section 6.8
Section 6.4 and Appendix O	10631.2(a)	The UWMP must include energy information, as stated in the code, that a supplier can readily obtain.	System Suppliers, Energy Intensity	Section 6.10
Section 7.2	10634	Provide information on the quality of existing sources of water available to the supplier and the manner in which water quality affects water management strategies and supply reliability	Water Supply Reliability Assessment	Section 7.2
Section 7.2.4	10620(f)	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	Water Supply Reliability Assessment	Section 6.8 and Chapter 9
Section 7.3	10635(a)	Service Reliability Assessment: Assess the water supply reliability during normal, dry, and a drought lasting five consecutive water years by comparing the total water supply sources available to the water supplier with the total projected water use over the next 20 years.	Water Supply Reliability Assessment	Sections 7.3 and 7.4
Section 7.3	10635(b)	Provide a drought risk assessment as part of information considered in developing the demand management measures and water supply projects.	Water Supply Reliability Assessment	Section 7.5

2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
Section 7.3	10635(b)(1)	Include a description of the data, methodology, and basis for one or more supply shortage conditions that are necessary to conduct a drought risk assessment for a drought period that lasts 5 consecutive years.	Water Supply Reliability Assessment	Section 7.5
Section 7.3	10635(b)(2)	Include a determination of the reliability of each source of supply under a variety of water shortage conditions.	Water Supply Reliability Assessment	Sections 7.3, 7.4, and 7.5
Section 7.3	10635(b)(3)	Include a comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period.	Water Supply Reliability Assessment	Sections 7.4 and 7.5
Section 7.3	10635(b)(4)	Include considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.	Water Supply Reliability Assessment	Chapter 7
Chapter 8	10632(a)	Provide a water shortage contingency plan (WSCP) with specified elements below.	Water Shortage Contingency Planning	Chapter 8
Chapter 8	10632(a)(1)	Provide the analysis of water supply reliability (from Chapter 7 of Guidebook) in the WSCP	Water Shortage Contingency Planning	Section 8.1 and Chapter 7
Section 8.10	10632(a)(10)	Describe reevaluation and improvement procedures for monitoring and evaluation the water shortage contingency plan to ensure risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented.	Water Shortage Contingency Planning	Section 8.11
Section 8.2	10632(a)(2)(A)	Provide the written decision-making process and other methods that the supplier will use each year to determine its water reliability.	Water Shortage Contingency Planning	Section 8.2
Section 8.2	10632(a)(2)(B)	Provide data and methodology to evaluate the supplier's water reliability for the current year and one dry year pursuant to factors in the code.	Water Shortage Contingency Planning	Section 8.2
Section 8.3	10632(a)(3)(A)	Define six standard water shortage levels of 10, 20, 30, 40, 50 percent shortage and greater than 50 percent shortage. These levels shall be based on supply conditions, including percent reductions in supply, changes in groundwater levels, changes in surface elevation, or other conditions. The shortage levels shall also apply to a catastrophic interruption of supply.	Water Shortage Contingency Planning	Sections 8.3 and 8.4
Section 8.3	10632(a)(3)(B)	Suppliers with an existing water shortage contingency plan that uses different water shortage levels must cross reference their categories with the six standard categories.	Water Shortage Contingency Planning	Section 8.3
Section 8.4	10632(a)(4)(A)	Suppliers with water shortage contingency plans that align with the defined shortage levels must specify locally appropriate supply augmentation actions.	Water Shortage Contingency Planning	Section 8.4
Section 8.4	10632(a)(4)(B)	Specify locally appropriate demand reduction actions to adequately respond to shortages.	Water Shortage Contingency Planning	Section 8.4
Section 8.4	10632(a)(4)(C)	Specify locally appropriate operational changes.	Water Shortage Contingency Planning	Section 8.4
Section 8.4	10632(a)(4)(D)	Specify additional mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions are appropriate to local conditions.	Water Shortage Contingency Planning	Section 8.4
Section 8.4	10632(a)(4)(E)	Estimate the extent to which the gap between supplies and demand will be reduced by implementation of the action.	Water Shortage Contingency Planning	Section 8.4
Section 8.4.6	10632.5	The plan shall include a seismic risk assessment and mitigation plan.	Water Shortage Contingency Plan	Section 8.5
Section 8.5	10632(a)(5)(A)	Suppliers must describe that they will inform customers, the public and others regarding any current or predicted water shortages.	Water Shortage Contingency Planning	Section 8.6
Section 8.5 and 8.6	10632(a)(5)(B) 10632(a)(5)(C)	Suppliers must describe that they will inform customers, the public and others regarding any shortage response actions triggered or anticipated to be triggered and other relevant communications.	Water Shortage Contingency Planning	Section 8.6
Section 8.6	10632(a)(6)	Retail supplier must describe how it will ensure compliance with and enforce provisions of the WSCP.	Water Shortage Contingency Planning	Section 8.7
Section 8.7	10632(a)(7)(A)	Describe the legal authority that empowers the supplier to enforce shortage response actions.	Water Shortage Contingency Planning	Section 8.8
Section 8.7	10632(a)(7)(B)	Provide a statement that the supplier will declare a water shortage emergency Water Code Chapter 3.	Water Shortage Contingency Planning	Section 8.8
Section 8.7	10632(a)(7)(C)	Provide a statement that the supplier will coordinate with any city or county within which it provides water for the possible proclamation of a local emergency.	Water Shortage Contingency Planning	Section 8.8
Section 8.8	10632(a)(8)(A)	Describe the potential revenue reductions and expense increases associated with activated shortage response actions.	Water Shortage Contingency Planning	Section 8.9
Section 8.8	10632(a)(8)(B)	Provide a description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions.	Water Shortage Contingency Planning	Section 8.9
Section 8.8	10632(a)(8)(C)	Retail suppliers must describe the cost of compliance with Water Code Chapter 3.3: Excessive Residential Water Use During Drought	Water Shortage Contingency Planning	Section 8.9 and Appendix J
Section 8.9	10632(a)(9)	Retail suppliers must describe the monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance.	Water Shortage Contingency Planning	Section 8.10
Section 8.11	10632(b)	Analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas.	Water Shortage Contingency Planning	Section 8.12
Sections 8.12 and 10.4	10635(c)	Provide supporting documentation that Water Shortage Contingency Plan has been, or will be, provided to any city or county within which it provides water, no later than 30 days after the submission of the plan to DWR.	Plan Adoption, Submittal, and Implementation	Section 10.5
Section 8.12	10632(c)	Make available the Water Shortage Contingency Plan to customers and any city or county where it provides water within 30 after adopted the plan.	Water Shortage Contingency Planning	Section 10.5
Sections 9.2 and 9.3	10631(e)(1)	Retail suppliers shall provide a description of the nature and extent of each demand management measure implemented over the past five years. The description will address specific measures listed in code.	Demand Management Measures	Section 9.2
Chapter 10	10608.26(a)	Retail suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets (recommended to discuss compliance).	Plan Adoption, Submittal, and Implementation	Section 10.3
Section 10.2.1	10621(b)	Notify, at least 60 days prior to the public hearing, any city or county within which the supplier provides water that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. Reported in Table 10-1.	Plan Adoption, Submittal, and Implementation	Section 10.2
Section 10.4	10621(f)	Each urban water supplier shall update and submit its 2020 plan to the department by July 1, 2021.	Plan Adoption, Submittal, and Implementation	Section 10.4
Sections 10.2.2, 10.3, and 10.5	10642	Provide supporting documentation that the urban water supplier made the plan and contingency plan available for public inspection, published notice of the public hearing, and held a public hearing about the plan and contingency plan.	Plan Adoption, Submittal, and Implementation	Section 10.5
Section 10.2.2	10642	The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water.	Plan Adoption, Submittal, and Implementation	Appendix F
Section 10.3.2	10642	Provide supporting documentation that the plan and contingency plan has been adopted as prepared or modified.	Plan Adoption, Submittal, and Implementation	Section 10.3 and Appendix F
Section 10.4	10644(a)	Provide supporting documentation that the urban water supplier has submitted this UWMP to the California State Library.	Plan Adoption, Submittal, and Implementation	Section 10.4 and Appendix F
Section 10.4	10644(a)(1)	Provide supporting documentation that the urban water supplier has submitted this UWMP to any city or county within which the supplier provides water no later than 30 days after adoption.	Plan Adoption, Submittal, and Implementation	Section 10.4 and Appendix F
Sections 10.4.1 and 10.4.2	10644(a)(2)	The plan, or amendments to the plan, submitted to the department shall be submitted electronically.	Plan Adoption, Submittal, and Implementation	Section 10.4
Section 10.5	10645(a)	Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	Section 10.4
Section 10.5	10645(b)	Provide supporting documentation that, not later than 30 days after filing a copy of its water shortage contingency plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	Section 10.4
Section 10.6	10621(c)	If supplier is regulated by the Public Utilities Commission, include its plan and contingency plan as part of its general rate case filings.	Plan Adoption, Submittal, and Implementation	N/A
Section 10.7.2	10644(b)	If revised, submit a copy of the water shortage contingency plan to DWR within 30 days of adoption.	Plan Adoption, Submittal, and Implementation	Section 10. 6

APPENDIX B

UWMP Submittal Tables

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Submittal Table 2-1 Retail Only: Public Water Systems

Public Water System Number	Public Water System Name	Number of Municipal Connections 2020	Volume of Water Supplied 2020 *
Add additional rows as needed			
1910156	City of Beverly Hills	10,662	9,565
	TOTAL	10,662	9,565

**** Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3.*

NOTES:

<table>
<tr><th colspan="4">Submittal Table 2 2: Plan Identification</th></tr>
<tr><th>Select Only One</th><th colspan="2">Type of Plan</th><th>Name of RUWMP or Regional Alliance
if applicable
(select from drop down list)</th></tr>
<tr><td>☑</td><td colspan="3">Individual UWMP</td></tr>
<tr><td rowspan="2"></td><td>☐</td><td>Water Supplier is also a member of a RUWMP</td><td></td></tr>
<tr><td>☐</td><td>Water Supplier is also a member of a Regional Alliance</td><td></td></tr>
<tr><td>☐</td><td colspan="2">Regional Urban Water Management Plan (RUWMP)</td><td></td></tr>
<tr><td colspan="4">NOTES:</td></tr>
</table>

Submittal Table 2 3: Supplier Identification

Type of Supplier (select one or both)	
☐	Supplier is a wholesaler
☑	Supplier is a retailer
Fiscal or Calendar Year (select one)	
☑	UWMP Tables are in calendar years
☐	UWMP Tables are in fiscal years
If using fiscal years provide month and date that the fiscal year begins (mm/dd)	
Units of measure used in UWMP * (select from drop down)	
Unit	AF
* ***Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3.*	
NOTES:	

Submittal Table 2-4 Retail: Water Supplier Information Exchange

The retail Supplier has informed the following wholesale supplier(s) of projected water use in accordance with Water Code Section 10631.

Wholesale Water Supplier Name
Add additional rows as needed
Metropolitan Water District of Southern California

NOTES:

Submittal Table 3-1 Retail: Population - Current and Projected

Population Served	2020	2025	2030	2035	2040	2045*(opt)*
	43,371	44,176	44,618	45,214	45,712	46,279

NOTES: Population figure based on SCAG data and includes the West Hollywood portion of the water service area.

Submittal Table 4-1 Retail: Demands for Potable and Non-Potable[1] Water - Actual

Use Type	2020 Actual		
Drop down list May select each use multiple times These are the only Use Types that will be recognized by the WUEdata online submittal tool	Additional Description (as needed)	Level of Treatment When Delivered Drop down list	Volume[2]
Add additional rows as needed			
Single Family		Drinking Water	5,135
Multi-Family		Drinking Water	2,034
Commercial	(CII) Commercial, Industrial, Institutional/Government	Drinking Water	2,095
Other Potable	Fire hydrant water	Drinking Water	9
Losses			292
		TOTAL	9,565

[1] *Recycled water demands are NOT reported in this table. Recycled water demands are reported in Table 6-4.*

[2] *Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.*

NOTES:

Submittal Table 4-2 Retail: Use for Potable and Non-Potable[1] Water - Projected

Use Type	Additional Description (as needed)	Projected Water Use[2] *Report To the Extent that Records are Available*				
Drop down list May select each use multiple times These are the only Use Types that will be recognized by the WUEdata online submittal tool		2025	2030	2035	2040	2045 (opt)
Add additional rows as needed						
Single Family		5,913	6,002	6,096	6,187	6,255
Multi-Family		2,483	2,510	2,540	2,580	2,623
Commercial	CII (Comm/Institut, Indust), and fire/temp	2,940	3,012	3,086	3,185	3,251
Losses		597	607	618	630	639
	TOTAL	11,933	12,131	12,340	12,582	12,768

[1] *Recycled water demands are NOT reported in this table. Recycled water demands are reported in Table 6-4.*

[2] *Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.*

NOTES: Losses are assumed equal to 5% of supply based on the five-year average of historical Water Loss Audit data (2015 to 2019).

Submittal Table 4-3 Retail: Total Water Use (Potable and Non-Potable)

	2020	2025	2030	2035	2040	2045 (opt)
Potable Water, Raw, Other Non-potable *From Tables 4-1R and 4-2 R*	9,565	11,933	12,131	12,340	12,582	12,768
Recycled Water Demand[1] *From Table 6-4*	0	0	0	0	0	0
Optional Deduction of Recycled Water Put Into Long-Term Storage[2]						
TOTAL WATER USE	9,565	11,933	12,131	12,340	12,582	12,768

[1] Recycled water demand fields will be blank until Table 6-4 is complete

[2] Long term storage means water placed into groundwater or surface storage that is not removed from storage in the same year. Supplier ***may*** *deduct recycled water placed in long-term storage from their reported demand. This value is manually entered into Table 4-3.*

NOTES:

Submittal Table 4-4 Retail: Last Five Years of Water Loss Audit Reporting

Reporting Period Start Date (mm/yyyy)	Volume of Water Loss [1,2]
01/2015	498
01/2016	551
01/2017	758
01/2018	439
01/2019	235

[1] *Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet.*

[2] ***Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3.*

NOTES:

Submittal Table 4-5 Retail Only: Inclusion in Water Use Projections

Are Future Water Savings Included in Projections? (Refer to Appendix K of UWMP Guidebook) *Drop down list (y/n)*	Yes
If "Yes" to above, state the section or page number, in the cell to the right, where citations of the codes, ordinances, or otherwise are utilized in demand projections are found.	Chapter 9 2020 UWMP
Are Lower Income Residential Demands Included In Projections? *Drop down list (y/n)*	Yes

NOTES:

Submittal Table 5-1 Baselines and Targets Summary From SB X7-7 Verification Form

Retail Supplier or Regional Alliance Only

Baseline Period	Start Year *	End Year *	Average Baseline GPCD*	Confirmed 2020 Target*
10-15 year	*1996*	*2005*	*291.7*	*233.4*
5 Year	*2003*	*2007*	*286.3*	

**All cells in this table should be populated manually from the supplier's SBX7-7 Verification Form and reported in Gallons per Capita per Day (GPCD)*

NOTES:

Submittal Table 5-2: 2020 Compliance
From SB X7-7 2020 Compliance Form
Retail Supplier or Regional Alliance Only

2020 GPCD			2020 Confirmed Target GPCD*	Did Supplier Achieve Targeted Reduction for 2020? Y/N
Actual 2020 GPCD*	2020 TOTAL Adjustments*	Adjusted 2020 GPCD* *(Adjusted if applicable)*		
197	*0*	*197*	*233*	*Yes*

Caution. This table has two header rows, and the second one starts in the table body. Markdown only allows one header row. So the label "2020 Confirmed Target GPCD*" sits above the "Adjusted 2020 GPCD*" column position. Its data value is 233. The label "Did Supplier Achieve Targeted Reduction for 2020? Y/N" sits in the last column. Its value is Yes.

**All cells in this table should be populated manually from the supplier's SBX7-7 2020 Compliance Form and reported in Gallons per Capita per Day (GPCD)*

NOTES:

Submittal Table 6 1 Retail: Groundwater Volume Pumped						
☑	Supplier does not pump groundwater. The supplier will not complete the table below.					
☐	All or part of the groundwater described below is desalinated.					
Groundwater Type ***Drop Down List*** *May use each category multiple times*	Location or Basin Name	2016*	2017*	2018*	2019*	2020*
Add additional rows as needed						
	TOTAL	0	0	0	0	0
**** Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3.*						
NOTES: Water treatment plant and wells off-line for the past five years for improvements to the treatment plant.						

Submittal Table 6 2 Retail: Wastewater Collected Within Service Area in 2020

☐	There is no wastewater collection system. The supplier will not complete the table below.
	Percentage of 2020 service area covered by wastewater collection system *(optional)*
	Percentage of 2020 service area population covered by wastewater collection system *(optional)*

Wastewater Collection			**Recipient of Collected Wastewater**			
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated? *Drop Down List*	Volume of Wastewater Collected from UWMP Service Area 2020 *	Name of Wastewater Treatment Agency Receiving Collected Wastewater	Treatment Plant Name	Is WWTP Located Within UWMP Area? *Drop Down List*	Is WWTP Operation Contracted to a Third Party? *(optional)* *Drop Down List*
L.A. Bureau of Sanitation	Metered	4,130	L.A. Bureau of Sanitation	Hyperion Water Reclamation Plant	No	
Total Wastewater Collected from Service Area in 2020:		4,130				

**** Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3* **.**

NOTES: Volume based on average flow rate reported by City of Los Angeles to City of Beverly Hills for April 2019 through March 2020 as part of annual reporting in accordance with the wastewater service agreement.

Submittal Table 6 3 Retail: Wastewater Treatment and Discharge Within Service Area in 2020

☑ **No wastewater is treated or disposed of within the UWMP service area.** The supplier will not complete the table below.

Wastewater Treatment Plant Name	Discharge Location Name or Identifier	Discharge Location Description	Wastewater Discharge ID Number *(optional)* [2]	Method of Disposal ***Drop down list***	Does This Plant Treat Wastewater Generated Outside the Service Area? ***Drop down list***	Treatment Level ***Drop down list***	**2020 volumes** [1]				
							Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area	Instream Flow Permit Requirement
Total							0	0	0	0	0

[1] **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.

[2] If the **Wastewater Discharge ID Number** is not available to the UWMP preparer, access the SWRCB CIWQS regulated facility website at https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/CiwqsReportServlet?inCommand=reset&reportName=RegulatedFacility

NOTES: Hyperion is located outside of the City’s service area. No wastewater is treated or disposed of within the City’s service area.

Submittal Table 6 4 Retail: Recycled Water Direct Beneficial Uses Within Service Area

☑ Recycled water is not used and is not planned for use within the service area of the supplier.
The supplier will not complete the table below.

Name of Supplier Producing (Treating) the Recycled Water:	
Name of Supplier Operating the Recycled Water Distribution System:	
Supplemental Water Added in 2020 (volume) *Include units*	
Source of 2020 Supplemental Water	

Beneficial Use Type *Insert additional rows if needed.*	**Potential** Beneficial Uses of Recycled Water (Describe)	Amount of **Potential** Uses of Recycled Water (Quantity) *Include volume units*[1]	General Description of 2020 Uses	Level of Treatment *Drop down list*	2020[1]	2025[1]	2030[1]	2035[1]	2040[1]	2045[1] (opt)
Agricultural irrigation										
Landscape irrigation (exc golf courses)										
Golf course irrigation										
Commercial use										
Industrial use										
Geothermal and other energy production										
Seawater intrusion barrier										
Recreational impoundment										
Wetlands or wildlife habitat										
Groundwater recharge (IPR)										
Reservoir water augmentation (IPR)										
Direct potable reuse										
Other (Description Required)										
				Total:	0	0	0	0	0	0
				2020 Internal Reuse						

[1] ***Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3.*

NOTES:

Submittal Table 6 5 Retail: 2015 UWMP Recycled Water Use Projection Compared to 2020 Actual

☑	Recycled water was not used in 2015 nor projected for use in 2020. The supplier will not complete the table below. If recycled water was not used in 2020, and was not predicted to be in 2015, then check the box and do not complete the table.

Beneficial Use Type	2015 Projection for 2020 [1]	2020 Actual Use[1]
Insert additional rows as needed.		
Agricultural irrigation		
Landscape irrigation (exc golf courses)		
Golf course irrigation		
Commercial use		
Industrial use		
Geothermal and other energy production		
Seawater intrusion barrier		
Recreational impoundment		
Wetlands or wildlife habitat		
Groundwater recharge (IPR)		
Reservoir water augmentation (IPR)		
Direct potable reuse		
Other (Description Required)		
Total	0	0

[1] **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.

NOTE:

Submittal Table 6 6 Retail: Methods to Expand Future Recycled Water Use

☑	Supplier does not plan to expand recycled water use in the future. Supplier will not complete the table below but will provide narrative explanation.		
Section 6.5	Provide page location of narrative in UWMP		
Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use *
Add additional rows as needed			
		Total	0

***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*

NOTES:

Submittal Table 6 7 Retail: Expected Future Water Supply Projects or Programs

☐ No expected future water supply projects or programs that provide a quantifiable increase to the agency s water supply. Supplier will not complete the table below.

☐ Some or all of the supplier s future water supply projects or programs are not compatible with this table and are described in a narrative format.

Provide page location of narrative in the UWMP

Name of Future Projects or Programs	Joint Project with other suppliers?		Description (if needed)	Planned Implementation Year	Planned for Use in Year Type *Drop Down List*	Expected Increase in Water Supply to Supplier* *This may be a range*
	Drop Down List (y/n)	*If Yes, Supplier Name*				
Add additional rows as needed						
One (1) well in La Brea Subarea of Central Basin	No		Constructed and ready to be equipped	2022	All Year Types	600 - 800
Two (2) wells in La Brea Subarea of Central Basin	No		Locations to be determined	2025	All Year Types	900 - 1200

***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*

NOTES: Implementation year of 2025 for two (2) La Brea Subarea wells is estimated. Locations of well sites are still to be determined.

Submittal Table 6-8 Retail: Water Supplies — Actual

Water Supply	Additional Detail on Water Supply	2020		
Drop down list May use each category multiple times.These are the only water supply categories that will be recognized by the WUEdata online submittal tool		Actual Volume*	Water Quality Drop Down List	Total Right or Safe Yield* (optional)
Add additional rows as needed				
Purchased or Imported Water	Treated Metropolitan water	9,565	Drinking Water	
Groundwater (not desalinated)	Treated at City Plant	0	Drinking Water	
	Total	9,565		0

***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*

NOTES: Volume from Metropolitan billing data for 2020.

Submittal Table 6-9 Retail: Water Supplies — Projected

Water Supply	Additional Detail on Water Supply	**Projected Water Supply *** Report To the Extent Practicable				
Drop down list May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool		**2025**	**2030**	**2035**	**2040**	**2045** (opt)
		Reasonably Available Volume	Reasonably Available Volume	Reasonably Available Volume	Reasonably Available Volume	Reasonably Available Volume
Add additional rows as needed						
Purchased or Imported Water	Treated Metropolitan	8,981	8,804	9,013	9,255	9,441
Groundwater (not desalinated)	Local Basins	2,952	3,327	3,327	3,327	3,327
	Total	11,933	12,131	12,340	12,582	12,768

**Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.*

NOTES

Submittal Table 7 1 Retail: Basis of Water Year Data (Reliability Assessment)

Year Type	**Base Year** If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 2019-2020, use 2020	**Available Supplies if Year Type Repeats**	
		☐	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location ________________________________
		☑	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available *	**% of Average Supply**
Average Year	1922-2017		100%
Single-Dry Year	1977		100%
Consecutive Dry Years 1st Year	1988		101%
Consecutive Dry Years 2nd Year	1989		102%
Consecutive Dry Years 3rd Year	1990		103%
Consecutive Dry Years 4th Year	1991		99%
Consecutive Dry Years 5th Year	1992		100%

Supplier may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a Supplier uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.

****Units of measure (AF, CCF, MG**) must remain consistent throughout the UWMP as reported in Table 2-3.*

NOTES: Percentages are based on Metropolitan's modeled demand output for normal, single-dry, and 5-consecutirve drought years provided for the City of Beverly Hills. Model output shows 100% supply reliability under all three water year conditions.

Submittal Table 7-2 Retail: Normal Year Supply and Demand Comparison

	2025	2030	2035	2040	2045 *(Opt)*
Supply totals *(autofill from Table 6-9)*	11,933	12,131	12,340	12,582	12,768
Demand totals *(autofill from Table 4-3)*	11,933	12,131	12,340	12,582	12,768
Difference	0	0	0	0	0

NOTES:

Submittal Table 7-3 Retail: Single Dry Year Supply and Demand Comparison

	2025	2030	2035	2040	2045 (Opt)
Supply totals*	11,933	12,131	12,340	12,582	12,768
Demand totals*	11,933	12,131	12,340	12,582	12,768
Difference	0	0	0	0	0

NOTES: Supply and demand equal to percentage shown in Table 7-1 for single-dry year times normal year values shown in Table 7-2.

Submittal Table 7-4 Retail: Multiple Dry Years Supply and Demand Comparison

		2025*	2030*	2035*	2040*	2045* (Opt)
First year	Supply totals	12,064	12,264	12,476	12,720	12,908
	Demand totals	12,064	12,264	12,476	12,720	12,908
	Difference	0	0	0	0	0
Second year	Supply totals	12,219	12,422	12,636	12,884	13,074
	Demand totals	12,219	12,422	12,636	12,884	13,074
	Difference	0	0	0	0	0
Third year	Supply totals	12,255	12,459	12,673	12,922	13,113
	Demand totals	12,255	12,459	12,673	12,922	13,113
	Difference	0	0	0	0	0
Fourth year	Supply totals	11,826	12,022	12,229	12,469	12,653
	Demand totals	11,826	12,022	12,229	12,469	12,653
	Difference	0	0	0	0	0
Fifth year	Supply totals	11,969	12,167	12,377	12,620	12,806
	Demand totals	11,969	12,167	12,377	12,620	12,806
	Difference	0	0	0	0	0

NOTES: Supply and demand equal to percentages shown in Table 7-1 for each year times normal year values shown in Table 7-2.

Submittal Table 7-5: Five-Year Drought Risk Assessment Tables to address Water Code Section 10635(b)

2021	Total
Total Water Use	10,164
Total Supplies	10,164
Surplus/Shortfall w/o WSCP Action	0
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	0%

2022	Total
Total Water Use	10,776
Total Supplies	10,776
Surplus/Shortfall w/o WSCP Action	0
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	0%

2023	Total
Total Water Use	11,290
Total Supplies	11,290
Surplus/Shortfall w/o WSCP Action	0
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	0%

2024	Total
Total Water Use	11,360
Total Supplies	11,360
Surplus/Shortfall w/o WSCP Action	0
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	0%

2025	Total
Total Water Use	11,969
Total Supplies	11,969
Surplus/Shortfall w/o WSCP Action	0
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	0%

Submittal Table 8-1
Water Shortage Contingency Plan Levels

Shortage Level	Percent Shortage Range	Shortage Response Actions (*Narrative description)*
1	Up to 10%	City manager declares a Stage B shortage: All users reduce to 90 percent of baseline water use, restaurants serve water upon request only, customers must repair leaks and breaks in a timely manner
2	Up to 20%	City manager declares a Stage C shortage: All restrictions of Stage B and users reduce to 80 percent of baseline water use
3	Up to 30%	City manager declares a Stage D shortage: All restrictions of Stage C, users reduce to 70 percent of baseline water use, limit landscape irrigation days, pool filling allowed only when appropriate cover is in place, restrict water feature use, prohibit potalbe use for vehicle washing, construction, dust control, and washing hard surfaces
4	Up to 40%	City manager declares a Stage D: All restrictions of Stage D, users further reduce use to 60 percent of baseline
5	Up to 50%	City manager declares a Stage E shortage: All restrictions of Stage D, users reduce to 50 percent of baseline water use, probibit all landscape irrigation, prioritize water use to health and safety needs, subsequent water use is prioritzed to maintain commerce, then enhance aethetic, and last to facilitate construction
6	>50%	City manager declares a Stage E shortage and activates Emergency Response Plan: All restrictions of Stage D, ERP standardized response and recovery protocol, contact planning partnerships as part of Mutual Aid Agreements to response to catastrophic supply interruption.

NOTES:

Submittal Table 8 2: Demand Reduction Actions

Shortage Level	Demand Reduction Actions **_Drop down list_** *These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.*	How much is this going to reduce the shortage gap? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail Suppliers Only*** *Drop Down List*
1	Other	5%	Stage A 5% system-wide reduction is required	No
1	Expand Public Information Campaign		Enhances effectiveness of other actions	No
1	Improve Customer Billing	1%		No
1	Provide Rebates on Plumbing Fixtures and Devices	1%		No
1	Reduce System Water Loss	1%		No
1	Other	5%	Stage B 10% system-wide reduction is required	Yes
1	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	3% - 5%		Yes
2	Other	10%	All restrictions and prohibitions of Stage B (Level 1)	Yes
2	Other	10%	Stage C 20% system-wide reduction is required	Yes
2	Landscape - Limit landscape irrigation to specific days	5%	Limit to specific days and times	Yes
3	Other	20%	All restrictions and prohibitions of Stage C (Level 2)	Yes
3	Other	5% - 20%	Stage D 30% or more system-wide reduction is required	Yes
3	Other water feature or swimming pool restriction	1%	Allow filling of swimming pools only if needed for health and safety	Yes
3	Other - Prohibit use of potable water for washing hard surfaces	2%	Limit to specific situations. Includes buildings. Details in City’s Emergency Water Conservation Plan	Yes
3	Other	1%	Prohibit use of hydrant water and flushing. Limit use to firefighting only.	Yes
4	Other	30% or more	Same as Level 3: Stage D system-wide reduction is required	Yes
5	Other	30% or more	All restrictions and prohibitions of Stage D (Levels 3 & 4)	Yes
5	Other	10% to Unknown	All users to reduce to 50% or percent needed due to interruption in supply	Yes
5	Landscape - Prohibit all landscape irrigation	20% - 50%	Priority to health and safety needs. Subsequent water uses are prioritized to maintain and expand commerce, then to enhance the aesthetics of the environment, and then to facilitate construction activities.	Yes
6	Other	50% +	All restrictions and prohibitions of Stage E (Level 5)	Yes
6	Other	Ration water supplies as needed	ERP response and recovery protocol to catastrophic supply interruption	Yes

NOTES: (1) Reduction percentages are estimated based on experience with existing DMMs and are subject to refinement after monitoring observed outcomes. (2) Reduction Actions are selected from a DWR drop down list. These are the only categories that are accepted for online submittal. See Additional Explanation for “Other.” (3) Shortage Level based on State’s six standard levels which can be mapped to the City’s Shortage Stages using UWMP Table 8-1B.

Submittal Table 8-3: Supply Augmentation and Other Actions

Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool*	How much is this going to reduce the shortage gap? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*
Add additional rows as needed			

NOTES: If there is a specified shortage in supply as shown in Table 8-1, then it is assumed that one or both sources are limited to the extent to cause such a shortage. As no alternative sources are available, supply is not a response triggered by the WSCP's shortage level, but already represented in the determination of any gap between supply and customer water use.

Submittal Table 10-1 Retail: Notification to Cities and Counties		
City Name	60 Day Notice	Notice of Public Hearing
Beverly Hills	Yes	Yes
West Hollywood	Yes	Yes
County Name	60 Day Notice	Notice of Public Hearing
Los Angeles County	Yes	Yes
NOTES:		

APPENDIX C

AWWA Water Audit Worksheets

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AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0
American Water Works Association

? Click to access definition
\+ Click to add a comment

Water Audit Report for: City of Beverly Hills
Reporting Year: 2015 1/2015 - 12/2015

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the input data by grading each component (n/a or 1-10) using the drop-down list to the left of the input cell. Hover the mouse over the cell to obtain a description of the grades

All volumes to be entered as: ACRE-FEET PER YEAR

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

Master Meter and Supply Error Adjustments

WATER SUPPLIED

<----------- Enter grading in column 'E' and 'J' ---------->

					Pcnt:		Value:	
Volume from own sources:	8	42.500	acre-ft/yr	7		● ○		acre-ft/yr
Water imported:	8	10,389.000	acre-ft/yr	8		● ○		acre-ft/yr
Water exported:	n/a	0.000	acre-ft/yr			● ○		acre-ft/yr

Enter negative % or value for under-registration
Enter positive % or value for over-registration

WATER SUPPLIED: 10,431.500 acre-ft/yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

				Pcnt:		Value:	
Billed metered:	8	9,803.000	acre-ft/yr				
Billed unmetered:	n/a	0.000	acre-ft/yr				
Unbilled metered:	n/a	0.000	acre-ft/yr				
Unbilled unmetered:	7	130.394	acre-ft/yr	1.25%	● ○		acre-ft/yr

Default option selected for Unbilled unmetered - a grading of 5 is applied but not displayed

AUTHORIZED CONSUMPTION: 9,933.394 acre-ft/yr

Use buttons to select percentage of water supplied
OR
value

WATER LOSSES (Water Supplied - Authorized Consumption) 498.106 acre-ft/yr

Apparent Losses

				Pcnt:		Value:	
Unauthorized consumption:		26.079	acre-ft/yr	0.25%	● ○		acre-ft/yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Customer metering inaccuracies:	n/a	0.000	acre-ft/yr	🟥	● ○		acre-ft/yr
Systematic data handling errors:	7	24.508	acre-ft/yr	0.25%	● ○		acre-ft/yr

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: 50.586 acre-ft/yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: 447.520 acre-ft/yr

WATER LOSSES: 498.106 acre-ft/yr

NON-REVENUE WATER

NON-REVENUE WATER: 628.500 acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	8	170.0	miles
Number of active AND inactive service connections:	8	10,752	
Service connection density:		63	conn./mile main

Are customer meters typically located at the curbstop or property line? Yes

Average length of customer service line: (length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line has been set to zero and a data grading score of 10 has been applied

Average operating pressure: 8 65.0 psi

COST DATA

Total annual cost of operating water system:	8	$42,500,000	$/Year
Customer retail unit cost (applied to Apparent Losses):	8	$4,051.00	$/1000 gallons (US)
Variable production cost (applied to Real Losses):	8	$2,269.00	$/acre-ft

☑ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 76 out of 100 *****

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

1: Water imported
2: Unauthorized consumption
3: Systematic data handling errors

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0

American Water Works Association.

? Click to access definition
+ Click to add a comment

Water Audit Report for: City of Beverly Hills
Reporting Year: 2016 | 1/2016 - 12/2016

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the input data by grading each component (n/a or 1-10) using the drop-down list to the left of the input cell. Hover the mouse over the cell to obtain a description of the grades

All volumes to be entered as: ACRE-FEET PER YEAR

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

<----------- Enter grading in column 'E' and 'J' ---------->

Master Meter and Supply Error Adjustments

WATER SUPPLIED

					Pcnt:		Value:	
Volume from own sources:	5	0.000	acre-ft/yr			● ○		acre-ft/yr
Water imported:	7	9,497.900	acre-ft/yr	4		○ ●	-10.200	acre-ft/yr
Water exported:	n/a	0.000	acre-ft/yr			● ○		acre-ft/yr

Enter negative % or value for under-registration
Enter positive % or value for over-registration

WATER SUPPLIED: 9,508.100 acre-ft/yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

				Pcnt:		Value:	
Billed metered:	5	8,956.900	acre-ft/yr				
Billed unmetered:	n/a	0.000	acre-ft/yr				
Unbilled metered:	n/a	0.000	acre-ft/yr				
Unbilled unmetered:	10	0.001	acre-ft/yr		○ ●	0.001	acre-ft/yr

Use buttons to select percentage of water supplied
OR
value

AUTHORIZED CONSUMPTION: 8,956.901 acre-ft/yr

WATER LOSSES (Water Supplied - Authorized Consumption) 551.199 acre-ft/yr

Apparent Losses

				Pcnt:		Value:	
Unauthorized consumption:		23.770	acre-ft/yr	0.25%	● ○		acre-ft/yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Customer metering inaccuracies:	3	90.474	acre-ft/yr	1.00%	● ○		acre-ft/yr
Systematic data handling errors:	5	22.392	acre-ft/yr	0.25%	● ○		acre-ft/yr

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: 136.636 acre-ft/yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: 414.563 acre-ft/yr

WATER LOSSES: 551.199 acre-ft/yr

NON-REVENUE WATER

NON-REVENUE WATER: 551.200 acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	9	171.0	miles
Number of active AND inactive service connections:	10	11,006	
Service connection density:		64	conn./mile main

Are customer meters typically located at the curbstop or property line? Yes

Average length of customer service line: (length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line has been set to zero and a data grading score of 10 has been applied

Average operating pressure:	8	68.4	psi

COST DATA

Total annual cost of operating water system:	10	$34,340,579	$/Year
Customer retail unit cost (applied to Apparent Losses):	9	$9.40	$/1000 gallons (US)
Variable production cost (applied to Real Losses):	7	$1,193.60	$/acre-ft

☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 68 out of 100 *****

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

1: Water imported
2: Customer metering inaccuracies
3: Billed metered

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0
American Water Works Association.
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Water Audit Report for: City of Beverly Hills (CA1910156)
Reporting Year: 2017 1/2017 - 12/2017

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the input data by grading each component (n/a or 1-10) using the drop-down list to the left of the input cell. Hover the mouse over the cell to obtain a description of the grades

All volumes to be entered as: ACRE-FEET PER YEAR

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

<----------- Enter grading in column 'E' and 'J' ---------->

WATER SUPPLIED

Master Meter and Supply Error Adjustments

		Grade	Value	Unit		Grade	Pcnt:		Value:	
Volume from own sources:	+ ?	10	0.001	acre-ft/yr	+ ?	5		○ ●	-37.700	acre-ft/yr
Water imported:	+ ?	7	9,965.500	acre-ft/yr	+ ?	9	0.02%	● ○		acre-ft/yr
Water exported:	+ ?	n/a	0.000	acre-ft/yr	+ ?			● ○		acre-ft/yr

Enter negative % or value for under-registration
Enter positive % or value for over-registration

WATER SUPPLIED: **10,001.208** acre-ft/yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

		Grade	Value	Unit	Pcnt:		Value:	
Billed metered:	+ ?	5	9,236.200	acre-ft/yr				
Billed unmetered:	+ ?	n/a		acre-ft/yr				
Unbilled metered:	+ ?	n/a		acre-ft/yr				
Unbilled unmetered:	+ ?	10	6.794	acre-ft/yr		○ ●	6.794	acre-ft/yr

Use buttons to select percentage of water supplied
OR
value

AUTHORIZED CONSUMPTION: ? **9,242.994** acre-ft/yr

WATER LOSSES (Water Supplied - Authorized Consumption)

758.214 acre-ft/yr

Apparent Losses

		Grade	Value	Unit	Pcnt:		Value:	
Unauthorized consumption:	+ ?	5	25.003	acre-ft/yr	0.25%	● ○		acre-ft/yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

		Grade	Value	Unit	Pcnt:		Value:	
Customer metering inaccuracies:	+ ?	2	188.494	acre-ft/yr	2.00%	● ○		acre-ft/yr
Systematic data handling errors:	+ ?	5	23.091	acre-ft/yr	0.25%	● ○		acre-ft/yr

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: ? **236.587** acre-ft/yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: ? **521.627** acre-ft/yr

WATER LOSSES: **758.214** acre-ft/yr

NON-REVENUE WATER

NON-REVENUE WATER: ? **765.008** acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

		Grade	Value	Unit
Length of mains:	+ ?	9	171.0	miles
Number of active AND inactive service connections:	+ ?	10	11,290	
Service connection density:	?		66	conn./mile main

Are customer meters typically located at the curbstop or property line? Yes

Average length of customer service line: + ? (length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line has been set to zero and a data grading score of 10 has been applied

Average operating pressure: + ? 7 68.4 psi

COST DATA

		Grade	Value	Unit
Total annual cost of operating water system:	+ ?	10	$35,133,817	$/Year
Customer retail unit cost (applied to Apparent Losses):	+ ?	9	$9.40	$/1000 gallons (US)
Variable production cost (applied to Real Losses):	+ ?	6	$1,162.00	$/acre-ft

☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 66 out of 100 *****

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

1: Water imported
2: Customer metering inaccuracies
3: Billed metered

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0

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\+ Click to add a comment

Water Audit Report for: City of Beverly Hills (CA1910156)
Reporting Year: 2018 | 1/2018 - 12/2018

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the input data by grading each component (n/a or 1-10) using the drop-down list to the left of the input cell. Hover the mouse over the cell to obtain a description of the grades

All volumes to be entered as: ACRE-FEET PER YEAR

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

<----------- Enter grading in column 'E' and 'J' ---------->

Master Meter and Supply Error Adjustments

WATER SUPPLIED

									Pcnt:		Value:	
Volume from own sources:	+	?	10	0.001	acre-ft/yr	+	?	5		○ ●	-7.556	acre-ft/yr
Water imported:	+	?	7	10,305.100	acre-ft/yr	+	?	9	0.01%	● ○		acre-ft/yr
Water exported:	+	?	n/a	0.000	acre-ft/yr	+	?			● ○		acre-ft/yr

Enter negative % or value for under-registration
Enter positive % or value for over-registration

WATER SUPPLIED: **10,312.131** acre-ft/yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

						Pcnt:		Value:	
Billed metered:	+	?	5	9,854.340	acre-ft/yr				
Billed unmetered:	+	?	n/a		acre-ft/yr				
Unbilled metered:	+	?	n/a		acre-ft/yr				
Unbilled unmetered:	+	?	10	19.030	acre-ft/yr		○ ●	19.030	acre-ft/yr

Use buttons to select percentage of water supplied
OR
value

AUTHORIZED CONSUMPTION: ? **9,873.370** acre-ft/yr

WATER LOSSES (Water Supplied - Authorized Consumption) **438.761** acre-ft/yr

Apparent Losses

						Pcnt:		Value:	
Unauthorized consumption:	+	?	5	25.780	acre-ft/yr	0.25%	● ○		acre-ft/yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Customer metering inaccuracies:	+	?	3	201.109	acre-ft/yr	2.00%	● ○		acre-ft/yr
Systematic data handling errors:	+	?	5	24.636	acre-ft/yr	0.25%	● ○		acre-ft/yr

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: ? **251.525** acre-ft/yr

Real Losses (Current Annual Real Losses or CARL)
Real Losses = Water Losses - Apparent Losses: ? **187.236** acre-ft/yr

WATER LOSSES: **438.761** acre-ft/yr

NON-REVENUE WATER

NON-REVENUE WATER: ? **457.791** acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	+	?	9	171.0	miles
Number of active AND inactive service connections:	+	?	10	11,127	
Service connection density:		?		65	conn./mile main

Are customer meters typically located at the curbstop or property line? Yes

Average length of customer service line: + ? (length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line has been set to zero and a data grading score of 10 has been applied

Average operating pressure: + ? 7 67.9 psi

COST DATA

Total annual cost of operating water system:	+	?	10	$38,483,085	$/Year
Customer retail unit cost (applied to Apparent Losses):	+	?	9	$9.74	$/1000 gallons (US)
Variable production cost (applied to Real Losses):	+	?	6	$1,261.76	$/acre-ft

☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 67 out of 100 *****

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

1: Water imported

2: Customer metering inaccuracies

3: Billed metered

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0

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Water Audit Report for: City of Beverly Hills (CA1910156)
Reporting Year: 2019 1/2019 - 12/2019

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the input data by grading each component (n/a or 1-10) using the drop-down list to the left of the input cell. Hover the mouse over the cell to obtain a description of the grades

All volumes to be entered as: ACRE-FEET PER YEAR

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

<----------- Enter grading in column 'E' and 'J' ---------->

Master Meter and Supply Error Adjustments

WATER SUPPLIED

						Pcnt:		Value:	
Volume from own sources:	10	0.001	acre-ft/yr	+ ?	5		○ ●	-5.400	acre-ft/yr
Water imported:	7	9,516.800	acre-ft/yr	+ ?	9	0.05%	● ○		acre-ft/yr
Water exported:	n/a	0.000	acre-ft/yr	+ ?			● ○		acre-ft/yr

Enter negative % or value for under-registration
Enter positive % or value for over-registration

WATER SUPPLIED: 9,517.103 acre-ft/yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

				Pcnt:		Value:	
Billed metered:	5	9,267.870	acre-ft/yr				
Billed unmetered:	n/a		acre-ft/yr				
Unbilled metered:	n/a		acre-ft/yr				
Unbilled unmetered:	10	13.950	acre-ft/yr		○ ●	13.950	acre-ft/yr

Use buttons to select percentage of water supplied
OR
value

AUTHORIZED CONSUMPTION: ? 9,281.820 acre-ft/yr

WATER LOSSES (Water Supplied - Authorized Consumption) 235.283 acre-ft/yr

Apparent Losses

				Pcnt:		Value:	
Unauthorized consumption:	3	23.793	acre-ft/yr	0.25%	● ○		acre-ft/yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Customer metering inaccuracies:	5	93.615	acre-ft/yr	1.00%	● ○		acre-ft/yr
Systematic data handling errors:	5	23.170	acre-ft/yr	0.25%	● ○		acre-ft/yr

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: ? 140.577 acre-ft/yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: ? 94.705 acre-ft/yr

WATER LOSSES: 235.283 acre-ft/yr

NON-REVENUE WATER

NON-REVENUE WATER: ? 249.233 acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	9	171.0	miles
Number of active AND inactive service connections:	10	10,913	
Service connection density:		64	conn./mile main

Are customer meters typically located at the curbstop or property line? Yes

Average length of customer service line: + ? (length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line has been set to zero and a data grading score of 10 has been applied

Average operating pressure: 7 67.4 psi

COST DATA

Total annual cost of operating water system:	10	$38,593,045	$/Year
Customer retail unit cost (applied to Apparent Losses):	9	$12.78	$/1000 gallons (US)
Variable production cost (applied to Real Losses):	6	$1,270.28	$/acre-ft

☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 69 out of 100 *****

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

1: Water imported
2: Billed metered
3: Customer metering inaccuracies

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APPENDIX D

Metropolitan 2020 UWMP Supply Capability

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Table 2-4
Single Dry-Year
Supply Capability[1] and Projected Demands
Repeat of 1977 Hydrology

(Acre-feet per year)

Forecast Year	2025	2030	2035	2040	2045
Current Programs					
In-Region Supplies and Programs	875,000	876,000	875,000	875,000	872,000
California Aqueduct[2]	647,000	634,000	633,000	634,000	633,000
Colorado River Aqueduct					
Total Supply Available[3]	1,174,000	1,403,500	927,500	1,327,500	974,500
Aqueduct Capacity Limit[4]	*1,250,000*	*1,250,000*	*1,250,000*	*1,250,000*	*1,250,000*
Colorado River Aqueduct Capability	1,174,000	1,250,000	927,500	1,250,000	974,500
Capability of Current Programs	**2,696,000**	**2,760,000**	**2,435,500**	**2,759,000**	**2,479,500**
Demands					
Total Demands on Metropolitan	1,319,000	1,270,000	1,227,000	1,246,000	1,273,000
Exchange with SDCWA	278,000	278,000	278,000	278,000	278,000
Total Metropolitan Deliveries[5]	**1,597,000**	**1,548,000**	**1,505,000**	**1,524,000**	**1,551,000**
Surplus	**1,099,000**	**1,212,000**	**930,500**	**1,235,000**	**928,500**
Programs Under Development					
In-Region Supplies and Programs	0	0	0	0	0
California Aqueduct	0	0	0	0	0
Colorado River Aqueduct					
Total Supply Available[3]	0	0	0	0	0
Aqueduct Capacity Limit[4]	*76,000*	*0*	*322,500*	*0*	*275,500*
Colorado River Aqueduct Capability	0	0	0	0	0
Capability of Proposed Programs	**0**	**0**	**0**	**0**	**0**
Potential Surplus	**1,099,000**	**1,212,000**	**930,500**	**1,235,000**	**928,500**

[1] Represents Supply Capability for resource programs under listed year type.
[2] California Aqueduct includes Central Valley transfers and storage program supplies conveyed by the aqueduct.

[3] Colorado River Aqueduct includes programs and Exchange with SDCWA conveyed by the aqueduct.
[4] Maximum CRA deliveries limited to 1.25 MAF including Exchange with SDCWA.

[5] Total demands are adjusted to include Exchange with SDCWA.

Table 2-5
Drought Lasting Five Consecutive Water Years Supply Capability[1] and Projected Demands Repeat of 1988-1992 Hydrology

(Acre-feet per year)

Forecast Year	2025	2030	2035	2040	2045
Current Programs					
In-Region Supplies and Programs	191,000	196,000	197,000	197,000	197,000
California Aqueduct[2]	730,800	768,000	789,000	812,000	792,000
Colorado River Aqueduct					
Total Supply Available[3]	1,240,000	1,466,000	1,466,000	1,415,000	1,437,000
Aqueduct Capacity Limit[4]	*1,250,000*	*1,250,000*	*1,250,000*	*1,250,000*	*1,250,000*
Colorado River Aqueduct Capability	1,240,000	1,250,000	1,250,000	1,250,000	1,250,000
Capability of Current Programs	**2,161,800**	**2,214,000**	**2,236,000**	**2,259,000**	**2,239,000**
Demands					
Total Demands on Metropolitan	1,351,000	1,332,000	1,297,000	1,290,000	1,313,000
Exchange with SDCWA	278,000	278,000	278,000	278,000	278,000
Total Metropolitan Deliveries[5]	**1,629,000**	**1,610,000**	**1,575,000**	**1,568,000**	**1,591,000**
Surplus	**532,800**	**604,000**	**661,000**	**691,000**	**648,000**
Programs Under Development					
In-Region Supplies and Programs	0	0	0	0	0
California Aqueduct	0	0	0	0	0
Colorado River Aqueduct					
Total Supply Available[3]	0	0	0	0	0
Aqueduct Capacity Limit[4]	*10,000*	*0*	*0*	*0*	0
Colorado River Aqueduct Capability	*0*	*0*	*0*	*0*	*0*
Capability of Proposed Programs	**0**	**0**	**0**	**0**	**0**
Potential Surplus	**532,800**	**604,000**	**661,000**	**691,000**	**648,000**

[1] Represents Supply Capability for resource programs under listed year type.

[2] California Aqueduct includes Central Valley transfers and storage program supplies conveyed by the aqueduct.

[3] Colorado River Aqueduct includes programs and Exchange with SDCWA conveyed by the aqueduct.

[4] Maximum CRA deliveries limited to 1.25 MAF including Exchange with SDCWA.

[5] Total demands are adjusted to include Exchange with SDCWA.

Table 2-6
Normal Water Year
Supply Capability[1] and Projected Demands
Average of 1922-2017 Hydrologies
(Acre-feet per year)

Forecast Year	2025	2030	2035	2040	2045
Current Programs					
In-Region Supplies and Programs	875,000	876,000	875,000	875,000	872,000
California Aqueduct[2]	1,774,000	1,766,000	1,763,000	1,762,000	1,761,000
Colorado River Aqueduct					
Total Supply Available[3]	1,214,000	1,290,000	1,283,000	1,230,000	1,250,000
Aqueduct Capacity Limit[4]	*1,250,000*	*1,250,000*	*1,250,000*	*1,250,000*	*1,250,000*
Colorado River Aqueduct Capability	1,214,000	1,250,000	1,250,000	1,230,000	1,250,000
Capability of Current Programs	**3,863,000**	**3,892,000**	**3,888,000**	**3,867,000**	**3,883,000**
Demands					
Total Demands on Metropolitan	1,191,000	1,142,000	1,101,000	1,116,000	1,140,000
Exchange with SDCWA	278,000	278,000	278,000	278,000	278,000
Total Metropolitan Deliveries[5]	**1,469,000**	**1,420,000**	**1,379,000**	**1,394,000**	**1,418,000**
Surplus	**2,394,000**	**2,472,000**	**2,509,000**	**2,473,000**	**2,465,000**
Programs Under Development					
In-Region Supplies and Programs	0	0	0	0	0
California Aqueduct	13,000	13,000	13,000	13,000	13,000
Colorado River Aqueduct					
Total Supply Available[3]	0	0	0	0	0
Aqueduct Capacity Limit[4]	*36,000*	*0*	*0*	*20,000*	0
Colorado River Aqueduct Capability	0	0	0	0	0
Capability of Proposed Programs	**13,000**	**13,000**	**13,000**	**13,000**	**13,000**
Potential Surplus	**2,407,000**	**2,485,000**	**2,522,000**	**2,486,000**	**2,478,000**

[1] Represents Supply Capability for resource programs under listed year type.

[2] California Aqueduct includes Central Valley transfers and storage program supplies conveyed by the aqueduct.

[3] Colorado River Aqueduct includes programs and Exchange with SDCWA conveyed by the aqueduct.

[4] Maximum CRA deliveries limited to 1.25 MAF including Exchange with SDCWA.

[5] Total demands are adjusted to include Exchange with SDCWA.

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APPENDIX E

City Conservation Ordinances

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ORDINANCE NO. 20-O-2819

AN ORDINANCE OF THE CITY OF BEVERLY HILLS AMENDING THE BEVERLY HILLS MUNICIPAL CODE REGARDING EMERGENCY WATER CONSERVATION PLAN

WHEREAS, on February 5, 2019, the City Council adopted an ordinance substituting a revenue stabilization rate schedule during water shortages instead of previous baseline methods and penalty surcharges, and intends to conform the Emergency Water Conservation Plan in accordance with such changes.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF BEVERLY HILLS DOES ORDAIN AS FOLLOWS:

Section 1. The City Council hereby amends and restates Article 3 (“Emergency Water Conservation Plan”) of Chapter 4 (“WATER REGULATIONS”) of Title 9 (“BUILDING AND PROPERTY HEALTH AND SAFETY REGULATIONS”) of the Beverly Hills Municipal Code to read as follows:

Article 3. Emergency Water Conservation Plan

9-4-301: AUTHORITY OF CITY MANAGER:

A. The City Manager is hereby authorized and directed to implement the applicable provisions of this article in order to protect the public health, safety, and welfare under the following conditions:
   1. In the event of an unforeseeable disaster or water emergency such as an earthquake, reservoir failure or other major disruption in the water supply, the City Manager is authorized to implement the emergency provisions of this article.
   2. In the event of a foreseeable water emergency, such as an extended drought, the City Manager is authorized to implement the applicable provisions of this article, after holding a public hearing before the City Council.

B. The City Manager is authorized to determine and declare that a water shortage emergency exists in any or all parts of the City of Beverly Hills and upon such determination, to promulgate such regulations, rules and conditions relative to the time of using water, the purpose or purposes for which it may be used and such other necessary limitations as will, in his or her opinion, relieve the water shortage in such part or parts of the City.

C. The City Council may review and affirm, reverse, or modify any determination made or regulations, rules or conditions promulgated by the City Manager pursuant to this article.

D. All references to the City Manager in this article shall mean the City Manager or his or her designee.

9-4-302: GENERAL PROHIBITION; APPLICABILITY:

A. No person shall use or permit the use of water from the City for residential, commercial, industrial, governmental, or any other purposes in violation of any provision of this article or in an amount in excess of the use that is permitted by the water conservation stages defined below.
B. The provisions of this article shall apply to all persons, customers and property served by the City of Beverly Hills, Public Works Department - Utilities Division wherever situated.

9-4-303: DECLARATION OF WATER CONSERVATION STAGES:

A. Water conservation stages shall be determined by the amount of water available or the potential for water interruption. The City Manager shall monitor the supply and demand for water by customers. When the City Manager determines that the requirements to declare a water shortage exist, he or she shall recommend that the City Council adopt a resolution to declare the appropriate water conservation stage be adopted.
B. The resolution shall specify the water use baseline for determining the water conservation measures required by Section 9-4-303 and the water revenue stabilization factors to be applied pursuant to Section 9-4-304. The water use baseline shall be determined based upon such factors as deemed appropriate by the City, including the characteristics of a local emergency, or as otherwise mandated by the State of California or other regulatory agency, or by the Metropolitan Water District of Southern California.
C. The City Council may modify by resolution any of the requirements contained in the stages of water conservation set forth in section 9-4-303 and 9-4-304 of this article if the City Council determines that the modification is in the best interests of the City or is appropriate to promote compliance with an applicable water use regulation.
D. The resolution to declare a water shortage exists shall be published within ten (10) days after its adoption at least once in a newspaper of general circulation within the City and shall be posted in at least three (3) public places. The resolution shall continue to be posted until such time as City Council repeals the resolution.
E. Except as otherwise may be provided by this article or a resolution adopted by the City Council or pursuant to the exercise of emergency powers authorized by Article 1 of Chapter 4 of the Municipal Code, any resolution that requires a reduction in the use of water shall not become effective for at least 30 days.

9-4-304: REQUIREMENTS FOR WATER CONSERVATION STAGES:

Upon the declaration of a water conservation stage, the water conservation reductions shall be implemented. The water conservation reductions for each water conservation stage and each class are described in the following table:

Water Conservation Reductions by Class

Class	Stage A	Stage B	Stage C	Stage D	Stage E
City-wide goal	(5% reduction)	(10% reduction)	(20% reduction)	(30% reduction)	(50% reduction)
single-family	6%	12%	24%	36%	58%
multi-family	3%	5%	11%	16%	31%
commercial	4%	7%	15%	22%	40%
irrigation	11%	22%	45%	67%	100%

Additional compliance elements for each water conservation stage are described below.

A. Stage A Requirements:
   1. A stage A shortage shall be declared when the City Manager determines that a five percent (5%) citywide reduction in potable water use is required.
   2. Stage A compliance may include voluntary reduced irrigation, notification of hotel and restaurant patrons of water conservation goals, and use of reclaimed water for construction purposes.

B. Stage B Requirements:
   1. A stage B shortage shall be declared when the City Manager determines that a ten percent (10%) citywide reduction in potable water use is required.
   2. Stage B compliance shall include the following mandatory elements:
      a. All public restrooms in the City and private bathrooms in hotels shall notify patrons and employees of water conservation goals;

   3. Violation by any person of the stage B mandatory requirements shall constitute an infraction and, upon conviction, shall be punished by a fine not to exceed one hundred dollars ($100.00). The violation of each element, and each separate violation thereof, shall be deemed a separate offense, and shall be punished accordingly.

C. Stage C Requirements:
   1. A stage C shortage shall be declared when the City Manager determines that a twenty percent (20%) citywide reduction in potable water use is required.
   2. Stage C compliance elements shall include the following mandatory elements:
      a. All public restrooms in the City and private bathrooms in hotels shall notify patrons and employees of water conservation goals;
      b. Water usage from fire hydrants shall be limited to firefighting, related activities or other activities necessary to maintain the public health, safety and welfare;
      c. Landscape irrigation shall be restricted to selected days and times as determined by the City Manager, unless such irrigation uses reclaimed wastewater.

   3. Violation by any person of the stage C mandatory requirements shall constitute a misdemeanor and, upon conviction, shall be punished by a fine not to exceed five hundred dollars ($500.00). Water supply through irrigation water services may be

terminated for continued excessive use. The violation of each element, and each separate violation thereof, shall be deemed a separate offense, and shall be punished accordingly.

D. Stage D Requirements:

1. A stage D shortage shall be declared when the City Manager determines that a thirty percent (30%) or higher citywide reduction in potable water use is required.
2. Stage D compliance elements shall include the following mandatory elements:
    - a. All public restrooms in the City and private bathrooms in hotels shall notify patrons and employees of water conservation goals;
    - b. Landscape irrigation shall be restricted to selected days and times as determined by the City Manager, unless such irrigation uses reclaimed wastewater;
    - c. Refilling of swimming pools, spas or ponds shall be prohibited unless required for health or safety reasons;
    - d. Exterior washdown of vehicles shall be prohibited unless:
        - (1) Using a reclaimed water system;
        - (2) Performed in accordance with an alternative plan that promotes water conservation and is approved in writing by the Director of Public Works or his/her designee; or
        - (3) Required to meet laws or governmental regulations to protect health and safety, such as the cleaning of garbage trucks and vehicles to transport food.
    - e. Water usage from fire hydrants shall be limited to firefighting, related activities or other activities necessary to maintain the public health, safety and welfare;
    - f. Exterior washdown of buildings shall be prohibited unless:
        - (1) Using a reclaimed water system and such washing is done: a) no more than once per month for retail building frontage; b) no more than twice per year for office and commercial buildings; c) no more often than is necessary to comply with health laws and regulations for the building frontage of food service uses; or d) no more than once per year for residential structures solely for the purpose of preparing a residential structure for painting.
        - (2) Using a commercial glass and window cleaner.
    - g. Exterior washdown of sidewalks and the pavement of outdoor dining areas shall be prohibited unless using a reclaimed water system and such washing is done no more often than is necessary to comply with health laws and regulations.
3. Violation by any person of the stage D mandatory requirements shall constitute a misdemeanor and, upon conviction, shall be punished by a fine not to exceed one thousand dollars ($1,000.00). Continued excessive use may result in termination of water supply through irrigation water services and/or restriction of water

supply through domestic meters. The violation of each element, and each separate violation thereof, shall be deemed a separate offense, and shall be punished accordingly.

4. For purposes of this article, "reclaimed water system" shall mean a system that initially uses potable water and then collects the runoff, treats the runoff, and uses the runoff for nonpotable uses for multiple cycles.

E. Stage E Requirements:
   1. A stage E shortage shall be declared when the City Manager determines that a catastrophic interruption of potable water supply has occurred or is foreseen.
   2. The City Manager shall have emergency water allocation authority in the case of a stage E declaration. This authority shall include the authority to interrupt service to any property or City service zone in order to provide the maximum water supply for human health and safety needs. A Stage E declaration will include mandatory shutoff of all irrigation-only service connections.
   3. In allocating water, the City Manager shall give first priority to health and safety needs of water utility customers. Subsequent water uses are prioritized to provide water supply first to maintain and expand commerce within the City, then to enhance the aesthetics of the environment, and then to facilitate construction activities.
   4. Violation by any person of the stage E emergency water conservation regulations, shall constitute a misdemeanor and, upon conviction, shall be punished by a fine not to exceed one thousand dollars ($1,000.00) and six (6) months in jail. The violation of each element, and each separate violation thereof, shall be deemed a separate offense, and shall be punished accordingly.

9-4-305: WATER SHORTAGE REVENUE STABILIZATION FACTORS

Upon the declaration of a water conservation stage, the water shortage revenue stabilization factors shall be implemented. The water shortage revenue stabilization factors for each water conservation stage and each class shall be multiplied by the then applicable quantity charge rate for each customer as described in the following table:

Revenue Stabilization Factors by Water Conservation Stage and Class

Class	Stage A (5% reduction)	Stage B (10% reduction)	Stage C (20% reduction)	Stage D (30% reduction)	Stage E (50% reduction)
single-family	1.039	1.081	1.187	1.333	1.824
multi-family	1.016	1.033	1.069	1.110	1.262
commercial	1.023	1.048	1.103	1.170	1.388
irrigation	1.076	1.169	1.474	2.192	n/a

9-4-306: NOTICE OF VIOLATION

A. The City shall give notice of violation to the person committing a violation of this article as follows:

1. Notice of violation of any water usage percentage reduction provisions shall be given in writing by regular mail.
2. Notice of violation of any other mandatory requirement listed in section 9-4-304 of this article shall be given in writing in the following manner:
    a. By giving the notice to the customer personally; or
    b. If the customer is absent from or unavailable at the premises at which the violation occurred, by leaving a copy with some person of suitable age and discretion at the premises and sending a copy through the regular mail to the address at which the customer is normally billed; or
    c. If a person of suitable age or discretion cannot be found, then by affixing a copy in a conspicuous place at the premises at which the violation occurred and also sending a copy through the regular mail to the address at which the customer is normally billed.

B. The notice shall contain a brief description of the facts of the violation and a statement of the possible penalties for each violation and a statement informing the customer of his or her right to a hearing on the merits of the violation pursuant to section 9-4-306 of this article.

9-4-307: HEARINGS:

Any person receiving notice of a violation of any water usage percentage reduction provision set forth in section 9-4-304 of this chapter shall have the right to request a hearing to appeal the violation. The City Council shall establish the appeal procedures by resolution.

9-4-308: ADDITIONAL WATER CONSERVATION MEASURES:

After holding a public hearing before the City Council, the City Manager may order implementation of water conservation measures including, or in addition to, those set forth in section 9-4-303 of this chapter, in order to encourage proper potable water use or to meet water conservation goals, regardless of supply.

9-4-309: EXCEPTIONS:

Nothing in this article shall be construed to require the City to curtail the supply of water to any customer when such water is required by that customer to maintain an adequate level of public health and safety.

Section 2. Severability. If any section, subsection, subdivision, sentence, clause, phrase, or portion of this Ordinance for any reason is held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance. The City Council hereby declares that it would have adopted this Ordinance, and each section, subsection, subdivision, sentence, clause, phrase, or portion thereof, irrespective of the fact that any one or more sections, subsections, subdivisions, sentences, clauses, phrases, or portions thereof be declared invalid or unconstitutional.

Section 3. Publication. The City Clerk shall cause this Ordinance to be published at least once in a newspaper of general circulation published and circulated in the city within fifteen (15) days after its passage in accordance with Section 36933 of the Government Code, shall certify to the adoption of this Ordinance and shall cause this Ordinance and the City Clerk's certification, together with proof of publication, to be entered in the Book of Ordinances of the Council of this city.

Section 4. Effective Date. This Ordinance shall go into effect and be in full force and effect at 12:01 a.m. on the thirty-first (31st) day after its passage.

Adopted: September 15, 2020
Effective: October 16, 2020

LESTER J. FRIEDMAN
Mayor

ATTEST:

Huma Ahmed (SEAL)
HUMA AHMED
City Clerk

APPROVED AS TO FORM:

LAURENCE S. WIENER
City Attorney

APPROVED AS TO CONTENT:

GEORGE CHAVEZ
City Manager

ARTICLE 2. WATER USE EFFICIENCY REGULATIONS

9-4-201: PERMANENT WATER USE RESTRICTIONS AND WATER WASTE PREVENTION:

A. Permanent Water Use Restrictions; Exceptions:

1. The following permanent water use restrictions are in effect at all times. It shall be unlawful to:

a. Water or irrigate, or allow watering or irrigation of any outdoor plant on private property or parkways other than between the hours of five o'clock (5:00) P.M. and nine o'clock (9:00) A.M. As used in this article, "plants" shall include plants, flowers, lawns, shrubs and trees. Outdoor plants may also be referred to as "outdoor landscaping".

b. Water or irrigate, or allow watering or irrigation of outdoor landscaping in a manner that causes or allows water flow or runoff onto an adjoining sidewalk, driveway, street, alley, gutter, ditch or adjacent property.

c. Apply potable water to outdoor landscaping during, and within forty eight (48) hours after, measurable rainfall, which includes at a minimum any amount of rainfall that generates run-off or puddles.

d. Use, or allow the use of, potable water in decorative water features, including but not limited to fountains, pools, ponds, cascades, waterfalls, and streams, that do not recirculate the water.

e. Allow a loss or escape of water through breaks, leaks or other malfunctions in the water user's plumbing or distribution system. A water user shall have the obligation to repair any such breaks, leaks, or other malfunctions within seven (7) days of notification by the Beverly Hills Public Works Department unless the Director of Public Works or their designee makes other arrangements with the water user.

f. Serve, or allow service of, drinking water to a customer other than upon request in eating or drinking establishments, including but not limited to restaurants, hotels, cafes, cafeterias, bars, or other public places where food or drink are served and/or purchased.

g. Fail to provide written notice to all hotel or motel patrons of their right to refrain from being provided with laundered towels and linens on a daily basis. The notice shall consist of clear language and shall be prominently displayed in each room at all times.

h. Fail to abide by any State law or regulation concerning water conservation.

2. All washdown activities are prohibited at all times, except as follows:

a. Washdown of the exterior of vehicles in residential areas with the use of a low-volume, high-pressure nozzle or water efficient nozzle equipped with an automatic shutoff valve; or with an alternative plan that promotes water conservation and is first approved in writing by the Director of Public Works.

b. Washdown of the exterior of vehicles as part of a commercial enterprise with the use of a reclaimed water system (a system that initially uses potable water and then collects the runoff, treats the runoff, and uses the runoff for nonpotable uses for multiple cycles) that promotes water conservation and achieves at least a twenty percent (20%) reduction of water consumption and is first approved in writing by the Director of Public Works. Vehicles (including garbage trucks and those used to transport food) that are required to have exteriors washed pursuant to State laws or regulations are exempt from this regulation.

c. Washdown of residential buildings and other structures with the use of a low-volume, high-pressure nozzle or water efficient nozzle equipped with an automatic shutoff valve; or with a reclaimed water system. Washdown can be performed no more than four (4) times a year.

d. Washdown of commercial buildings with the use of a low-volume, high-pressure nozzle or water efficient nozzle equipped with an automatic shutoff valve; or with a reclaimed water system. Washdown can be performed no more than two (2) times per month for retail, office and commercial building frontages, provided that washdown may be performed more than two (2) times per month, but no more than necessary, to comply with health and safety laws and regulations for the building frontages of establishments that offer food and/or beverages to customers.

e. Washdown, or allow the washdown of, residential sidewalks, walkways, driveways, parking areas, tennis courts, patios, and alleys except where necessary to alleviate health and safety hazards, and then only with a low-volume, high-pressure nozzle or water efficient nozzle equipped with an automatic shutoff valve; or by use of a hand-held bucket or similar container.

f. Washdown of sidewalks for retail, office, and commercial buildings with the use of a low-volume, high-pressure nozzle or water efficient nozzle equipped with an automatic shutoff valve; or use of a reclaimed water system. Washdowns can be performed no more than two (2) times per month for sidewalks adjoining establishments that offer food and/or beverages to customers, provided that washdown may be performed more than two (2) times per month, but no more than necessary, to comply with health and safety laws and regulations.

g. Washdown of outdoor pavement areas of food establishments with the use of a low-volume, high-pressure nozzle or water efficient nozzle equipped with an automatic shutoff valve; or use of a reclaimed water system. Washdowns can be performed no more than necessary to comply with health and safety laws and regulations. As used herein, "pavement" means and includes, but is not limited to, ground covering of concrete, stone, brick, tile, or similar substance. (Ord. 18-O-2761, eff. 11-16-2018)

ARTICLE 3. EMERGENCY WATER CONSERVATION PLAN

9-4-301: AUTHORITY OF CITY MANAGER:

A. The City Manager is hereby authorized and directed to implement the applicable provisions of this article in order to protect the public health, safety, and welfare under the following conditions:

1. In the event of an unforeseeable disaster or water emergency such as an earthquake, reservoir failure or other major disruption in the water supply, the City Manager is authorized to implement the emergency provisions of this article.

2. In the event of a foreseeable water emergency, such as an extended drought, the City Manager is authorized to implement the applicable provisions of this article, after holding a public hearing before the City Council.

B. The City Manager is authorized to determine and declare that a water shortage emergency exists in any or all parts of the City of Beverly Hills and upon such determination, to promulgate such regulations, rules and conditions relative to the time of using water, the purpose or purposes for which it may be used and such other necessary limitations as will, in his or her opinion, relieve the water shortage in such part or parts of the City.

C. The City Council may review and affirm, reverse, or modify any determination made or regulations, rules or conditions promulgated by the City Manager pursuant to this article.

D. All references to the City Manager in this article shall mean the City Manager or his or her designee. (Ord. 92-O-2139, eff. 4-2-1992; amd. Ord. 20-O-2819, eff. 10-16-2020)

9-4-302: GENERAL PROHIBITION; APPLICABILITY:

A. No person shall use or permit the use of water from the City for residential, commercial, industrial, governmental, or any other purposes in violation of any provision of this article or in an amount in excess of the use that is permitted by the water conservation stages defined below.

B. The provisions of this article shall apply to all persons, customers and property served by the City of Beverly Hills, Public Works Department - Utilities Division wherever situated. (Ord. 15-O-2677, eff. 6-18-2015; amd. Ord. 20-O-2819, eff. 10-16-2020)

9-4-303: DECLARATION OF WATER CONSERVATION STAGES:

A. Water conservation stages shall be determined by the amount of water available or the potential for water interruption. The City Manager shall monitor the supply and demand for water by customers. When the City Manager determines that the requirements to declare a water shortage exist, he or she shall recommend that City Council adopt a resolution to declare the appropriate water conservation stage be adopted.

B. The resolution shall specify the water use baseline for determining the water conservation measures required by Section 9-4-303 and the water revenue stabilization factors to be applied pursuant to Section 9-4-304. The water use baseline shall be determined based upon such factors as deemed appropriate by the City, including the characteristics of a local emergency, or as otherwise mandated by the State of California or other regulatory agency, or by the Metropolitan Water District of Southern California.

C. The City Council may modify by resolution any of the requirements contained in the stages of water conservation set forth in section 9-4-303 and 9-4-304 of this article if the City Council determines that the modification is in the best interests of the City or is appropriate to promote compliance with any applicable water use regulation.

D. The resolution to declare a water shortage exists shall be published within ten (10) days after its adoption at least once in a newspaper of general circulation within the City and shall be posted in at least three (3) public places. The resolution shall continue to be posted until such time as City Council repeals the resolution.

E. Except as otherwise may be provided by this article or a resolution adopted by the City Council or pursuant to the exercise of emergency powers authorized by Article 1 of Chapter 4 of the Municipal Code, any resolution that requires a reduction in the use of water shall not become effective for at least thirty (30) days. (Ord. 15-O-2677, eff. 6-18-2015; amd. Ord. 20-O-2819, eff. 10-16-2020)

9-4-304: REQUIREMENTS FOR WATER CONSERVATION STAGES:

Upon the declaration of a water conservation stage, the water conservation reductions shall be implemented. The water conservation reductions for each water conservation stage and each class are described in the following table:

Water Conservation Reductions By Class

Class	Stage A	Stage B	Stage C	Stage D	Stage E
City-wide goal	(5% reduction)	(10% reduction)	(20% reduction)	(30% reduction)	(50% reduction)
single-family	6%	12%	24%	36%	58%
multi-family	3%	5%	11%	16%	31%
commercial	4%	7%	15%	22%	40%
irrigation	11%	22%	45%	67%	100%

Additional compliance elements for each water conservation stage are described below.

A. Stage A Requirements:

1. A stage A shortage shall be declared when the City Manager determines that a five percent (5%) citywide reduction in potable water use is required.

2. Stage A compliance may include voluntary reduced irrigation, notification of hotel and restaurant patrons of water conservation goals, and use of reclaimed water for construction purposes.

B. Stage B Requirements:

1. A stage B shortage shall be declared when the City Manager determines that a ten percent (10%) citywide reduction in potable water use is required.

2. Stage B compliance shall include the following mandatory elements:

a. All public restrooms in the City and private bathrooms in hotels shall notify patrons and employees of water conservation goals;

3. Violation by any person of the stage B mandatory requirements shall constitute an infraction and, upon conviction, shall be punished by a fine not to exceed one hundred dollars ($100.00). The violation of each element, and each separate violation thereof, shall be deemed a separate offense, and shall be punished accordingly.

C. Stage C Requirements:

1. A stage C shortage shall be declared when the City Manager determines that a twenty percent (20%) citywide reduction in potable water use is required.

2. Stage C compliance elements shall include the following mandatory elements:

a. All public restrooms in the City and private bathrooms in hotels shall notify patrons and employees of water conservation goals;

b. Water usage from fire hydrants shall be limited to firefighting, related activities or other activities necessary to maintain the public health, safety and welfare;

c. Landscape irrigation shall be restricted to selected days and times as determined by the City Manager, unless such irrigation uses reclaimed wastewater.

3. Violation by any person of the stage C mandatory requirements shall constitute a misdemeanor and, upon conviction, shall be punished by a fine not to exceed five hundred dollars ($500.00). Water supply through irrigation water services may be terminated for continued excessive use. The violation of each element, and each separate violation thereof, shall be deemed a separate offense, and shall be punished accordingly.

D. Stage D Requirements:

1. A stage D shortage shall be declared when the City Manager determines that a thirty percent (30%) or higher citywide reduction in potable water use is required.

2. Stage D compliance elements shall include the following mandatory elements:

a. All public restrooms in the City and private bathrooms in hotels shall notify patrons and employees of water conservation goals;

b. Landscape irrigation shall be restricted to selected days and times as determined by the City Manager, unless such irrigation uses reclaimed wastewater;

c. Refilling of swimming pools, spas or ponds shall be prohibited unless required for health or safety reasons;

d. Exterior washdown of vehicles shall be prohibited unless:

(1) Using a reclaimed water system;

(2) Performed in accordance with an alternative plan that promotes water conservation and is approved in writing by the Director of Public Works or his/her designee; or

(3) Required to meet laws or governmental regulations to protect health and safety, such as the cleaning of garbage trucks and vehicles to transport food.

e. Water usage from fire hydrants shall be limited to firefighting, related activities or other activities necessary to maintain the public health, safety and welfare;

f. Exterior washdown of buildings shall be prohibited unless:

(1) Using a reclaimed water system and such washing is done: a) no more than once per month for retail building frontage; b) no more than twice per year for office and commercial buildings; c) no more often than is necessary to comply with health laws and regulations for the building frontage of food service uses; or d) no more than once per year for residential structures solely for the purpose of preparing a residential structure for painting.

(2) Using a commercial glass and window cleaner.

g. Exterior washdown of sidewalks and the pavement of outdoor dining areas shall be prohibited unless using a reclaimed water system and such washing is done no more often than is necessary to comply with health laws and regulations.

3. Violation by any person of the stage D mandatory requirements shall constitute a misdemeanor and, upon conviction, shall be punished by a fine not to exceed one thousand dollars ($1,000.00). Continued excessive use may result in termination of water supply through irrigation water services and/or restriction of water supply through domestic meters. The violation of each element, and each separate violation thereof, shall be deemed a separate offense, and shall be punished accordingly.

4. For purposes of this article, "reclaimed water system" shall mean a system that initially uses potable water and then collects the runoff, treats the runoff, and uses the runoff for nonpotable uses for multiple cycles.

E. Stage E Requirements:

1. A stage E shortage shall be declared when the City Manager determines that a catastrophic interruption of potable water supply has occurred or is foreseen.

2. The City Manager shall have emergency water allocation authority in the case of a stage E declaration. This authority shall include the authority to

interrupt service to any property or City service zone in order to provide the maximum water supply for human health and safety needs. A Stage E declaration will include mandatory shutoff of all irrigation-only service connections.

3. In allocating water, the City Manager shall give first priority to health and safety needs of water utility customers. Subsequent water uses are prioritized to provide water supply first to maintain and expand commerce within the City, then to enhance the aesthetics of the environment, and then to facilitate construction activities.

4. Violation by any person of the stage E emergency water conservation regulations shall constitute a misdemeanor and, upon conviction, shall be punished by a fine not to exceed one thousand dollars ($1,000.00) and six (6) months in jail. The violation of each element, and each separate violation thereof, shall be deemed a separate offense, and shall be punished accordingly. (Ord. 18-O-2761, eff. 11-16-2018; amd. Ord. 20-O-2819, eff. 10-16-2020)

9-4-305: WATER SHORTAGE REVENUE STABILIZATION FACTORS:

Upon the declaration of a water conservation stage, the water shortage revenue stabilization factors shall be implemented. The water shortage revenue stabilization factors for each water conservation stage and each class shall be multiplied by the then applicable quantity charge rate for each customer as described in the following table:

Revenue Stabilization Factors By Water Conservation State And Class

Class	Stage A (5% reduction)	Stage B (10% reduction)	Stage C (20% reduction)	Stage D (30% reduction)	Stage E (50% reduction)
single-family	1.039	1.081	1.187	1.333	1.824
multi-family	1.016	1.033	1.069	1.110	1.262
commercial	1.023	1.048	1.103	1.170	1.388
irrigation	1.076	1.169	1.474	2.192	n/a

(Ord. 20-O-2819, eff. 10-16-2020)

9-4-306: NOTICE OF VIOLATION:

A. The City shall give notice of violation to the person committing a violation of this article as follows:

1. Notice of violation of any water usage percentage reduction provisions shall be given in writing by regular mail.

2. Notice of violation of any other mandatory requirement listed in section 9-4-304 of this article shall be given in writing in the following manner:

a. By giving the notice to the customer personally; or

b. If the customer is absent from or unavailable at the premises at which the violation occurred, by leaving a copy with some person of suitable age and discretion at the premises and sending a copy through the regular mail to the address at which the customer is normally billed; or

c. If a person of suitable age or discretion cannot be found, then by affixing a copy in a conspicuous place at the premises at which the violation occurred and also sending a copy through the regular mail to the address at which the customer is normally billed.

B. The notice shall contain a brief description of the facts of the violation and a statement of the possible penalties for each violation and a statement informing the customer of his or her right to a hearing on the merits of the violation pursuant to section 9-4-306 of this article. (Ord. 92-O-2139, eff. 4-2-1992; amd. Ord. 20-O-2819, eff. 10-16-2020)

9-4-307: HEARINGS:

Any person receiving notice of a violation of any water usage percentage reduction provision set forth in section 9-4-304 of this article shall have the right to request a hearing to appeal the violation. The City Council shall establish the appeal procedures by resolution. (Ord. 09-O-2567, eff. 6-27-2009; amd. Ord. 20-O-2819, eff. 10-16-2020)

9-4-308: ADDITIONAL WATER CONSERVATION MEASURES:

After holding a public hearing before the City Council, the City Manager may order implementation of water conservation measures including, or in addition to, those set forth in section 9-4-303 of this article, in order to encourage proper potable water use or to meet water conservation goals, regardless of supply. (Ord. 92-O-2139, eff. 4-2-1992; amd. Ord. 20-O-2819, eff. 10-16-2020)

9-4-309: EXCEPTIONS:

Nothing in this article shall be construed to require the City to curtail the supply of water to any customer when such water is required by that customer to maintain an adequate level of public health and safety. (Ord. 09-O-2567, eff. 6-27-2009; amd. Ord. 20-O-2819, eff. 10-16-2020)

APPENDIX F

Notices and Adoption

RESOLUTION NO. 21-R-13352

RESOLUTION OF THE COUNCIL OF THE CITY OF BEVERLY HILLS ADOPTING THE 2020 URBAN WATER MANAGEMENT PLAN, A WATER SHORTAGE CONTINGENCY PLAN, AND AN AMENDMENT TO THE 2015 URBAN WATER MANAGEMENT PLAN

The City Council of the City of Beverly Hills hereby resolves as follows:

WHEREAS, California Water Code Section 10610 et seq under the Urban Water Management Planning Act ("Act") requires that an urban water supplier prepare and adopt an Urban Water Management Plan (UWMP). Once adopted, the Water Code requires the UWMP be updated every five years in years ending in "0" or "5".

WHEREAS, the City has prepared the 2020 UWMP (dated June 2021, 318 pages), Water Shortage Contingency Plan (Chapter 8 of the 2020 UWMP), Water Shortage Contingency Plan (Chapter 8 of the 2020 UWMP), and amendment to the 2015 UWMP (Appendix H of the 2020 UWMP), which has been circulated for public review and may be modified following input from the Council or public.

WHEREAS, the City Council has held a public hearing to hear, consider, and accept review comments as required under the Act.

NOW THEREFORE, THE CITY COUNCIL OF THE CITY OF BEVERLY HILLS DOES HEREBY RESOLVE AS FOLLOWS:

Section 1. The Council adopts the City's 2020 UWMP, Water Shortage Contingency Plan (Chapter 8 of the 2020 UWMP), and the amendment to the 2015 UWMP

(Appendix H of the 2020 UWMP) and directs the Director of Public Works and/or his/her designee to incorporate public comments into the City's UWMP as directed by the Council, and file copies of the 2020 UWMP (including Chapter 8 -Water Shortage Contingency Plan), and amendment to the 2015 UWMP (Appendix H of the 2020 UWMP) with the State Department of Water Resources, the California State Library, and the County of Los Angeles. If the State Department of Water Resources requires any revisions prior to acceptance of the UWMP, any such UWMP revisions shall be approved by the Director of Public Works and his/her designee prior to resubmittal. A copy of the 2020 UWMP (including Chapter 8 -Water Shortage Contingency Plan), and amendment to the 2015 UWMP (Appendix H of the 2020 UWMP) is on file in the office of the City Clerk.

Section 2. The City Clerk shall certify to the adoption of this resolution and shall cause this resolution and its certification to be entered in the Book of Resolutions of the Council of this City.

Adopted: July 15, 2021

Robert Wunderlich
ROBERT WUNDERLICH
Mayor of the City of Beverly Hills, California

ATTEST:

Huma Ahmed
HUMA AHMED (SEAL)
City Clerk

APPROVED AS TO FORM:

LAURENCE S. WIENER
City Attorney

APPROVED AS TO CONTENT:

George Chavez LP
GEORGE CHAVEZ
City Manager

Shana E Epstein

SHANA EPSTEIN
Director of Public Works

DocuSign

Certificate Of Completion

Envelope Id: A5EE7B52EB18458F8351F5E23538F800
Subject: Please DocuSign: Resolution - 2020 URBAN WATER MANAGEMENT PLAN
Source Envelope:
Document Pages: 3
Certificate Pages: 3
AutoNav: Enabled
EnvelopeId Stamping: Enabled
Time Zone: (UTC-08:00) Pacific Time (US & Canada)

Signatures: 5
Initials: 1

Status: Completed

Envelope Originator:
Lucy Quiralte
455 N. Rexford Drive
Beverly Hills, CA 90210
lquiralte@beverlyhills.org
IP Address: 198.245.189.169

Record Tracking

Status: Original
5/27/2021 5:33:15 PM

Holder: Lucy Quiralte
lquiralte@beverlyhills.org

Location: DocuSign

Signer Events	Signature	Timestamp
Lolly Enriquez lenriquez@beverlyhills.org Security Level: Email, Account Authentication (None) **Electronic Record and Signature Disclosure:** Not Offered via DocuSign	Signature Adoption: Drawn on Device Using IP Address: 107.77.219.213 Signed using mobile	Sent: 5/27/2021 5:35:50 PM Viewed: 5/27/2021 7:05:56 PM Signed: 5/27/2021 7:06:25 PM
Shana E Epstein sepstein@beverlyhills.org Security Level: Email, Account Authentication (None) **Electronic Record and Signature Disclosure:** Not Offered via DocuSign	Shana E Epstein Signature Adoption: Pre-selected Style Using IP Address: 23.242.79.84 Signed using mobile	Sent: 5/27/2021 7:06:26 PM Viewed: 5/27/2021 7:09:53 PM Signed: 5/27/2021 7:10:08 PM
Logan Phillippo lphillippo@beverlyhills.org Senior Management Analyst City of Beverly Hills Security Level: Email, Account Authentication (None) **Electronic Record and Signature Disclosure:** Not Offered via DocuSign	Signature Adoption: Pre-selected Style Using IP Address: 76.168.110.145	Sent: 5/27/2021 7:10:10 PM Viewed: 7/18/2021 9:07:25 AM Signed: 7/18/2021 9:07:38 AM
George Chavez gchavez@beverlyhills.org Security Level: Email, Account Authentication (None) **Electronic Record and Signature Disclosure:** Not Offered via DocuSign	George Chavez Signature Adoption: Pre-selected Style Using IP Address: 76.95.192.176	Sent: 7/18/2021 9:07:39 AM Viewed: 7/19/2021 9:48:38 AM Signed: 7/19/2021 9:48:46 AM

Signer Events	Signature	Timestamp
Robert Wunderlich rwunderlich@beverlyhills.org Security Level: Email, Account Authentication (None)	Robert Wunderlich Signature Adoption: Pre-selected Style Using IP Address: 104.175.7.182	Sent: 7/19/2021 9:48:50 AM Viewed: 7/19/2021 11:01:02 AM Signed: 7/19/2021 11:01:19 AM
Electronic Record and Signature Disclosure: Not Offered via DocuSign		
Huma Ahmed hahmed@beverlyhills.org Security Level: Email, Account Authentication (None)	Huma Ahmed Signature Adoption: Pre-selected Style Using IP Address: 198.245.189.154	Sent: 7/19/2021 11:01:21 AM Resent: 7/21/2021 9:50:14 AM Viewed: 7/21/2021 9:51:45 AM Signed: 7/21/2021 9:52:00 AM
Electronic Record and Signature Disclosure: Not Offered via DocuSign		

In Person Signer Events	Signature	Timestamp

Editor Delivery Events	Status	Timestamp

Agent Delivery Events	Status	Timestamp

Intermediary Delivery Events	Status	Timestamp

Certified Delivery Events	Status	Timestamp

Carbon Copy Events	Status	Timestamp
Adrianne Tarazon atarazon@bverlyhills.org Security Level: Email, Account Authentication (None) **Electronic Record and Signature Disclosure:** Not Offered via DocuSign	COPIED	Sent: 7/19/2021 9:48:48 AM
Dorina Mohan dmohan@beverlyhills.org Security Level: Email, Account Authentication (None) **Electronic Record and Signature Disclosure:** Not Offered via DocuSign	COPIED	Sent: 7/19/2021 9:48:49 AM
Jackie Perez jperez@beverlyhills.org Security Level: Email, Account Authentication (None) **Electronic Record and Signature Disclosure:** Not Offered via DocuSign	COPIED	Sent: 7/21/2021 9:52:02 AM
Lourdes Sy-Rodriguez lsyrodriguez@beverlyhills.org Security Level: Email, Account Authentication (None) **Electronic Record and Signature Disclosure:** Not Offered via DocuSign	COPIED	Sent: 7/21/2021 9:52:03 AM

Witness Events	Signature	Timestamp

Notary Events	Signature	Timestamp

Envelope Summary Events	Status	Timestamps
Envelope Sent	Hashed/Encrypted	5/27/2021 5:35:50 PM
Certified Delivered	Security Checked	7/21/2021 9:51:45 AM
Signing Complete	Security Checked	7/21/2021 9:52:00 AM
Completed	Security Checked	7/21/2021 9:52:03 AM

Payment Events	Status	Timestamps

Vince Damasse, Water Resources Manager
Department of Public Works

March 29, 2021

Rob Beste
Assistant General Manager- Water Replenishment District of Southern California
4040 Paramount Boulevard
Lakewood, CA 90712

RE: CITY OF BEVERLY HILLS 2020 URBAN WATER MANAGEMENT PLAN UPDATE

Dear Mr. Beste,

This letter serves as notification that the City of Beverly Hills is currently (a) updating its Urban Water Management Plan (2020 UWMP) and preparing its Water Shortage Contingency Plan (WSCP) in accordance with the Urban Water Management Planning Act of the California Water Code, and (b) amending its 2015 Urban Water Management Plan (2015 UWMP Amendment) to demonstrate consistency with Delta Plan Policy WR P1, (Title 23 of the California Code Regulations section 5003). The Act requires urban water suppliers supplying more than 3,000 acre-feet of water annually or providing water to more than 3,000 customers to update their UWMP every five years.

A draft of the City's 2020 UWMP with WSCP and the 2015 UWMP Amendment will be available for review prior to the public hearing, which is tentatively scheduled for June 2021. Please contact us if you would like to have a draft sent to you when available, otherwise, the draft will be available for viewing on the City's website at least three weeks prior to the hearing at http://www.beverlyhills.org.

If you would like more information or have any questions, please contact me at (310) 285-2491 or via email at vdamasse@beverlyhills.org.

Sincerely,

Vince Damasse

Vince Damasse, P.E.
Water Resources Manager
Department of Public Works

Vince Damasse, Water Resources Manager
Department of Public Works

March 29, 2021

Brad Coffey
Water Resources Management- Metropolitan Water District of Southern California
P.O. Box 54153
Los Angeles, CA 90054-0153

RE: CITY OF BEVERLY HILLS 2020 URBAN WATER MANAGEMENT PLAN UPDATE

Dear Mr. Coffey,

This letter serves as notification that the City of Beverly Hills is currently (a) updating its Urban Water Management Plan (2020 UWMP) and preparing its Water Shortage Contingency Plan (WSCP) in accordance with the Urban Water Management Planning Act of the California Water Code, and (b) amending its 2015 Urban Water Management Plan (2015 UWMP Amendment) to demonstrate consistency with Delta Plan Policy WR P1, (Title 23 of the California Code Regulations section 5003). The Act requires urban water suppliers supplying more than 3,000 acre-feet of water annually or providing water to more than 3,000 customers to update their UWMP every five years.

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Sincerely,

Vince Damasse

Vince Damasse, P.E.
Water Resources Manager
Department of Public Works

Vince Damasse, Water Resources Manager
Department of Public Works

March 29, 2021

Hany Yanni Demitri
City Engineer- City of West Hollywood
8300 Santa Monica Blvd.
West Hollywood, CA 90069

RE: CITY OF BEVERLY HILLS 2020 URBAN WATER MANAGEMENT PLAN UPDATE

Dear Mr. Demitri,

This letter serves as notification that the City of Beverly Hills is currently (a) updating its Urban Water Management Plan (2020 UWMP) and preparing its Water Shortage Contingency Plan (WSCP) in accordance with the Urban Water Management Planning Act of the California Water Code, and (b) amending its 2015 Urban Water Management Plan (2015 UWMP Amendment) to demonstrate consistency with Delta Plan Policy WR P1, (Title 23 of the California Code Regulations section 5003). The Act requires urban water suppliers supplying more than 3,000 acre-feet of water annually or providing water to more than 3,000 customers to update their UWMP every five years.

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Sincerely,

Vince Damasse

Vince Damasse, P.E.
Water Resources Manager
Department of Public Works

Vince Damasse, Water Resources Manager
Department of Public Works

March 29, 2021

Charles D. Herbertson
Public Works Director/ City Engineer, City of Culver City
9505 Jefferson Blvd
Culver City, CA 90232

RE: CITY OF BEVERLY HILLS 2020 URBAN WATER MANAGEMENT PLAN UPDATE

Dear Mr. Herbertson,

This letter serves as notification that the City of Beverly Hills is currently (a) updating its Urban Water Management Plan (2020 UWMP) and preparing its Water Shortage Contingency Plan (WSCP) in accordance with the Urban Water Management Planning Act of the California Water Code, and (b) amending its 2015 Urban Water Management Plan (2015 UWMP Amendment) to demonstrate consistency with Delta Plan Policy WR P1, (Title 23 of the California Code Regulations section 5003). The Act requires urban water suppliers supplying more than 3,000 acre-feet of water annually or providing water to more than 3,000 customers to update their UWMP every five years.

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Sincerely,

Vince Damasse

Vince Damasse, P.E.
Water Resources Manager
Department of Public Works

Vince Damasse, Water Resources Manager
Department of Public Works

March 29, 2021

Jeffrey Kightlinger
General Manager, Metropolitan Water District of Southern California
P.O. Box 54153
Los Angeles, CA 90054-0153

RE: CITY OF BEVERLY HILLS 2020 URBAN WATER MANAGEMENT PLAN UPDATE

Dear Mr. Kightlinger,

This letter serves as notification that the City of Beverly Hills is currently (a) updating its Urban Water Management Plan (2020 UWMP) and preparing its Water Shortage Contingency Plan (WSCP) in accordance with the Urban Water Management Planning Act of the California Water Code, and (b) amending its 2015 Urban Water Management Plan (2015 UWMP Amendment) to demonstrate consistency with Delta Plan Policy WR P1, (Title 23 of the California Code Regulations section 5003). The Act requires urban water suppliers supplying more than 3,000 acre-feet of water annually or providing water to more than 3,000 customers to update their UWMP every five years.

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Sincerely,

Vince Damasse

Vince Damasse, P.E.
Water Resources Manager
Department of Public Works

Vince Damasse, Water Resources Manager
Department of Public Works

March 29, 2021

Toby B. Moore
Water Resources Manager/ Chief Hydrogeologist, Golden State Water Company
2283 E. Via Burton
Anaheim, CA 92806

RE: CITY OF BEVERLY HILLS 2020 URBAN WATER MANAGEMENT PLAN UPDATE

Dear Mr. Moore,

This letter serves as notification that the City of Beverly Hills is currently (a) updating its Urban Water Management Plan (2020 UWMP) and preparing its Water Shortage Contingency Plan (WSCP) in accordance with the Urban Water Management Planning Act of the California Water Code, and (b) amending its 2015 Urban Water Management Plan (2015 UWMP Amendment) to demonstrate consistency with Delta Plan Policy WR P1, (Title 23 of the California Code Regulations section 5003). The Act requires urban water suppliers supplying more than 3,000 acre-feet of water annually or providing water to more than 3,000 customers to update their UWMP every five years.

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Sincerely,

Vince Damasse

Vince Damasse, P.E.
Water Resources Manager
Department of Public Works

Vince Damasse, Water Resources Manager
Department of Public Works

March 29, 2021

Mark Pestrella
Los Angeles County Department of Public Works Director
900 S. Fremont Ave.
Alhambra, CA 91803

RE: CITY OF BEVERLY HILLS 2020 URBAN WATER MANAGEMENT PLAN UPDATE

Dear Mr. Pestrella,

This letter serves as notification that the City of Beverly Hills is currently (a) updating its Urban Water Management Plan (2020 UWMP) and preparing its Water Shortage Contingency Plan (WSCP) in accordance with the Urban Water Management Planning Act of the California Water Code, and (b) amending its 2015 Urban Water Management Plan (2015 UWMP Amendment) to demonstrate consistency with Delta Plan Policy WR P1, (Title 23 of the California Code Regulations section 5003). The Act requires urban water suppliers supplying more than 3,000 acre-feet of water annually or providing water to more than 3,000 customers to update their UWMP every five years.

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Sincerely,

Vince Damasse

Vince Damasse, P.E.
Water Resources Manager
Department of Public Works

Vince Damasse, Water Resources Manager
Department of Public Works

March 29, 2021

David Pettijohn
Water Resources Manager, Los Angeles Department of Water and Power
P.O. Box 51111
Los Angeles, CA 90051-0100

RE: CITY OF BEVERLY HILLS 2020 URBAN WATER MANAGEMENT PLAN UPDATE

Dear Mr. Pettijohn,

This letter serves as notification that the City of Beverly Hills is currently (a) updating its Urban Water Management Plan (2020 UWMP) and preparing its Water Shortage Contingency Plan (WSCP) in accordance with the Urban Water Management Planning Act of the California Water Code, and (b) amending its 2015 Urban Water Management Plan (2015 UWMP Amendment) to demonstrate consistency with Delta Plan Policy WR P1, (Title 23 of the California Code Regulations section 5003). The Act requires urban water suppliers supplying more than 3,000 acre-feet of water annually or providing water to more than 3,000 customers to update their UWMP every five years.

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Sincerely,

Vince Damasse

Vince Damasse, P.E.
Water Resources Manager
Department of Public Works

Vince Damasse, Water Resources Manager
Department of Public Works

March 29, 2021

Jackie Rocco
Director of Public Works - City of West Hollywood
8300 Santa Monica Blvd.
West Hollywood, CA 90069

RE: CITY OF BEVERLY HILLS 2020 URBAN WATER MANAGEMENT PLAN UPDATE

Dear Ms. Rocco,

This letter serves as notification that the City of Beverly Hills is currently (a) updating its Urban Water Management Plan (2020 UWMP) and preparing its Water Shortage Contingency Plan (WSCP) in accordance with the Urban Water Management Planning Act of the California Water Code, and (b) amending its 2015 Urban Water Management Plan (2015 UWMP Amendment) to demonstrate consistency with Delta Plan Policy WR P1, (Title 23 of the California Code Regulations section 5003). The Act requires urban water suppliers supplying more than 3,000 acre-feet of water annually or providing water to more than 3,000 customers to update their UWMP every five years.

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Sincerely,

Vince Damasse

Vince Damasse, P.E.
Water Resources Manager
Department of Public Works

Vince Damasse, Water Resources Manager
Department of Public Works

March 29, 2021

Sunny Wang
Water Resources Manager, City of Santa Monica
1685 Main St.
Santa Monica, CA 90401

RE: CITY OF BEVERLY HILLS 2020 URBAN WATER MANAGEMENT PLAN UPDATE

Dear Mr. Wang,

This letter serves as notification that the City of Beverly Hills is currently (a) updating its Urban Water Management Plan (2020 UWMP) and preparing its Water Shortage Contingency Plan (WSCP) in accordance with the Urban Water Management Planning Act of the California Water Code, and (b) amending its 2015 Urban Water Management Plan (2015 UWMP Amendment) to demonstrate consistency with Delta Plan Policy WR P1, (Title 23 of the California Code Regulations section 5003). The Act requires urban water suppliers supplying more than 3,000 acre-feet of water annually or providing water to more than 3,000 customers to update their UWMP every five years.

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Sincerely,

Vince Damasse

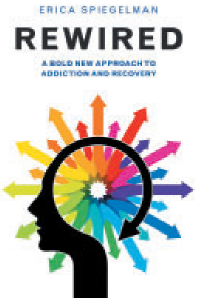
Vince Damasse, P.E.
Water Resources Manager
Department of Public Works

SEE PAGE 10 FOR UWMP PUBLIC HEARING NOTICE

BEVERLY HILLS COURIER

VOL. LVII NO. 25 JUNE 18, 2021 THE NEWSPAPER OF RECORD FOR BEVERLY HILLS BEVERLYHILLSCOURIER.COM

IN THIS ISSUE



THE WEATHER, BEVERLY HILLS

⛅	Friday	80° | 64°
⛅	Saturday	82° | 64°
☼	Sunday	81° | 62°
☼	Monday	76° | 61°
☼	Tuesday	77° | 61°
☼	Wednesday	78° | 61°
☼	Thursday	78° | 61°

Tour d'Elegance is Coming to Beverly Hills on Father's Day

BY TIM LAPPEN

In light of the ongoing pandemic, the committee which usually creates the Father's Day Concours d'Elegance in Beverly Hills made the wise decision to make a change this year. Instead of inviting people to come ogle the amazing cars parked along Rodeo Drive, they are driving some 50 exotic automobiles through Beverly Hills. Notable individuals from film and entertainment, top collectors and city officials will be at the wheel. The Beverly Hills Tour d'Elegance could be the world's best rolling car show and it takes place at 9 a.m. on Father's Day, June 20.

Thanks to numerous sponsors, this fun and free event supports the Beverly Hills Police Officers Association and the Beverly Hills Firefighters' Association - non-profit charities providing assistance to first responders injured in the line of duty, maintain scholarship funds for their children and provide other support.

(Tour d'Elegance continues on page 10)

Shah Bugatti 1 Photo courtesy Petersen Automotive Museum and Ted7

Beverly Hills Hit With Two Violent Crimes June 15

BY SAMUEL BRASLOW

Beverly Hills experienced two violent crimes on June 15, including an attempted carjacking in the 500 block of North Beverly Drive and a strong-arm robbery of an expensive watch at North Doheny Drive and Civic Center Drive. The crimes come at a time when overall crime remains down but have nonetheless raised concerns over their brazenness–especially following the midday armed robbery of another high-end watch from a patron at Il Pastaio.

"It's very troubling to have a robbery and a carjacking on the same evening, no matter what the crime stats say," Beverly Hills Police Department (BHPD) Acting Captain Max Subin told the Courier.

The watch theft took place on Tuesday night near the border of Beverly Hills and West Hollywood. Four suspects accosted the victim and stole a watch that Subin initially valued at $300,000. No firearm was used. Subin could not specify the make and model of the watch at the time of the interview.

Despite the similarities to other recent robberies of luxury watches, Subin said there was no connection. However, he said the incident might be connected to another robbery that happened within the last month on the 300 block of South Elm.

(Violent Crimes continues on page 3)

Commission Plans Summer of Art in Beverly Hills

BY BIANCA HEYWARD

The Beverly Hills Arts and Culture Commission has reviewed preliminarily location options for the upcoming Sing for Hope piano program. The project will place 12 artist-designed street pianos throughout public spaces in Beverly Hills for community use from Aug. 5 through Sept. 6.

(Summer of Art continues on page 3)

SINCE 1965

Courier Calendar

NOW

CALIFORNIA SCIENCE CENTER: “LIFE! BEGINNINGS”

10 a.m. - 5 p.m.

“Life! Beginnings" opens at the California Science Center as the first stage of a reimagination of the World of Life Gallery. Guests can learn about how living creatures reproduce, develop, and pass on their genes to new generations as well as discovering how living organisms, including humans, survive and thrive on Earth. The exhibition will include interactive experiences, such as mixing and matching parent genes to create life. https://www.prnewswire.com/news-releases/life-beginnings-premieres-at-the-california-science-center-june-18-2021-301296368.html

NOW - JUNE 20

THE MUSIC CENTER FREE CONCERT EXPERIENCE FEATURING JENS LINDEMANN

8:45 p.m.

Celebrate the summer at the Music Center's Jerry Moss Plaza enjoying great music in a concert under the stars. World-renowned musician Jens Lindemann takes the audience on a journey from Jazz to Contemporary, Classical to Klezmer, Spirituals to Rock. The Grammy-nominated virtuoso, who has performed at New York's Carnegie Hall, and in London, Berlin, Moscow and Tokyo, offers a musical treat with trumpet, piccolo trumpet and flugelhorn. Enjoy light bites, a no-host bar and the beautiful expanse of Jerry Moss Plaza at The Music Center as the city welcomes back live performance. https://www.musiccenter.org/tickets

NOW – JUNE 30

PRIDE CELEBRATIONS AT BEVERLY CENTER

Sat. 1-7 p.m.
Sun. 1-6 p.m.

Beverly Center is introducing its first Bubble Spectacular in order to continue honoring the LGBTQ+ community. The Bubble Spectacular takes place in the Grand Court, where bubbles will float into the skylight accompanied by music and rainbow lights at the beginning of each hour. Rainbow lights, inspired by the pride colors, will also illuminate the exterior of Beverly Center.

NOW – AUG. 1

“AI WEIWEI: TRACE” AT THE SKIRBALL CULTURAL CENTER

The Skirball Cultural Center presents “Ai Weiwei: Trace.” This exhibit highlights the power of resistance through 83 of the work’s original 176 portraits, which were each made through the formation of LEGO bricks. These portraits portray advocates of free speech, prisoners of conscience, and activists from around the globe; many are citizens who fought against injustice in their communities. In addition to these portraits, Ai Weiwei designed the wallpaper, which includes hidden iconography such as cameras, handcuffs and alpacas. For more information, visit https://www.skirball.org/exhibitions/ai-weiwei-trace.

NOW – SEPT. 6

KIDSPACE CHILDREN'S MUSEUM’S BUBBLE PLANET

Bubble Planet at Kidspace Children’s Museum is a new, outdoor event that features many different types of bubbles, from some that you can make yourself, to some that you can step inside of, or even some shaped like rockets. The multi-sensory exhibit immerses the audience visually, tactically, and audibly. Guests can also work with “moon rocks,” “alien goop” slime, and more. For tickets and more information, visit kidspacemuseum.org.

JUNE 19

BLACK ON THE BLOCK: JUNETEENTH POP-UP MARKET

12-4 p.m.

For a Juneteenth celebration, Black on the Block is a free pop-up market that includes over 70 black-owned vendors. There will be games, food, drinks, DJs, a photo booth and more. Food includes soul food, Jamaican cuisine, gourmet burgers, and tacos. Street parking will be available, and it is located at Evolve Project LA at 1921 Blake Avenue in Los Angeles. For updates and more information, visit their Instagram @blackxtheblock.

JUNE 19 – JULY 17

ADVOCARTSY WEST HOLLYWOOD AND “TRANSFORMATION”

ADVOCARTSY, a visual arts platform that specializes in Iranian contemporary art, opens a new location in West Hollywood on June 19. “TRANSFORMATION,” featuring Shadi Yousefian’s mixed media of collage and photography, will be the first exhibit in this location. Her work focuses on immigrant experience and cultural identity. This new location is located at 434 North La Cienega Blvd. No reservations are required, and there will be limited capacity protocols. https://advocartsy.com/upcoming-exhibitions/

JUNE 22

HOLOCAUST MUSEUM LA: “THE DARING LIFE AND DANGEROUS TIMES OF EVE ADAMS”

5 p.m.

Holocaust Museum LA offers “The Daring Life and Dangerous Times of Eve Adams,” a book talk with author Jonathan Ned Katz in honor of pride month. At the virtual event, Katz will discuss his book, which is based off of Eve Adam’s book “Lesbian Love” which is about Adams, a pioneering lesbian Jewish activist, who is also known as Eva Kotchever. Katz focuses on same-sex attraction and transformations in sexuality’s social organization as he is an American historian of lesbian, gay, bisexual, transgender, and hetersexual American history. For more information, visit https://www.holocaustmuseumla.org/event-details/the-daring-life-and-dangerous-times-of-eve-adams-book-talk-with-jonathan-ned-katz.

JUNE 23

VISIONARY WOMEN: WOMEN IN POWER SERIES

10 a.m.

Visionary Women is hosting a virtual event, the Women in Power Series, with Dr. Sharon Nazarian, Senior Vice President, International Affairs at Anti-Defamation League. She will be conversing with Piera Klein. This event is supported by Sinai Temple Los Angeles. Register by the evening of June 22 at https://us02web.zoom.us/meeting/register/tZMsdO-qTotGNH8XF8JdWvSPUKc4qsWhv3m?mc_cid=4b0055cb5d&mc_eid=b1de22e3da.

JUNE 24 – JUNE 27

SAATCHI ART’S THE OTHER ART FAIR LOS ANGELES

The Other Art Fair Los Angeles at ROW DTLA is an in-person art fair that features thousands of pieces of artwork by 75 independent artists who were personally selected by a committee of experts on world art. Visitors have the opportunity to listen to the artists as they share their inspiration, and they can also directly purchase the artwork. Tickets will be available online as well as at the door. https://www.theotherartfair.com/la/tickets/

JUNE 30

INDEPENDENT SHAKESPEARE CO.’S IMMERSIVE, VIRTUAL EXPERIENCE: THE LAST SYLLABLE

Independent Shakespeare Co. presents "The Last Syllable," which is based on Shakespeare’s "Macbeth." In this immersive, online experience, audience members become travelers who are guided by maps in their journey through a theatrical landscape. The free exploration also includes filmed scenes, poetry, and cartography. Audience members can choose their path and begin, pause, or stop at any time. http://www.iscla.org/

JULY 1 – 31

GRAND PARK’S PORTRAIT OF FREEDOM: BUILDING A LIFE IN L.A.

In place of Grand Park and The Music Center’s Fourth of July Block Party this year, Portraits of Freedom: Building a Life in L.A. will feature photography and video exhibitions in addition to a nighttime projection installation. Taking place throughout Grand Park, between Grand Avenue and North Broadway, it will brighten Los Angeles through civic pride, engagement, and identity. Grand Park will be open on July 4, but there will not be live events or the traditional fireworks show. https://grandparkla.org

JULY 4 - MARCH 2022

THE LOS ANGELES COUNTY MUSEUM OF ART (LACMA) PRESENTS "LEGACIES OF EXCHANGE: CHINESE CONTEMPORARY ART FROM THE YUZ FOUNDATION"

LACMA presents “Legacies of Exchange: Chinese Contemporary Art from the Yuz Foundation,” which features Ai Weiwei, Huang Yong Ping, Wang Guangyi, Xu Bing, and more. The exhibition brings together 20 works of Chinese contemporary art created by 15 artists in response to international trade, political conflict, and global artistic exchange. Drawn from Yuz Foundation’s esteemed collection of contemporary art, "Legacies of Exchange" spotlights encounters, exchanges, and collisions between China and the West. https://www.lacma.org

JULY 4

HOLLYWOOD BOWL: FIREWORKS SPECTACULAR WITH KOOL & THE GANG

7:30 p.m.

As one of its first reopening events, the Hollywood Bowl’s Fourth of July Fireworks Spectacular will feature Kool & the Gang as well as the Hollywood Bowl Orchestra led by Principal Conductor Thomas Wilkins. The disco-funk group will perform, and the orchestra will play patriotic music. https://www.hollywoodbowl.com/events/performances/1228/2021-07-03/july-4th-fireworks-spectacular-with-kool-the-gang

JULY 9

EL CAPITAN THEATRE PRESENTS MARVEL’S “BLACK WIDOW”

12 p.m., 3:30 p.m., 7 p.m., 10:30 p.m.

On July 9, El Capitan Theatre will feature Marvel’s “Black Widow.” Guests can view costumes from the movie and participate in a “Black Widow”-themed photo op. During opening weekend, guests can also obtain an exclusive poster. On July 8, there will be a special opening at 7 p.m., Opening Night Fan Event, which includes reserved seating tickets, a red and white box of popcorn, a “Black Widow” poster, a collector cup and beverage, and an Opening Night Fan Event Souvenir Credential with a lanyard. Tickets are available at www.elcapitantickets.com and https://www.fandango.com/el-capitan-theatre-aacon/theater-page.

JULY 9 - AUG. 1

THEATRE 40 “TAMING THE LION”

Previews July 8 at 8 p.m.
Performances Thurs.- Sat. 8 p.m.; Sun. 2 p.m.

After being shuttered for 16 months due to the global pandemic, Theatre 40 is reopening for live performances. It is resuming the interrupted engagement of Taming the Lion. The piece is suggested by true events. William Haines acted in 50 films between 1922 and 1934 and was the number one box-office draw at the end of the silent era. He was also the first openly gay movie star, a fact that the MGM studio attempted to conceal, fearing that Haines’ gayness would prove to be box-office poison. Studio executives Louis B. Mayer and Irving Thalberg attempt to force Haines to marry a woman, to please the fans. Covid safety protocols in effect on opening date will be observed. Theatre 40 is on the campus of Beverly Hills High School in the Reuben Cordova Theatre. Free parking is available in the parking lot beneath the theatre. To access parking, enter through the driveway at the intersection of Durant and Moreno Drives. For reservations call 310-364-0535. www.theatre40.org

BHPD on Canon Drive and Crescent Drive after attempted carjacking. Photo by Gunnar J Kuepper

(Violent Crimes continued from page 1)

On May 28, around 10 p.m., a resident was approached on their walk home by two suspects. The suspects "presented a handgun and they took personal property" including a phone and wallet, Subin said.

Subin could not give the evidence connecting the two crimes, citing the ongoing investigation, but did say that "the city has a lot of cameras around town and other electronic evidence that we've been able to uncover."

An attempted carjacking also took place on June 15 in the 500 block of North Beverly Drive. According to Subin, "A witness blocked in the vehicle and didn't let the vehicle drive away." At that point, the suspect fled on foot to the 500 block of North Canon Drive. The witness then directed law enforcement to his hiding location "and a canine search was conducted." The Los Angeles Police Department assisted in the search with an airship.

"It's very troubling because they are crimes of violence and we want the community to feel safe either walking at night, taking the dog for a walk, or enjoying the sights in Beverly Hills," Subin said of the incidents.

Subin pointed to the most recent crime statistics from the department for the month of May, showing a year-over-year decline of 8% in overall crime. Crime has remained down each month compared to last year for each month so far, fluctuating between 5% and 13%. "It's a couple of percent points, but it means something to us. The productivity of all the officers plus the security guards in the armed security," he said. "We deploy based on crimes, we deploy based on what's happening in the area. If we see a spike in robberies, we deploy, if we see a spike in auto thefts, we'll deploy." ●

(Summer of Art continued from page 1)

At the end of the project, the pianos would be placed in their "forever homes" at under-resourced schools, hospitals, and communities where Sing for Hope provides programming year-round. During the meeting, commissioners also unveiled the new Arts and Culture website (https://beverlyhillsarts.org/), which went live on June 15. With Sing for Hope on the horizon, the fine art walking tours, and events for "Make Music Day" on June 21, there's an array of arts and culture programming coming to Beverly Hills. "This is going to be the summer of art in Beverly Hills," said Jenny Rogers, Director of Community Services.

The city and The Wallis Annenberg Center for the Performing Arts have each contributed $50,000 to fund the Sing for Hope project. "We're looking for donations and people that are interested in helping us with this project," Commissioner Stephanie Vahn said. "Even if you gave $100 or $1,000, all of that accumulates into one piano. The more people that give, the more pianos we can have."

After conducting site visits, Lester Vrtiak, Director of the Sing for Hope Pianos, and Adrine Ovasapyan, the city's Recreation Supervisor, identified the following as potential locations: City Hall, the Beverly Hills sign, Beverly Gardens Park, Will Rogers Park, La Cienega Park, near the community center at Roxbury Park, Two Rodeo, and the Wallis Annenberg Center for Performing Arts. For Beverly Gardens Park, two options were presented: one to the right of Ringo Starr's "Peace and Love" on Santa Monica Boulevard and Canon Drive, and a second option shaded under a tree near Tom Friedman's "Takeaway" on Santa Monica Boulevard and Rodeo Drive. For Will Rogers Park, staff suggested that one piano be placed in a shaded area near a large palm tree, and the other near the steps of the Sunset Boulevard entrance.

"I know the business community is very eager for us to help welcome Beverly Hills back with a lot of vibrancy," Rogers said. "I think the arts play a vital role in bringing this economy back. It's one of the reasons why people want to come to Beverly Hills." Rogers also underscored how the Sing for Hope piano program hopes to support performance artists who have been unable to work for a year. Her team is working on scheduling concerts with surprise guests as part of the arts programming.

While commissioners endorsed the proposed locations, some hoped to see a larger piano presence in the business triangle.

"This is our first pilot in Beverly Hills," Vrtiak said, citing his years of experience with the program in New York City. "These are a lot of great ideas and I'm really enjoying hearing all of your suggestions. The goal is that this is our pilot, and in the future, when we return, we can learn from our locations and definitely expand and try new places."

On June 22, the Recreation and Parks Commission will review the proposed locations. To learn more about Sing for Hope Beverly Hills, visit https://singforhope.org/beverlyhills/. ●

Kathy Gohari Elected President of the Rodeo Drive Committee

Kathy Gohari

Kathy Gohari has been elected as President of the Rodeo Drive Committee (RDC) effective July 1. "On behalf of the Rodeo Drive Committee Board of Directors, I am delighted to announce the election of Kathy Gohari as President. Her ongoing commitment and dedication to advancing the organization's mission to support the interests of our members and of Rodeo Drive are unparalleled. She has forged enduring relationships with the City of Beverly Hills and our members and partners. We welcome her back again as President for a prosperous and exciting new term," said outgoing Rodeo Drive Committee President Nicola Cagliata.

Gohari previously served as president of the RDC in 2017-2018 and most recently served as vice president. Her involvement with the organization spans more than two decades. She is also a board member of the Beverly Hills Conference & Visitors Bureau. Gohari is an esteemed liaison to and expert in the luxury market, having held positions at Valentino, Christian Lacroix, Giorgio Armani and Dolce & Gabbana. In 2019, she was honored with the Beverly Hills Proclamation for Civic Duty.

As president, Gohari will spearhead marketing initiatives to promote and enhance Rodeo Drive. ●

Il Pastaio Suspect Pleads Not Guilty

BY SAMUEL BRASLOW

Khai McGhee, 18, appeared in federal court on June 11 and pleaded not guilty to three felonies related to the March armed robbery at Il Pastaio. The other two suspects in the case, Malik Lamont Powell, 20, and Marquise Anthony Gardon, 30, have yet to submit a plea. Both McGhee and Powell remain in detention, while Gardon was released on $25,000 bail.

The attorney representing McGhee did not respond to a request for comment.

All three have been charged with two counts of conspiracy to commit interference with commerce by robbery and one count of possession and use of a firearm during a crime of violence. According to FBI Special Agent Matthew Moon, who leads the Bureau's L.A. field office, the suspects are members of the Rollin' 30s Harlem Crips street gang.

A criminal complaint filed in federal court alleges that five suspects were involved in the heist, leaving two at large. An affidavit filed by an FBI special agent in support of the charges alleges that Powell's car, a black BMW 328i GT, was used as the getaway vehicle and that another unnamed suspect scouted the area in advance of the robbery. The woman walked around the Business Triangle appearing to speak on her phone, which the affidavit describes as a ruse to ferret out the Richard Mille-RM-11-03 Rose Gold Flyback watch worn by Shy Belhassen as he dined at Il Pastaio.

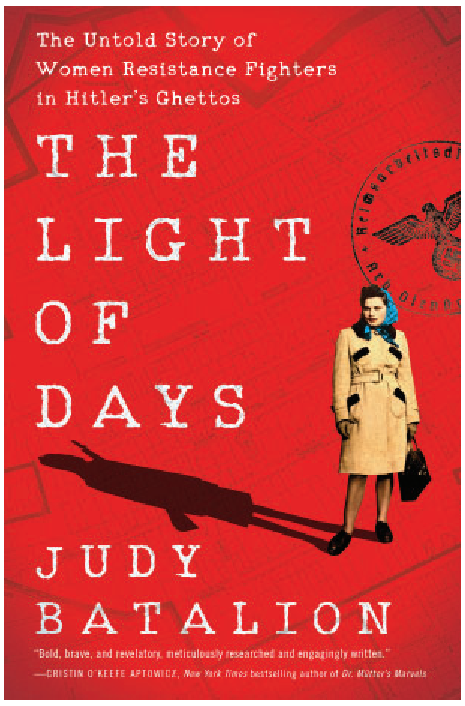
Belhassen told the Courier that he saw three men "running towards me with a gun" before the two unarmed men took his $500,000 watch while the other held him at gunpoint. Belhassen said that he then "grabbed the gun" from the suspect and "fought him to the ground." In the ensuing scuffle, the gun went off and injured another patron, Amanda Shawshan, who sustained a minor injury as a result.

Even after the arrests, law enforcement has yet to locate the watch. Belhassen has offered a $50,000 reward for its return. The affidavit details steps the suspects allegedly took to sell the watch.

(Il Pastaio Suspect continues on page 11)

Writers Bloc Discusses Jewish Female Freedom Fighters

BY SAMUEL BRASLOW



"The Light of Days," by Judy Batalion

"They lied, they stole, they forged, they blew up buildings and trains, they spied and created false identities, smuggled guns, knives and food, and they killed Nazis," said Writers Bloc founder Andrea Grossman, introducing the literary salon's latest fare. And no, she was not talking about Quentin Tarantino's 2009 historical revisionist film "Inglorious Basterds." She was introducing "The Light of Days," a deeply researched nonfiction account of Jewish women resistance fighters in Nazi ghettos by Judy Batalion.

The June 16 conversation with Batalion was co-presented by Writers Bloc, the USC Shoah Foundation, and the Holocaust Museum LA. Writer and producer Nancy Spielberg conducted a question-and-answer session with Batalion, where she asked how Batalion first came up with the idea for the book.

"This book started 14 years ago, and honestly, it started by accident," Batalion said. At the time, Batalion was living in London and reflecting on her Jewish identity as the granddaughter of Holocaust survivors and the connection between the Holocaust and intergenerational trauma. That curiosity and inquiry led her to the stories of Jewish resilience during the Nazi campaign of extermination–specifically, female resilience.

She first turned to the story of Hannah Szenes (pronounced Senesh), a Hungarian Jew who escaped the antisemitism of Budapest only to join the Allied Forces as a paratrooper to rescue Jews in Nazi-occupied Hungary. She was eventually arrested, tortured, and executed, but as Batalion recounted, "legend had it, she looked her executioners in the eye when they shot her."

Szenes's story left Batalion with even more questions, most pressingly, "Who chooses to go fight the Nazis? What is the psychology behind that? What motivates that kind of audacity, that boldness?"

Batalion offers her 576-page book as an answer to those questions–an answer that Grossman described as "one of the most inspiring and astonishing chronicles of collective courage I've ever read."

"It talks about resilience, our humanity, it talks about overcoming the odds and being present in the world, defending what is right and yours to defend, but also being human and being very present in the world," said USC Shoah Foundation Executive Director Dr. Stephen Smith. "And that's demanded of us today in many different ways."

Batalion said she relied primarily on personal testimonies like written memoirs, oral recordings, video recordings, and interviews with family members. "I was very, very conscious of accuracy and that is why I have all these footnotes, because I wanted to explain [that] I had to make a judgment as the writer, as the historian that...I'm going to go with this version of the events, which seems the most plausible to me, but there are other versions," she said.

Many of the stories in the book possess a distinctly cinematic quality and, in the case of one of Batalion's favorites, Bela Hazan, very well could have inspired a plotline in "Inglorious Basterds." At 19-years-old, Hazan's Poland came under Nazi occupation. Hazan, however, did not look like what the Nazis expected in a Jew; she was tall and blonde and could pass as Aryan. Working with the underground resistance, Hazan moved to a new city and adopted an identity as a young Polish Catholic woman. Hazan's life, like others in the resistance, was a "life or death performance."

"Every element of their life was performed," Batalion said. "They were afraid to fall asleep on trains in public. What if they mumbled in Yiddish in their sleep? There was no moment where they could break character."

Hazan secured a job working as a receptionist for the Gestapo, furtively stealing documents and passing them over to the resistance to make forgeries. But along the way, a Gestapo officer developed a crush on Hazan, which eventually lead to her capture.

Even in the Auschwitz death camp, "she maintains this fictional performance that she's Catholic," Batalion said. "The desire to be known for her real name is overwhelming for her but she cannot break character."

The cinematic potential of the stories was not lost on one reader. "It screams movie," Spielberg said. "Then I found out this guy with my last name is working on the film."

She was referring to her brother, Steven Spielberg, who directed "Schindler's List," founded the USC Shoah Foundation and bought the film rights to the book in 2018. Batalion is currently co-writing the screenplay. ●

Masks Still Required for Youth Programs in Beverly Hills

Vaccinated individuals may now visit the Beverly Hills City Hall without face coverings, in alignment with county and state masking guidelines. However, the city's Community Services Department programs and facilities must abide by the June 15 update from the Los Angeles County Department of Public Health. Those updates require face masks in facilities and indoor settings where youth programs are delivered. This requirement will be in effect pending further updates.

Community Service facilities and programs providing youth programs will require face masks regardless of vaccination status in order to protect children 12 years and under who utilize city programs and facilities and are currently not eligible for vaccination due to age requirements. These facilities include:

- Beverly Hills Public Library;
- La Cienega Park Community and Tennis Centers;
- Roxbury Park Community Center;
- Preschools, Adventure Camp, Summer Camps and other childcare and youth settings.

"Our library and community centers are the homes to many of our treasured youth- based programs, and as such, regulated under stricter guidelines," said Jenny Rogers, Community Services Director. "We look forward to future updates from L.A. County and state of California that will allow us to welcome everyone back mask free. Until that day, we ask for the continued patience and support of our community while we work together to keep everyone safe and healthy." For the latest news on COVID-19, visit beverlyhills.org/coronavirus or call the city's COVID-19 Hotline Monday-Friday from 9:30 a.m. - 6 p.m. at 310-550-4680. ●

A Theater Without Walls at The Wallis

Several months ago, when it seemed there was a glimmer of light for the return of live performances at the Wallis Annenberg Center for the Performing Arts, Artistic Director Paul Crewes conceived a plan to construct a substantial pop-up outdoor performance space that could safely accommodate audiences for live shows over the summer months. And now that plan has become a reality, as for the past two weeks the Promenade Terrace has been undergoing a massive engineered conversion into a professional stage, complete with lighting, sound, a set and socially-distanced seating for 100 people. The Wallis' theater without walls launches with the world premiere of the one-man show "Tevye in New York!" on June 26.

"I've always been drawn to projects that shake things up and look at physical spaces in a new way, which is where this idea began," said Crewes. "We have this beautiful open space which gave us so much opportunity and possibility. Our own production team designed the outdoor performance space, which has a larger footprint than our Lovelace Studio Theater, and in two weeks we'll have a fully staged piece of theater to share, followed by a month of dance and music programming in August." For more information and tickets, visit www.TheWallis.org. ●

Friends of Beverly Gardens Park (FOBGP), City Council members and Recreation and Parks Commissioners gathered to show appreciation for the city landscaping staff who work hard maintaining our city's century old treasure. Pictured (from left): FOBGP co-chair Gaby Reims Alexander, Councilmember Lester Friedman, Councilmember Julian Gold, BGP landscaping crew Octavio Morales, David Garrard, Peter Betancourt, Pedro Guzman, Brycen Sterkel and Luis De La Luz, FOBGP Founder Steven Gordon, Councilmember John Mirisch and FOBGP co-chairs Annette Saleh and Deborah Frank.

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Join the Worldwide Celebration of Music on June 21

Join us for fun activities to celebrate the power of music together !

11am - 2pm
Drum Circle at Roxbury Park with Alan Bruni

3pm - 6pm
Piano Sing-Along/Play-Along at
Beverly Gardens Park's Lily Pond with Steve Weinglass

6pm - 7pm
Live-Stream Concert on YouTube with
Singer-Songwriter Bill Rotella
Visit the website at 5pm on Monday, June 21 to access concert link!

BEVERLY HILLS

www.beverlyhills.org/makemusicday

RESIDENTS RESPOND TO HOTEL DEVELOPER'S ADVERTORIAL

In this space a few weeks ago, a developer paid for "SPONSORED CONTENT" to advertise a purely commercial large hotel and event space he is seeking to build in our community, which requires City Planning and the LA City Council approval because it runs counter to the overall plan for how land is zoned in Los Angeles. Save Our Canyon, an organization formed by hundreds of concerned residents to protect the Santa Monica Mountains, is paying for the same space in the Beverly Hills Courier to set the record straight and make clear how urgent this matter is, how strongly we object to this project, and the extraordinarily destructive precedent it would set for Benedict Canyon and its residents, the surrounding canyons, the City of Los Angeles, the City of Beverly Hills and the entire region.

Can a developer really just build a hotel in a residential community in the middle of Benedict Canyon? Is that even allowed?

No, it's not allowed. It requires a Zone Change and General Plan Amendment, which means disrupting the overall plan for how land is used in Los Angeles. The developer is requesting the LA City Council approve a "Specific Plan" which would disregard current zoning, and make new rules that only apply to his property. It is in our entirely residential area that he seeks to create his Specific Plan—surrounded by substandard streets that are narrow, unstable slopes, fragile soil, and where access is strictly limited. A commercial hotel would be inappropriate and dangerous. If these zoning changes are permitted, the impacts on the environment, public health, traffic, fire safety, and personal safety would be devastating and irreversible. The precedent could set off a chain reaction that would allow commercial development to transform the Santa Monica Mountains forever.

Can the City Council pass a General Plan Amendment and create a Specific Plan just for one commercial project?

The City Council has never approved a Specific Plan like the one being requested by this developer, yet he persists undeterred, spending untold amounts of money on lobbyists and publicity for a campaign and project that will negatively impact our neighborhood. We know that in the last three years the developer has spent over $1 million in publicly reported lobbying expenses trying to change the entitlement on his property. If you drive around Los Angeles, you'll see that the history of the city has been written by the developers. The only remaining exception to this is the Santa Monica Mountains.

What's so special about the Santa Monica Mountains?

The canyons of the Santa Monica Mountains have been protected since the birth of Los Angeles.The hills are a wildlife corridor that starts at the ocean and connects every canyon from Topanga all the way to Griffith Park. In the last century, while LA sprawled in every direction, this stretch of mountains didn't stay green by accident. It has stayed green because the state, the city, and the residents have fought against developers to keep the hills protected. We are running a generational and political relay race. In a relay race, you're only as strong as your weakest link. If one generation drops the baton, the race is lost. The baton is with us now. We have a responsibility to protect these mountains — and this ecosystem — for our children and their children and generations beyond that.

What exactly is the developer trying to do?

The developer filed an application with City Planning for construction of a 59-room hotel and eight residences on a 33-acre parcel that has practically no flat land, in the middle of an entirely residential neighborhood. The small house at 2534 Hutton Drive would be knocked down to cut and grade the hillside to build a new two-lane road that would lead to this large-scale commercial hotel project.

The application includes:

- The **Main Hotel Building that stands 69 feet tall-** with five stories above ground and two floors of subterranean parking — exceeding the height allowed by the Hillside Ordinance.
- **Two additional large cement parking structures for 260 cars.**
- **7,960 square feet of bar and restaurant space.**
- **8 additional residences,** ranging in size from 12,000 square feet to 48,000 square feet.
- A total of **27 detached structures,** equaling over **322,000 square feet of new construction.**

The application as filed would require:

- **One mile of concrete retaining walls** — that's one quarter of the distance from Sunset to Mulholland.
- Cutting and **grading over 117,000 cubic yards of earth** to dig out the seven story building and multiple parking structures. This means the **removal of 547 significant and protected trees.**
- It would take **thousands of large construction truck trips** through narrow, winding streets to bring in heavy grading equipment, cement, materials and workers for this project.

Why is a hotel so problematic?

Residential communities move on the same clock. But at the time that residents are returning home to their families, hotels are just getting started. **A hotel never sleeps.** The application indicates a 90 person staff, spread across multiple shifts, 24 hours a day, every day, including holidays. The application calls for "weddings, showers, birthdays, fundraisers, etc." That means that coming and going between staff, guests, parties, deliveries, food service, maintenance, there will be an endless parades of car and bus trips and noise seven days a week, month after month, forever.

What will happen if we don't stand up against this hotel and zone change?

- **Traffic between the city and the Valley will increase substantially**. Gridlock from the hotel construction and operation would divert traffic to all the other canyons — Coldwater, Laurel, Beverly Glen — and make access to the Valley far worse. **This will result in hundreds of cars backing up into Beverly Hills.**
- **Six years of daily construction.** This is directly from the application and, if you've ever remodeled a bathroom, you know to take the contractor's estimate and double it.
- **Beverly Hills and other neighboring communities will be severely impacted** by construction and hotel traffic, noise, and increased danger of fire evacuation.
- **Property values will go down.** Anyone who wants to sell their house will need to disclose the building or existence of this enormous long-term construction project.
- The construction would mean **destruction of trees, hillsides and disruption to the owls, coyotes, mountain lions and other wildlife who make their home here.** These are not renewable resources. They aren't making any more mountains.
- **Noise will surge throughout the canyon.** Noise echoing everywhere not only from construction, but forever.
- **Visitors to events and parties will leave after drinking and drive through narrow winding streets and put all of the surrounding residents**

Who opposes this proposed hotel and zone change that would significantly alter the Santa Monica Mountains?

Over 10,000 people have already signed the petition to stop the hotel. The commercial hotel and zone change are also opposed by the region's leading environmental and community organizations, including the Santa Monica Mountains Conservancy, TreePeople, Citizens for Los Angeles Wildlife, the Benedict Canyon Association, and the Bel Air-Beverly Crest Neighborhood Council. More than 100 homeowners immediately adjacent to the proposed hotel stand against the project.

LA City Councilmember Paul Koretz, whose 5th District represents our community, also has voiced his strong opposition to this hotel project. He issued a clear public statement against the hotel: "I cannot support the perception of spot zoning, a hillside General Plan Amendment and Zone Change. A project like this could have a profound impact on the surrounding community — forever changing the nature of this residential area."

This fact sheet has been paid for by Save Our Canyons, a nonprofit, nonpartisan organization formed by concerned residents to protect the Santa Monica Mountains. For more information, please visit our website ***saveourcanyon.la.*** *Sign the petition and join the mailing list to keep informed of the process. Together, we must stand up to all developers who seek to cause irreparable damage to the natural resource of the Santa Monica Mountains and threaten to negatively impact our quality of life and the city we love.*

Health and Wellness

How to Recover from the Pandemic

BY ERICA SPIEGELMAN

Erica Spiegelman (ericaspiegelman.com, @ericaspiegelman on Instagram) is a wellness specialist, recovery counselor, and author of the book, “The Rewired Life” (2018) as well as bestsellers, “Rewired: A Bold New Approach to Addiction & Recovery” (2015), “Rewired Workbook” (2017) and “Rewired Coloring Book” (2017), all published by Hatherleigh Press. Erica holds a bachelor’s degree in literature from the University of Arizona and is a California State Certified Drug and Alcohol Counselor (CADAC)-II from UCLA.

We have all been through a lot in 2020 and putting an end to last year felt cathartic for most. The pandemic put an unprecedented strain on our lives, affecting us in ways big and small–in ways obvious and in ways we likely haven't even started to understand. Yes, 2020 has transformed us. And now in 2021, we understand that our journey is not done. We are still learning and growing. It’s never been more crucial to look at our own needs–emotional, mental, emotional and spiritual.

We know that making healthy choices can help us feel better and live longer. Maybe you’ve already tried to eat better, get more exercise or sleep, quit smoking, cut back on drinking, or reduce stress. It’s not easy. Research shows how you can boost your ability to create and sustain a healthy lifestyle by being aware of your habits first, and then accessing which ones you want to change.

In my book, “The Rewired Life,” I discuss how to create healthy habits and increase self-care and emotional awareness. What I came to find out was this: we are not hard wired and that we can create new habits at any given time. You have to be consistent, to get the pathways in your brain rewired in healthy directions.

Practicing self-care and learning how we can RECOVER collectively and individually is important in tough times and in all times! Here are some tips on how to implement healthy habits and some new wellness trends to try today:

Plan:

Identify unhealthy patterns and triggers. Set realistic goals. Write down steps to help you achieve them. The more specific, the better. Buy a planner or create a day-to-day schedule.

Change Your Surroundings:

Find ways to make healthier choices easy choices. Remove temptations. Examine who is in your life. Do they have healthy habits? Do they have negative influence on you? Try to surround yourself with positive people who will support your new habit.

Ask for Support:

Find friends, family, co-workers, neighbors, or groups for support or ask people to join you. Being held accountable is great when trying to create healthier habits. A workout buddy or therapist that can check in with you on your goals is always helpful.

Fill Your Time with Healthy Activities:

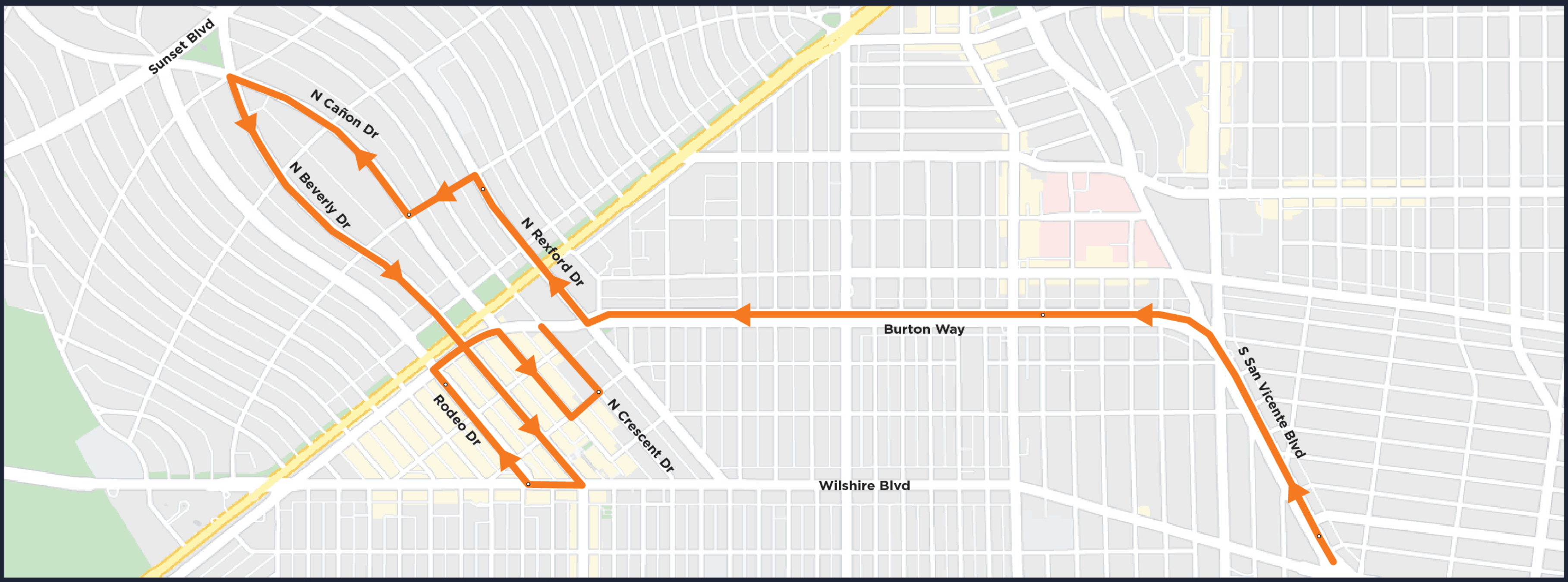
Try exercise, a favorite hobby, being artistic, puzzles, reading, hiking or spending time with family and friends.

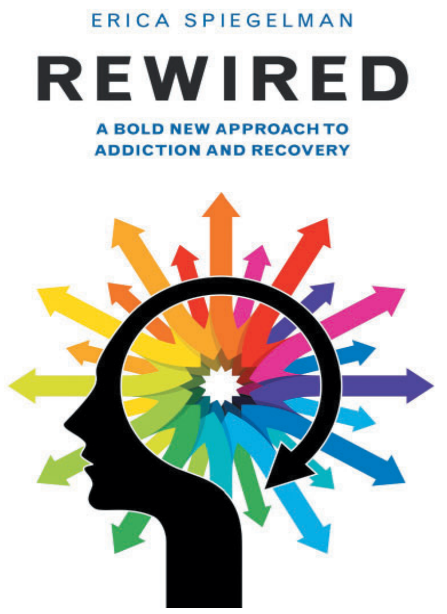
Track Your Progress:

Record how things are going to help you stay focused and catch slip-ups. Journaling is a great way to see your progress. We forget things day-to-day and writing things down helps.

Imagine the Future:

Think about future benefits to stay on track. Play out the tape. Envision your goal daily. (I just had a baby and am envisioning getting into my old jeans- yay!)





Spiegelman is the author of several best-selling books

Reward Yourself:

Give yourself a healthy reward when you've achieved a small goal or milestone, like a massage or personal time. Stay home one night and binge your favorite Netflix or buy concert tickets for your favorite band. So many fun and healthy ways to reward ourselves!

Be patient:

Most importantly, remember improvement takes time, and setbacks happen. Focus on progress, not perfection.

New Wellness Trends to Try:

1. Tending to Our Mental Health

When face to face contact is few and far between Telehealth Therapy, Online or Phone Counseling, Meditation Apps, Breathwork Classes Online, Affirmation Apps, Wellness Workshops and other online mental health services have become extremely popular and helpful. When faced with anxiety or everyday issues, this pandemic gave us a chance to use these resources and see that they are effective! Now more than ever, try to get in the habit of putting your health first.

2. Virtual Fitness

Ironically, in a time when Americans are seeing how important it is to stay fit and invest in wellness, studios and gyms have been forced to close intermittently. New virtual options allowed fitness studios and gyms to offer workouts and personal training online. Pandemic disruption and a new global wellness imperative have ushered in a new wave of wellness defined by both in-person and virtual experiences. More than one third of Americans (37%) join for live stream workouts at least once a week. Even more (40%) exercise to a pre-recorded fitness video. Americans are forming new workout habits. It's still nice to get out and move, but this is an option people can continue to choose.

3. Immunity Now

The popularity of immune-boosting herbs and superfoods reached new heights in 2020. Strengthening the immune system (and building physical fortitude) will be a major 2021 wellness trend across the board, from food to supplements and educational classes. There are more customized immunity hacks using genetic testing, biohacking, immunity-enhancing treatments and energy healing. Growing awareness of the effect our gut microbiome has on our overall wellbeing, immunity and brain function will also make cultivating good gut health a top priority.

4. Screen Time: Technology Boundaries are the New Normal

Back on that self-care trend forecasting: screen-fatigue and tech burnout are real, especially after so many of us have been cooped up for months. We're seeing the effects of blue light and screen time on our eye health, mental health, sleep cycles, and more. Tech boundaries are going to be quite popular, allowing us to have the best of both worlds: instant connectivity and a world of education at our fingertips and a healthy, boundary-centric relationship with tech with plenty of breaks from the dredges of social media comparison. Like, a 30-minute workout using the computer? YES, so healthy and great! Three hours of scrolling through TikTok? Maybe not so much!

5. Renewed Interest in Nature

People have increased their interest in nature in response to more time spent in their homes. Design trends show more people investing in plants to create indoor gardens, also known as "COVID gardens." Plants help clean the air and provide a sense of companionship. Consumers have shown shifts in behavior with increased interest in biking, hiking, and other immersive trips into nature.

New wellness trends, habits and self-care routines are fantastic to establish no matter what or when. We will begin to heal and recover as a community with practicing kindness to all, self-love and an open heart. ●

(Tour d'Elegance continued from page 1)

As of press time, the following is a sampling of the Tour d'Elegance entrants:

- 1962 Ferrari 250 GTO (this likely will be the most-expensive car in the Tour);
- 1912 Ford Model T Roadster Pickup (the oldest car in the Tour);
- 1970 Lancia Stratos Zero (this is the amazing "flying wedge" you may have heard about but not yet seen);
- Maserati MC12 (only 50 were built in 2004 and 2005; Maserati's answer to the Enzo Ferrari, which basically has the same chassis);
- Lamborghini Sian (the newest exotic offering from this special brand, their first production hybrid and their most-powerful road car ever – V12 engine plus electric motor bring the total to over 800 HP at a starting price of around $2,600,000);
- 1969 Ford Bronco "Big Oly" (one of the most storied off-road racers in history, owned for over 50 years by Parnelli Jones until a recent auction at a reported $1,870,000 a few weeks ago);
- 1960 Maserati Tipo 61 "Birdcage" (this car will travel the farthest in order to participate, coming from Sonoma, CA – the complex space-frame tube-chassis is what gave the car its moniker, but it likely will have the body on during the Tour so you'll have to use your imagination);
- 2021 McLaren Elva (one the company's newest offerings and its lightest now available, it has a unique offering - an optional windshield. At a base price of about $1,700,000, it's likely to be a crowd-pleaser);
- 1935 Packard Dual Cowl Phaeton by Dietrich (I love a car with two windshields! Maybe it could loan one to the McLaren Elva);
- 2021 McLaren Speedtail (this is tied with the Sian for the fastest accelerating car on the Tour but with a higher top speed, of 250 MPH - I hope that they put it up front. The base price is about $2,100,000);
- Several Chevy Low Riders (1958 and 1964 Impalas and 1983 Monte Carlo – always a delightful part of the show);
- 1957 Dual Ghia Convertible (the "it" car in Hollywood in that era);
- 1968 Mustang "Wasteland" car (think "Mad Max");
- 1929 Ahrens-Fox Fire Truck (driven by our own Beverly Hills Fire Department, we have this truck to thank for the annual Rodeo Drive Concours. In the early '90s, Beverly Hills had a fire truck that they had no money to restore, but it was an original Beverly Hills fire truck. Bruce Meyer helped create a group of supporters put together a car show and to raise money to restore the antique fire truck);
- 1939 Bugatti Type 57C by Vanvooren (the "Shah Bugatti" - one of my personal favorites - I have a model of this car on my desk);
- 1939 Auburn Boattail Speedster Custom (some car designers really loved their boats) and
- 1953 Chrysler Parade Phaeton (the kind used by President Eisenhower).

It will surprise no one that the driving force (so to speak) behind the event is Bruce Meyer, organizer extraordinaire, car collector par excellence and all-around good guy. Meyer brought the cars together; he made the connections with the city and he conceptualized the event (as he has with the Rodeo Drive Concours d'Elegance for over 25 years). He truly is the ringmaster of the event.

Lancia Stratos HF Zero Photo courtesy Ted7

GTO Photo courtesy Velocity Invitational

Other key movers (so to speak) include Kathy Gohari of the Rodeo Drive Committee, who worked behind the scenes to get the event off the ground early on, Mayor of Beverly Hills Robert Wunderlich and Vice Mayor Lili Bosse, who have given nothing but enthusiastic support to the event. Tom O'Gara of O'Gara Coach committed to be title sponsor of the event and will join the Tour in a McLaren Speedtail. Of the many sponsors, notable are Hagerty, Auto Vault Storage, GEARYS Beverly Hills, Two Rodeo Drive, Rodeo Drive Associates and the Beverly Hills Historical Society.

This historic drive begins at 9 a.m on June 20. The parade route travels up San Vicente Boulevard and turns left (west) on Burton Way. It then will turn right and go north on Rexford Drive for a block, to Carmelita Avenue, and then turn left and go two blocks over to North Canon Drive. They then turn right and will follow Canon up to the Will Rogers Memorial Park (just below Sunset Boulevard) and then turn left and go right back down (south) on North Beverly Drive all the way to Wilshire Boulevard. They will turn right and go west one block to Rodeo Drive, turn right again and go north to "Little" Santa Monica, turn right and go two blocks to Canon Drive, turn right (south) again on Canon Drive and go to Dayton Way. The parade then will turn left, go to Crescent Drive and turn left. (The route is subject to change so please check the event website the morning of the event for possible updates: https://rodeodrive-bh.com/fathers-day-automobile-celebration.

Note: There is no plan for viewing at the start or at the finish of the Tour as people are asked not to congregate at either end. However, your opportunity to see, hear and, yes, even smell these icons of iron is a once-in-a-lifetime experience (bring your photo and video equipment!). Most people will never have seen photos; some will have seen the photos but not the cars and a few will have seen them but not in action. You will get to experience them all in their native habitat - the roads of Beverly Hills. And mark your calendars for Father's Day 2022, when the Concours d'Elegance on Rodeo Drive is scheduled to return. ●

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A draft of the City's 2020 UWMP is available on the City's website (www.beverlyhills.org/UWMP). If you would like more information or have any questions, please contact **Vince Damasse, Water Resources Manager at (310) 285-2491 (email: vdamasse@beverlyhills.org) or contact Melissa Gomez, Senior Management Analyst, at (310) 288-2864 (email: mgomez@beverlyhills.org).**

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Please check the July 15, 2021 meeting agenda for further updated information. The agenda will be available on the City's website at www.beverlyhills.org at least 72 hours prior to the meeting.

Any interested person may participate in the meeting and be heard or present written comments to the City Council. According to Government Code Section 65009, if you challenge the Council's action in court, you may be limited to raising only those issues you or someone else raised at the public hearing described in this notice, or in written correspondence delivered to the City, either at or prior to the public hearing.

HUMA AHMED
City Clerk

If you are an individual with a disability and need a reasonable modification or accommodation pursuant to the Americans with Disabilities Act ("ADA") please contact (310) 285-2400 or (310) 285-6881 (TTY) preferably 24-hours prior to the meeting for assistance.

www.beverlyhills.org

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Issue 1134 • June 24 - June 30, 2021

Starting A School

The Weekly's interview with Gabriel Halimi on opening a preschool during a pandemic

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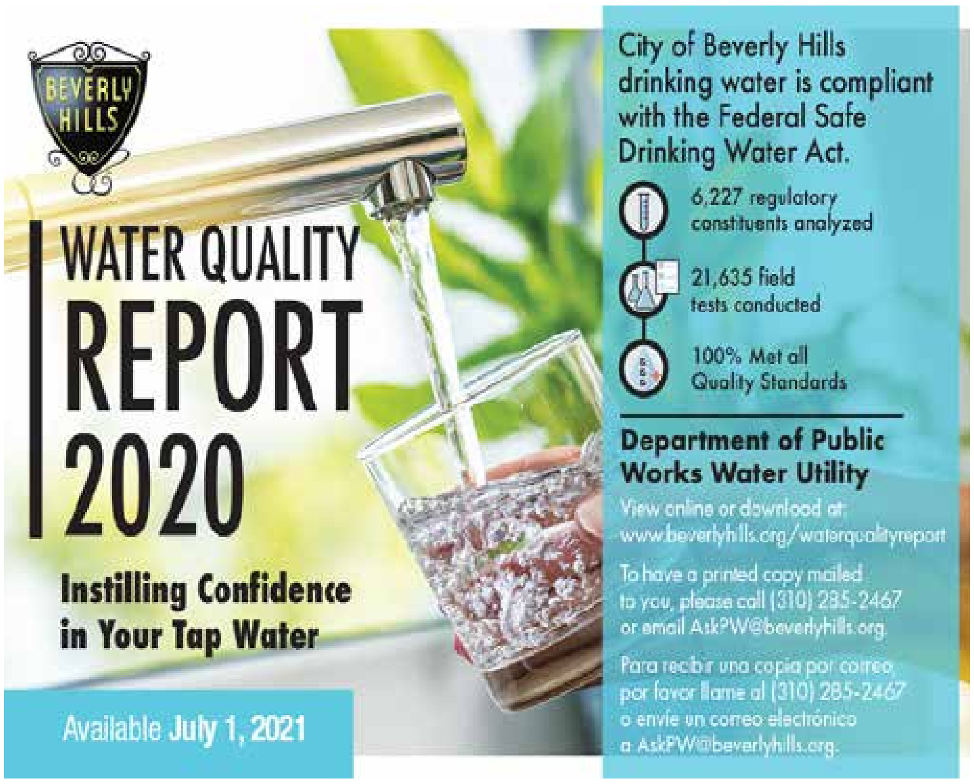

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SNAPSHOT

DAD'S DAY
RODEO DRIVE
L to R: Rodeo Drive Committee President Kathy Gohari, Councilmember Les Friedman, Miss Teen California United States Alana Morgan and Mayor Robert Wunderlich, during Sunday's Tour d'Elegance, a classic car drive-by event. Morgan is a 2021 Beverly High graduate.

letters & email

"City Council Approves One Beverly Hills" [Issue 1132]

We want to applaud City Councilmember John Mirisch's courageous opposition to the One Beverly Hills Project as expressed in the City Council's meeting on June 10. The project totally ignores our city's need and obligation to build affordable housing.

Mirisch is calling on us to do our part to engage in this crying need.

One Beverly Hills and Affordable Housing must be linked clearly and written into law.

Not one without the other!

Beth and David Meltzer
Beverly Hills

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briefs

Greystone Mansion Under Renovation

Although it's been closed to the public since last March due to COVID-19, Grey-

Beverly Hills Weekly

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OUR DATA SPEAKS VOLUMES

stone Mansion and Gardens reopened their grounds to the public in early May. Reservations are required and the interior of the property remains closed for now, but once guests step inside, they will have a chance to explore newly renovated rooms, including the Theatre, Library and Mr. Doheny's bathroom.

Greystone reopened in late April and now they are limiting tours and reservations to only Wednesday, Thursday and Friday. Venue Coordinator Sarah Scrimshaw presented updates and restoration projects to the Recreation and Parks commission Tuesday, outlining the property's reopening plans, upcoming events and what current or future renovations are necessary for conservation.

Greystone Mansion and Gardens

Most of these renovations, along with other projects funded by the Friends of Greystone non-profit organization, began right before the pandemic forced their closure. But the lack of public visitors during the pandemic seemed to accelerate the construction and restoration process.

Another exterior project that benefited from the closure were some brick paths found below the terrace and along the hillside that were becoming a safety hazard.

"Luckily they started right as the pandemic shut everything down which actually turned out to be a benefit because it lessened the impact on the public when they're visiting the park," Scrimshaw said. "It enabled the projects, probably this project at least, to probably get completed more quickly."

Some historic lamp post replicas have also been installed along the lower brick pathways, two of which were added to the ADA pathways that connect the courtyard to the terrace.

According to Greystone Mansion's website, the Library requires mostly material and monetary support - Rift White Oak Wood and approximately $455,000. This project entails repainting, restaining, replastering and updating old electrical wiring and cabinetry. The original design and architecture was mostly gutted by Mrs. Doheny upon moving in, but has now been restored to the original 1928 design that features a curved ceiling. Some other refurbishments include a new marble fireplace and detailed woodwork throughout the Library.

Another renovation project is the Theater and Screening Room. This forty-seat, "tennis court shaped theater," has been virtually untouched and unused since it's last occupants, the American Film Institute from 1965 to 1982. Aside from the periodic mold abatement and safety checks the city performed, this historic movie theater is estimated to undergo $1,500,000 in rehabilitation. One more addition to the Theater that is more modern is an electric lift to expand accessibility and to comply with ADA standards.

"The theater historically was only accessible by stairs and because of the nature of the building, it is on the historic registrar, and the limestone facade is part of what we call a character defining feature," Scrimshaw said.

To avoid damaging or tainting the historic character of the building, a hole in the rotunda outside of the theater that connects to an unused garage space will now house an electric lift for visitors who require the assistance.

Greystone Mansion continues to put on performances, virtually, for the public to enjoy every Monday at 7:30 p.m. online, including a special "Behind the Curtain," a behind the scene look that appears at the end of the performances. Coming soon is their park's 50th anniversary celebration, Sept. 19, where events and special celebration plans are to be determined.

To make a reservation or for more information, visit beverlyhills.org/visitgreystone.

1508 Lexington Road Moves Forward

The Planning Commission reviewed the plans for a new two-story single-family residence with an above-grade floor area of 7,788 square feet and a 6,989 square feet basement on Thursday. The project site will be located in a vacant lot on the south side of the 1500-block of Lexington Road between Oxford Way and North Crescent Drive.

1508 Lexington Road

Staff recommended that the Commission continue consideration of the project in a special meeting on June 23. This would allow the staff to visit the site and see what nearby properties' views might be impacted as a result of the project.

Planning Commission Considers Renewal of Conditional Use Permit for 9261 Alden Drive

Young Israel of North Beverly Hills requested that the Planning Commission renew the previously approved Conditional Use Permit in the existing synagogue facility at 9261 Alden Drive on Thursday. Along with the renewal, they also requested that there be several modifications of previous conditions of approval based upon their current operations, such as removing duplicated or inapplicable conditions and allowing off-site parking at public facilities or metered parking spaces.

The Planning Commission discussed the conditional use permit and staff recommended that they adopt the resolutions with conditions of approval. The Planning Commission also had the option to approve the project with modified findings or conditions of approval, deny the project, or portions of the project, based on revised findings or direct staff or applicant to another hearing date consistent with permit processing and at the applicant's request or consent.

Associate Planner for the City, Chloe Chen, presented the conditions and remedies necessary for the synagogue to renew their CUP, including no off-site parking at Maple Plaza, religious service times, posting parking restriction signs and submitting the proper affidavits.

"Staff noted lack of compliance with some conditions," Chen, said. "The applicant has since taken steps to comply including posting required parking restrictions signs and the removal of a mat covering the surface parking space at the rear of the building."

The applicant, Chen said, has met the first two criteria for renewing a CUP, which includes the site being used explicitly for religious practices and meetings and not used for social events. The third criteria is evidence showing whether or not parking or traffic will interfere with or impact any adjacent streets or area surrounding the synagogue.

Due to Young Israel being closed in response to COVID-19, only estimated attendee data is available for February 2020.

A representative for/from Young Israel, Anabel Garcia, confirmed the resolutions and conditions. "Everything that we want to revise has been taken into consideration," she said.

No public comment on the matter except on inquiry for more information.

Local Art Restoration Report

Sun, water and public damage are the biggest threats to the city's public art collection, according to the RLA Conservation of Art and Architecture. The RLA group attended the Arts & Culture Commission's meeting last Tuesday to present a comprehensive report that identified some pieces of art that would require immediate intervention to prevent further deterioration.

The meeting was also used to introduce the city's new Recreation Services Manager, Chris Paulson, announce the new Interim Arts and Culture Commission Manager, Paul Palone and to propose locations for an upcoming interactive exhibit from Sing for Hopes Pianos.

Chris Paulson

The public art's damage was due to a range of issues from exposure to sunlight to being touched occasionally by patrons.

"The city is extremely conscientious in terms of upkeep of the artwork and it shows in the condition in the majority of the pieces," RLA Conservation Specialist Christina Varvi said.

Varvi gave a summary of the report and provided restoration recommendations and her overall analysis to the commission. In particular, she pointed out a few sculptures that need immediate attention, including Spiral of Life in Rexford Park, Sisyphus located on the median of Burton Way, as well as a Bouvet piece that was previously brought to the commission's attention.

For example, due to the layers of laminated wooden veneers that are bonded together with marine epoxy, Spiral of Life

briefs cont. on page 4

Buss Speaks at Rotary

Rotary Club President Sharona R. Nazarian (right) interviews Los Angeles Lakers President Jeanie Buss at Monday's Rotary Club meeting. Buss discussed the challenges of running a franchise and her plans for the future. Nazarian's term ends next week at which time Charles Black will become president.

briefs cont. from page 3

is vulnerable to sun damage, Varvi said. Sisyphus, a sculpture made up of salvaged pipes, steel beams and other metal materials, requires a new paint job due to corrosion and deterioration. Repainting the city's sculptures every 10 years is common maintenance practice, Varvi said.

After Varvi's presentation, Sing for Hope Pianos representative Lester Vrtiak, presented its program and art display plans for this coming August. Typically hosted in New York City, the charitable organization is bringing the exhibit to Beverly Hills for the first time. After the exhibit concludes, all pianos will be donated to local schools where they'll introduce their Citizen Artistry Program.

Approximately 10 sites have been identified to host these pianos, including City Hall, Two Rodeo, The Wallis Annenberg Center for Performing Arts and parks: La Cienega Park, Beverly Gardens Park, Will Rogers Park and Roxbury Park. These locations have also been proposed to the Recreations and Parks Commission for its input.

City's Future Plans for Bicycles

As the weather warms up, and with May's Bike Month come and gone, the City's Public Works staff prepare future bicycle activities and events, in addition to discussing the City's future bicycles plans at Tuesday's Recreation and Parks Commission.

One upcoming event will be a Protected Bike Lane Demonstration event on July 25 from 10 a.m. to 4 p.m. The pop-up bike lane project, which will be going southbound on Roxbury Drive and adjacent to Roxbury Park, is meant to demonstrate the protections that come with installing a bicycle lane using signs, planters and temporary markings to direct traffic.

Transportation Planning Analyst Christian Vasquez presented Public Work's Roxbury bicycle lane pop-up demonstration as well as the city's Complete Streets Plan overview that was adopted by city council on April 20. This plan's purpose is to accommodate any mode of transportation, such as walking, bicycling, public transit or driving.

"The plan proposes a holistic bikeway network that prioritizes those transfacilites to key destinations like schools, parks and upcoming subway stations," Vasquez said.

The bike lane is set to be temporarily installed on Roxbury Drive, directly adjacent to Roxbury park, between the sidewalk and where there are diagonal vehicle parking spaces, adding a barrier between bicyclists and any nearby cars.

The city's Public Works Department encourages the community to test out the new project and provide feedback and experience during this one-day pop-up bicycle safety demonstration.

Theatre 40 to Reopen

After closing the curtain last year in response to the pandemic, Theatre 40 is celebrating it's 55th season by resuming in-person performances starting this September with three shows lined up: "As Good as Gold," "Good People" and "Hilda's Yard."

Opening night for Marilyn Anderson's world premiere of "As Good as Gold," is Sept. 16 and will run through Oct. 17. is about three female screenwriters in Hollywood end up hiring a male to front for them after experiencing the frustration of sexism in the film and entertainment industry.

"Good People," by David Lindsay-Abaire takes place in Southie, a Boston neighborhood, where Margie Walsh faces eviction, recently lost a job and is barely making ends meet. Yet, an old fling of hers made it out of Southie, so she decides to risk it all and rekindle that relationship to see what lies outside of her broken town. But does this "self-made man" have what it takes? Starting Nov. 18 and running through Dec. 19, see where Walsh goes and how her story ends.

Finally, the west coast's premiere of "Hilda's Yard," by Norm Foster, will start on Jan. 13, 2022 and continue until Feb. 13. Set in 1956, one seemingly ordinary family experienced the extraordinary. Gary and Janey Fluck finally moved out of their parents' home. But when Gary loses his job and Janey leaves her husband, the two need to navigate their way back to normalcy. This will be the first showing on the west coast.

Performance schedule and tickets for the upcoming season can be found at theatre40.org

For more information, see Theatre40.org.

--Briefs Compiled by Taylor Helmes

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To submit Audio/Oral comments during the hearing call: (310) 288-2288, to submit written comments please email: cityclerk@beverlyhills.org, to submit video comments (during public comment only) use https://beverlyhills-org.zoom.us/my/bevpublic (passcode: 90210).

It is recommended that public written comments be submitted to the City Clerk's office by 12:00 p.m. on the meeting date. Public comments will also be taken during the meeting when the topic is being reviewed by the City Council. Written comments should identify the Agenda Item Number or Topic in the subject line of the email. Written comments will be allowed with a maximum of 350 words, which corresponds to approximately 3 minutes of speaking time. If a comment is received after the agenda item is heard, it will not be a part of the record. Public comment via video conference will be 3 minutes per each individual comment, subject to City Council discretion.

Please check the July 15, 2021 meeting agenda for further updated information. The agenda will be available on the City's website at www.beverlyhills.org at least 72 hours prior to the meeting.

Any interested person may participate in the meeting and be heard or present written comments to the City Council. According to Government Code Section 65009, if you challenge the Council's action in court, you may be limited to raising only those issues you or someone else raised at the public hearing described in this notice, or in written correspondence delivered to the City, either at or prior to the public hearing.

HUMA AHMED
City Clerk

If you are an individual with a disability and need a reasonable modification or accommodation pursuant to the Americans with Disabilities Act ("ADA") please contact (310) 285-2400 or (310) 285-6881 (TTY) preferably 24-hours prior to the meeting for assistance.

sports & scores

BHHS Baseball Team Edged in Playoff Game

By Steven Herbert

Beverly High had the potential tying and winning runs in scoring position with no outs in the bottom of the seventh inning in its Southern Section Division 6 first-round baseball playoff game but were unable to drive either in in a 3-2 loss to Carpinteria June 4 at La Cienega Park.

Eli Biehl singled leading off the inning, moved to third on Charlie Barry's double but Biehl was picked off. Matthew Smoller was hit by a pitch.

Malik McCall hit a chopper with the infield in to third baseman Oscar Velazquez to threw to catcher Diego Nieves who tagged out Barry who was trying to score.

Jay Cukier was hit by a pitch to load the bases but Cole Summers grounded out to end the game.

"We did not lose the game, we played a very good baseball game with the exception of our base running mistakes," Normans coach Gregg Riesenberg said. "Carpinteria deserved to win the game.

"Our team performed great. Our pitching was stellar. We hit the ball extremely well, we just had bad luck. We hit six balls that were crushed but they were hit right at the defenders, A couple of those were line drives that were hit well over 300 feet. The baseball gods were just not on our side. Everything went right for Carpinteria and we just couldn't get over the hump to win the game."

Smoller drove in both Beverly Hills runs with a two-out single in the fifth. Aidan Dveirin, the Nor-

sports cont. on page 5

APPENDIX G

SBX7-7 Compliance Tables

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SB X7-7 Table 0: Units of Measure Used in 2020 UWMP* *(select one from the drop down list)*
Acre Feet
**The unit of measure must be consistent throughout the UWMP, as reported in Submittal Table 2-3.*
NOTES:

SB X7-7 Table 2: Method for 2020 Population Estimate	
Method Used to Determine 2020 Population (may check more than one)	
☑	**1. Department of Finance** (DOF) or **American Community Survey** (ACS)
☐	**2. Persons-per-Connection Method**
☐	**3. DWR Population Tool**
☐	**4. Other** DWR recommends pre-review
NOTES:	

SB X7-7 Table 3: 2020 Service Area Population

2020 Compliance Year Population	
2020	43,371

NOTES:

SB X7-7 Table 4: 2020 Gross Water Use

Compliance Year 2020	2020 Volume Into Distribution System *This column will remain blank until SB X7-7 Table 4-A is completed.*	2020 Deductions					2020 Gross Water Use
		Exported Water *	Change in Dist. System Storage* (+/-)	Indirect Recycled Water *This column will remain blank until SB X7-7 Table 4-B is completed.*	Water Delivered for Agricultural Use*	Process Water *This column will remain blank until SB X7-7 Table 4-D is completed.*	
			9,565				-

- **9,565**

*** Units of measure (AF, MG , or CCF)** must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.

NOTES:

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source	Metropolitan Water District		
This water source is *(check one)* **:**			
☐	The supplier's own water source		
☑	A purchased or imported source		
Compliance Year 2020	Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional* *(+/-)*	Corrected Volume Entering Distribution System
	9,565	-	9,565

[1] ***Units of measure (AF, MG , or CCF)*** *must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.*

[2] ***Meter Error Adjustment*** *- See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES

SB X7-7 Table 5: 2020 Gallons Per Capita Per Day (GPCD)

2020 Gross Water *Fm SB X7-7 Table 4*	2020 Population *Fm SB X7-7 Table 3*	2020 GPCD
9,565	43,371	**197**

NOTES:

SB X7-7 Table 9: 2020 Compliance

Actual 2020 GPCD[1]	Optional Adjustments to 2020 GPCD					2020 Confirmed Target GPCD [1, 2]	**Did Supplier Achieve Targeted Reduction for 2020?**
	Enter "0" if Adjustment Not Used			TOTAL Adjustments[1]	Adjusted 2020 GPCD [1] *(Adjusted if applicable)*		
	Extraordinary Events[1]	Weather Normalization[1]	Economic Adjustment[1]				
197		-	-	-	197	233	**YES**

[1] *All values are reported in GPCD*

[2] ***2020 Confirmed Target GPCD*** *is taken from the Supplier's SB X7-7 Verification Form Table SB X7-7, 7-F.*

NOTES:

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APPENDIX H

Reduced Reliance on the Delta

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REDUCED RELIANCE ON THE DELTA

BACKGROUND

An urban water supplier that anticipates participating in or receiving water from a proposed project (covered action) in the Sacramento-San Joaquin Delta (Delta) should provide information in their 2015 and 2020 Urban Water Management Plans (UWMP's) that can be used to demonstrate consistency with the Delta Plan Policy WR P1, *Reduced Reliance on the Delta Through Improved Regional Water Self-Reliance*. A covered action includes projects such as a multi-year water transfer, conveyance facility, or new diversion that involves transferring water through, exporting water from, or using water in the Delta.

Under the Sacramento-San Joaquin Delta Reform Act of 2009, prior to implementation of a covered action, agencies must prepare a written certification of consistency, including detailed findings, as to whether the covered action is consistent with applicable Delta Plan policies. Delta Plan Policy WR P1 identifies UWMPs as the tool to demonstrate consistency with state policy to reduce reliance on the Delta. The information on reduced reliance provided in the UWMP can then be used in the covered action process to demonstrate consistency.

WR P1 details what is needed for a covered action to demonstrate consistency with reduced reliance. WR P1 subsection (a) states:

(a) Water shall not be exported from, or transferred through, or used in the Delta if all of the following apply:

(1) One or more water suppliers that would receive water as a result of the export, transfer or use have failed to adequately contribute to reduced reliance on the Delta and improved regional self-reliance consistent with all of the requirements listed in paragraph (1) of subsection (c);
(2) That failure has significantly caused the need for the export, transfer, or use; and
(3) That export, transfer, or use would have a significant adverse environmental impact in the Delta.

WR P1 subsection (c)(1) further defines what adequately contributing to reduced reliance on the Delta means in terms of (a)(1) above.

(c)(1) Water suppliers that have done all of the following are contributing to reduced reliance on the Delta and improved regional self-reliance and are therefore consistent with this policy:

(A) Completed a current Urban or Agricultural Water Management Plan (Plan) which has been reviewed by the California Department of Water Resources for compliance with the applicable requirements of the Water Code;

(B) Identified, evaluated, and commenced implementation, consistent with the implementation schedule set forth in the Plan, of all programs and projects included in the Plan that are locally cost effective and technically feasible which reduce reliance on the Delta; and

(C) Included in the Plan, commencing in 2015, the expected outcome for measurable reduction in Delta reliance and improvement in regional self-reliance. The expected outcome for measurable reduction in Delta reliance and improvement in regional self-reliance shall be reported in the Plan as the reduction in the amount of water used, or in percentage of water used, from the Delta watershed. For purposes of reporting, water efficiency is considered a new source of water supply, consistent with the Water Code.

This appendix to the UWMP provides the analysis and documentation to demonstrate the City of Beverly Hills' improved regional self-reliance and measurable reduction in reliance on Delta water supplies, consistent with Delta Plan Policy WR P1, to support a certification of consistency for a future covered action.

SUMMARY OF METROPOLITAN EXPECTED OUTCOMES FOR REDUCED RELIANCE ON THE DELTA

As stated, WR P1 policy requires that, commencing in 2015, UWMPs include expected outcomes for the measurable reduction in Dela reliance and improved regional self-reliance with outcomes reported as the reduction in the amount of water used, or in the percentage of water used from the Delta.

The expected outcomes for Delta reliance and regional self-reliance are developed using the approach and guidance described in Appendix C of DWR's Urban Water Management Plan Guidebook 2020 (Guidebook Appendix C). Metropolitan Water District of Southern California (Metropolitan) provides the City, and Metropolitan's other member agencies, imported water supply through the State Water Project, thus relying on supplies from the Delta. The following provides a summary of the near-term (2025) and long-term (2045) expected outcomes for Metropolitan's Delta reliance and resulting in regional self-reliance as documented in the Appendix 11 Addendum to their 2015 UWMP. The results show that, as a region, Metropolitan and its member agencies are measurably reducing reliance on the Delta and improving regional self-reliance.

Expected Outcomes for Regional Self-Reliance

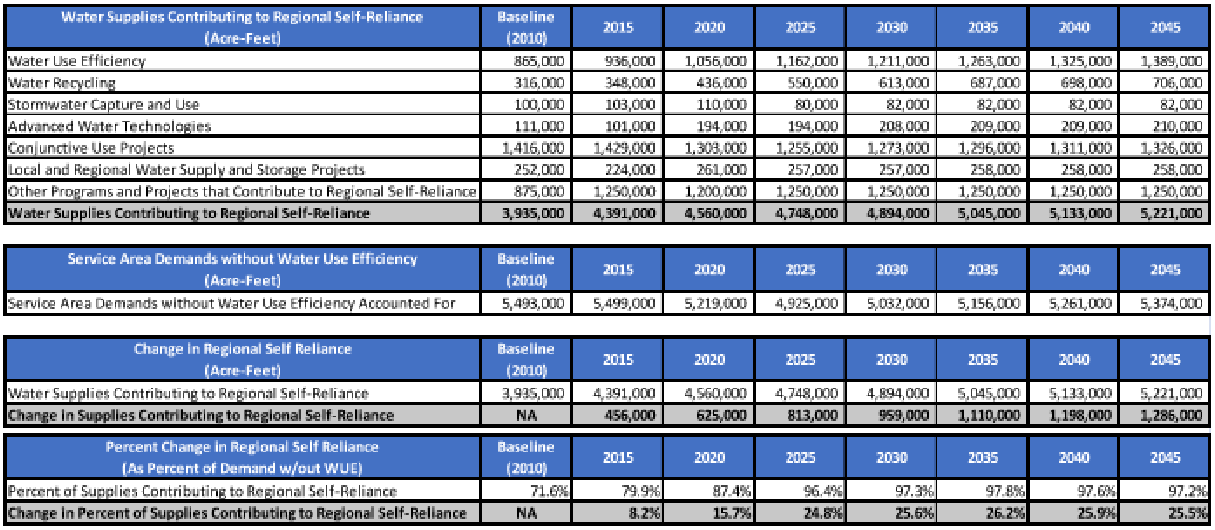
- Near-term (2025) – Normal water year regional self-reliance is expected to increase by 747 TAF from the 2010 baseline; this represents an increase of about 23 percent of 2025 normal water year retail demands (Metropolitan Table A.11-2).
- Long-term (2045) – Normal water year regional self-reliance is expected to increase by more than 1.26 MAF from the 2010 baseline, representing an increase of about 25 percent of 2045 normal water year retail demands (Metropolitan Table A.11-2).

Expected Outcomes for Reduced Reliance on Supplies from the Delta Watershed

- Near-term (2025) – Normal water year reliance on supplies from the Delta watershed decreased by 301 TAF from the 2010 baseline, representing a decrease of about 3 percent of 2025 normal water year retail demands (Metropolitan Table A.11-3).
- Long-term (2045) – Normal water year reliance on supplies from the Delta watershed decreased by 314 TAF from the 2010 baseline, representing a decrease of about 5.2 percent of 2045

Metropolitan Tables A.11-2 and A.11-3 are shown here for reference.

Table A.11-2
Supplies Contributing to Regional Self-Reliance



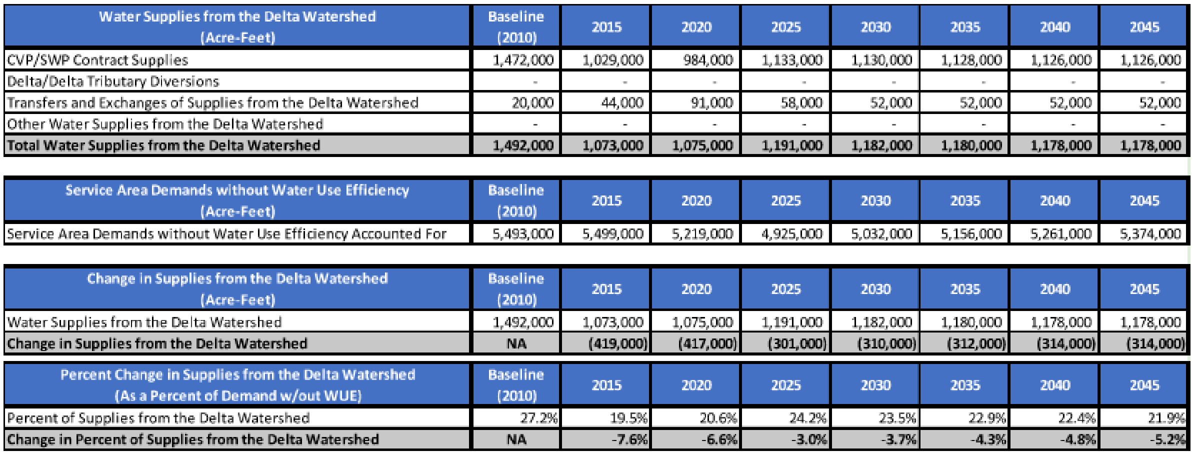
Water Supplies Contributing to Regional Self-Reliance (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045
Water Use Efficiency	865,000	936,000	1,056,000	1,162,000	1,211,000	1,263,000	1,325,000	1,389,000
Water Recycling	316,000	348,000	436,000	550,000	613,000	687,000	698,000	706,000
Stormwater Capture and Use	100,000	103,000	110,000	80,000	82,000	82,000	82,000	82,000
Advanced Water Technologies	111,000	101,000	194,000	194,000	208,000	209,000	209,000	210,000
Conjunctive Use Projects	1,416,000	1,429,000	1,303,000	1,255,000	1,273,000	1,296,000	1,311,000	1,326,000
Local and Regional Water Supply and Storage Projects	252,000	224,000	261,000	257,000	257,000	258,000	258,000	258,000
Other Programs and Projects that Contribute to Regional Self-Reliance	875,000	1,250,000	1,200,000	1,250,000	1,250,000	1,250,000	1,250,000	1,250,000
Water Supplies Contributing to Regional Self-Reliance	**3,935,000**	**4,391,000**	**4,560,000**	**4,748,000**	**4,894,000**	**5,045,000**	**5,133,000**	**5,221,000**

Service Area Demands without Water Use Efficiency (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045
Service Area Demands without Water Use Efficiency Accounted For	5,493,000	5,499,000	5,219,000	4,925,000	5,032,000	5,156,000	5,261,000	5,374,000

Change in Regional Self Reliance (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045
Water Supplies Contributing to Regional Self-Reliance	3,935,000	4,391,000	4,560,000	4,748,000	4,894,000	5,045,000	5,133,000	5,221,000
Change in Supplies Contributing to Regional Self-Reliance	**NA**	**456,000**	**625,000**	**813,000**	**959,000**	**1,110,000**	**1,198,000**	**1,286,000**

Percent Change in Regional Self Reliance (As Percent of Demand w/out WUE)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045
Percent of Supplies Contributing to Regional Self-Reliance	71.6%	79.9%	87.4%	96.4%	97.3%	97.8%	97.6%	97.2%
Change in Percent of Supplies Contributing to Regional Self-Reliance	**NA**	**8.2%**	**15.7%**	**24.8%**	**25.6%**	**26.2%**	**25.9%**	**25.5%**

Table A.11-3
Reliance on Water Supplies from the Delta Watershed



Water Supplies from the Delta Watershed (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045
CVP/SWP Contract Supplies	1,472,000	1,029,000	984,000	1,133,000	1,130,000	1,128,000	1,126,000	1,126,000
Delta/Delta Tributary Diversions	-	-	-	-	-	-	-	-
Transfers and Exchanges of Supplies from the Delta Watershed	20,000	44,000	91,000	58,000	52,000	52,000	52,000	52,000
Other Water Supplies from the Delta Watershed	-	-	-	-	-	-	-	-
Total Water Supplies from the Delta Watershed	**1,492,000**	**1,073,000**	**1,075,000**	**1,191,000**	**1,182,000**	**1,180,000**	**1,178,000**	**1,178,000**

Service Area Demands without Water Use Efficiency (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045
Service Area Demands without Water Use Efficiency Accounted For	5,493,000	5,499,000	5,219,000	4,925,000	5,032,000	5,156,000	5,261,000	5,374,000

Change in Supplies from the Delta Watershed (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045
Water Supplies from the Delta Watershed	1,492,000	1,073,000	1,075,000	1,191,000	1,182,000	1,180,000	1,178,000	1,178,000
Change in Supplies from the Delta Watershed	**NA**	**(419,000)**	**(417,000)**	**(301,000)**	**(310,000)**	**(312,000)**	**(314,000)**	**(314,000)**

Percent Change in Supplies from the Delta Watershed (As a Percent of Demand w/out WUE)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045
Percent of Supplies from the Delta Watershed	27.2%	19.5%	20.6%	24.2%	23.5%	22.9%	22.4%	21.9%
Change in Percent of Supplies from the Delta Watershed	**NA**	**-7.6%**	**-6.6%**	**-3.0%**	**-3.7%**	**-4.3%**	**-4.8%**	**-5.2%**

CITY OF BEVERLY HILLS DEMONSTRATION OF REDUCED RELIANCE ON THE DELTA

The methodology used to determine the City's reduced Delta reliance is consistent with the approach detailed in DWR's 2020 UWMP Guidebook (Guidebook) Appendix C, including the use of narrative justifications for the accounting of supplies and the documentation of specific data sources. Some of the key documentation underlying the City's demonstration of reduced reliance include:

- Data obtained from the current 2020 UWMP and previously adopted UWMPs for supply and demand under average or normal water year conditions.
- Documentation of regional self-reliance by Metropolitan in Appendix 11 Addendum to the Metropolitan Water District of Southern California's 2015 Urban Water Management Plan, Draft March 2021, reflecting the total contributions of Metropolitan and its member agencies.

Baseline and Expected Outcomes

To calculate the reduced reliance on the Delta, suppliers need to compare current and future normal water use with a baseline use. This baseline is the amount of water used historically under average or normal demand conditions. The comparison with the baseline is used to calculate how Delta use and regional self-reliance have changed over time. The Guidebook approach uses 2010 as the baseline year as the Delta Reform Act became effective in 2010. The Guidebook also recognizes that water demand varies from year to year due to hydrology and many other factors and that a single year of actual demand may not adequately characterize average water supplies.

Ideally, the baseline and expected outcomes would provide a basis that is consistent and reflects average or normal year conditions rather than actual conditions for a given year. As such, historic water use data was utilized in this analysis to select and estimate normal year conditions. This analysis uses a normal water year representation of 2010 as the baseline, consistent with the approach described in the Guidebook Appendix C. The 5-year period from 2006 through 2010 was selected, as the period prior to the Delta Reform Act, to represent normal year conditions for 2010. The average per capita water use for the 5-year period (269.2 gpcd) was multiplied by 2010 population to estimate normal use for that year. The years 2007 through 2009 experienced below average precipitation with the year 2010 reflecting reduced water demand having the lowest per capita use of the 5-year period. Though the gradual decline in use would appear to be more representative of prolonged drought conditions, looking at the historic plot of per capita use, water demands never bounced back to pre-2010 conditions and the average 5-year period used is considered the most representative data available for normal conditions at that time.

Consistent with the 2010 baseline approach, the expected outcome for reduced Delta reliance for 2015 was calculated using the average of historic per capita use multiplied by the 2015 population. The 2015 normal year demand was calculated using the 5-year average per-capita demand for 2011 through 2015. The year 2011 was the beginning of a drought period that didn't end until 2016. As with the 2010 baseline period, the conditions do not represent a normal or average period, however, a reduction in demand began to be realized in 2015 with mandatory conservation measures with a significant reduction seen in 2016. However, water demands have not bounced back to 2015 levels and the 5-year period selected is considered the best representation of normal use for that time period.

The normal year expected outcomes for 2020 through 2045 were estimated using data consistent with the 2020 UWMP. As required by the California Water Code (CWC), the 2020 actual demand is reported in the UWMP and corresponding Reporting Tables. The 2020 normal year demand was also calculated during the UWMP process as a starting point in projecting future demands. Actual 2020 demand data was utilized as a normal year demand as no drought condition or other demand constraints occurred. Actual 2020 water use is also utilized as the expected normal year outcome for 2020 in this analysis.

Expected outcomes for 2025 through 2045 are taken from the current 2020 UWMP which uses anticipated growth based on demographic data from the Center for Demographic Research (CDR) and future passive water use efficiency. For a conservative estimate of required water supplies, the 2020 UWMP assumed future water use efficiency would remain at 2020 levels. The gradual retrofitting of existing homes, the construction of new homes with water efficient fixtures, and gradually improved landscape irrigation efficiency will likely result in additional conservation. The current and projected normal year demand calculations are documented in Section 4.4 of the 2020 UWMP.

Service Area Water Demands without Water Use Efficiency

In alignment with the Guidebook Appendix C, this analysis uses normal water year demands to calculate expected outcomes for reductions in reliance on the Delta. Because WR P1 considers water use efficiency savings as a source of water supply, the water supplier must make an adjustment to properly reflect normal water year demands by adding back in efficiency savings. The City does not explicitly calculate and report water use efficiency savings in their UWMP. As such, Table C-1 from the Guidebook, Optional Calculation of Water Use Efficiency (WUE), was utilized to estimate the City's WUE since the baseline period.

The demands shown in Table C-1 represent the total normal year water demand for the City's water service area including residential, commercial, institutional, industrial, irrigation, fire, and non-revenue water. Non-potable demands are subtracted from the total demand to reflect only demands that implement water use efficiency measures. The demand data was collected as described above from historical use and Beverly Hills' 2020 UWMP:

- Baseline (2010) – Historic 2006 through 2010 data
- 2015 – Historic 2011 through 2015 data
- 2020 – Beverly Hills' 2020 UWMP; based 2020 actual use
- 2025-2045 – Beverly Hills' 2020 UWMP, Table 4-3: Total Water Demands

The water use efficiency estimate in Table C-1 is calculated using the reduction in per capita use for each of the expected outcomes when compared to the baseline per capita use. These reductions are attributed to efficiency savings and quantified into volumes based on service area population data.

The water use efficiency calculated using Table C-1 is then added back into the normal year demands to represent demands without water use efficiency savings using Guidebook Table C-2, Demands without WUE. This analysis allows the supplier to use efficiency as a source of supply contributing to reduced reliance.

SUPPLIES CONTRIBUTING TO REGIONAL SELF-RELIANCE

For a covered action to demonstrate consistency with the Delta plan, WR P1 states that water suppliers must report the expected outcomes for measurable improvement in regional self-reliance. Water supplies that are assumed to contribute to regional self-reliance are the following:

- Water use efficiency
- Water recycling
- Stormwater capture and use
- Advanced water technologies
- Conjunctive use projects
- Local and regional water supply and storage programs
- Other programs and projects that contribute to regional self-reliance

Of these supply sources, the City participats in water use efficiency and the use of groundwater as a local water supply. Water use efficiency is calculated in Table C-1 above. The expected water use efficiency is to be achieved through demand management measures (DMMs) as documented in Chapter 9 of the City's 2020 UWMP.

Regional water supply and storage programs are implemented by Metropolitan and accounted for in Metropolitan's Reduced Reliance on the Delta as documented in their 2020 UWMP and Appendix 11 Addendum to their 2015 UWMP. Metropolitan's contributions, along with its member agencies, is discussed in the section titled *Demonstration of Reduced Reliance on Water Supplies From the Delta* to follow.

Table C-1: Optional Calculation of Water Use Efficiency

Service Area Water Use Efficiency Demands (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045
Service Area Water Demands with Water Use Efficiency Accounted For	12,719	11,621	9,565	11,933	12,131	12,340	12,582	12,768
Non-Potable Water Demands								
Potable Service Area Demands with Water Use Efficiency Accounted For	12,719	11,621	9,565	11,933	12,131	12,340	12,582	12,768

Total Service Area Population	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045
Service Area Population	42,179	43,189	43,371	44,176	44,618	45,214	45,712	46,279

Water Use Efficiency Since Baseline (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045
Per Capita Water Use (GPCD)	269	240	197	241	243	244	246	246
Change in Per Capita Water Use from Baseline (GPCD)		(29)	(72)	(28)	(26)	(26)	(23)	(23)
Estimated Water Use Efficiency Since Baseline		1,403	3,514	1,388	1,324	1,294	1,203	1,188

Table C-2: Calculation of Service Area Water Demands Without Water Use Efficiency

Total Service Area Water Demands (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045
Service Area Water Demands with Water Use Efficiency Accounted For	12,719	11,621	9,565	11,933	12,131	12,340	12,582	12,768
Reported Water Use Efficiency or Estimated Water Use Efficiency Since Baseline		1,403	3,514	1,388	1,324	1,294	1,203	1,188
Service Area Water Demands without Water Use Efficiency Accounted For	12,719	13,024	13,079	13,321	13,455	13,634	13,785	13,956

Local Water Supply

The City is located within the Coastal Plain of the Los Angeles Groundwater Basin which is divided into multiple groundwater subbasins. The City overlies three of these subbasins (referred to as basins), specifically the Hollywood Groundwater Basin (GWB), the La Brea Subarea of the Central GWB, and the Crestal Subarea of the Santa Monica GWB. Most of the City overlies the Hollywood GWB, with smaller portions overlying the other two basins. The groundwater pumping rights in the three basins underlying the City have not been adjudicated by the Courts.

The City has a history of groundwater production from both the Hollywood GWB and the adjacent portion of the La Brea Subarea of the Central GWB. The City's secondary source of water supply behind imported surface water purchased from Metropolitan has been groundwater pumped from the Hollywood GWB, which is bounded on the north by Santa Monica Mountains and the Hollywood fault, on the east by the Elysian Hills, on the west by the Inglewood fault zone, and on the south by the La Brea High, formed by an anticline that brings impermeable rocks close to the surface. The City has been and continues to be the only municipal-supply producer of groundwater in the Hollywood GWB, owning and operating six active wells to supply local groundwater to its customers. A new municipal-supply well was constructed in 2020 to supply local groundwater from the La Brea Subarea. No City infrastructure currently exists in the Santa Monica GWB.

Percolation from precipitation, surface stream flows, and subsurface inflows from the Santa Monica Mountains naturally replenish the groundwater system. Direct percolation has decreased significantly due to urbanization, and natural replenishment to the water-bearing formations is limited to only a small portion of basin soils. The GWBs do not receive any artificial recharge through injection wells or spreading basins, and groundwater production is limited by low safe-yield limits.

Hollywood GWB

Six municipal-supply wells provide local groundwater supply for the City from the Hollywood GWB. Four are considered "deep" wells constructed between 1994 and 2000 that extract groundwater between the approximate depths of 400 feet below ground surface (ft bgs) and 700 ft bgs; and two are relatively "shallow" wells, constructed in 2016, that extract groundwater between the approximate depths of 70 ft bgs and 200 ft bgs.

The City pumps groundwater from the Hollywood GWB to the City's Foothill WTP via City Well Nos. 2, 4, 5 and 6. Groundwater was not extracted from the Basin from 2016 through 2020 because the Foothill WTP is currently under renovation. It is anticipated that the treatment plant improvements will be completed in the last quarter 2021 and local groundwater extraction and supply will commence and continue into the foreseeable future.

La Brea Subarea of the Central GWB

The City historically extracted groundwater from the La Brea Subarea utilizing multiple wellfields owned by the City both within the City boundaries and within the City of Los Angeles boundaries. Groundwater extractions were ceased in approximately 1975-76 when the City destroyed all remaining wells within the Subarea and sold off most of the well sites owned by the City at that time. There is one existing known actively producing well in the La Brea Subarea used for irrigation supply by a private well owner. There is limited published data available related to the perennial yield of the La Brea Subarea but it is estimated to be approximately 4,300 AFY (2020 IWRMP).

The City has one production well that was recently constructed in the La Brea Subarea and is anticipated to be equipped by early 2022. This new well (La Cienega Well No. 1, LCW-1), is the first production well constructed in the Subarea since the City's former wells were destroyed in the 1970s. Based on the hydrogeologic evaluation and pump testing for the well in 2020, it will have a maximum pumping capacity on the order of 500 to 700 gpm with a recommended long-term operational pumping capacity of 500 gpm. Groundwater pumped from the new well will be transmitted via a new transmission pipeline to the Foothill WTP, currently under construction. Construction of the transmission main is anticipated to be completed in March/April 2021.

Groundwater Treatment

All groundwater supplies to be used for water system distribution are to be treated at the Foothill WTP. The Foothill WTP consists of a single reverse osmosis (RO) train and its associated pre-treatment and post-treatment systems. The Foothill WTP is planned to be expandable at a future date to achieve an ultimate production capacity of 4.7 MGD. Treatment expansion will be necessary to utilize two additional proposed groundwater wells in the La Brea Subarea along with the existing Hollywood GWB wells. The current plant improvements are providing 2.7 MGD of raw groundwater treatment to the ultimate capacity. The 2.7 MGD raw groundwater capacity would comprise of the existing 6 Hollywood GWB wells and 1 La Brea Well currently under construction.

Regional Self-Reliance

The City's contribution to regional self-reliance is calculated using Guidebook Table C-3.

DEMONSTRATION OF REDUCED RELIANCE ON WATER SUPPLIES FROM THE DELTA

To demonstrate consistency with the Delta Plan, WR P1, suppliers are required to report measurable reduction in supplies from the Delta watershed either by volume or as a percentage of their water supply portfolio. Metropolitan provides the City, and its other member agencies, imported water supply through the State Water Project, thus relying on supplies from the Delta. Metropolitan also supplies its member agencies with water from the Colorado River Aqueduct (CRA). It is therefore infeasible to account for supplies from the Delta watershed for Metropolitan's member agencies and customers.

Metropolitan's service area, as a whole, reduces reliance on the Delta through investments in non-Delta water supplies, local water supplies, and regional and local demand management measures. Metropolitan's member agencies coordinate reliance on the Delta through their membership in Metropolitan, a regional cooperative providing wholesale water service to its 26 member agencies. Accordingly, regional reliance on the Delta can only be measured regionally—not by individual Metropolitan member agencies and not by the customers of those member agencies.

Metropolitan's member agencies, and those agencies' customers, indirectly reduce reliance on the Delta through their collective efforts as a cooperative. Metropolitan's member agencies do not control the amount of Delta water they receive from Metropolitan. Metropolitan manages a statewide integrated conveyance system consisting of its participation in the State Water Project (SWP), its Colorado River Aqueduct (CRA) including Colorado River water resources, programs and water exchanges, and its regional storage portfolio. Along with the SWP, CRA, storage programs, and Metropolitan's conveyance and distribution facilities, demand management programs increase the future reliability of water resources for the region. In addition, demand management programs provide system-wide benefits by decreasing the demand for imported water, which helps to decrease the burden on the district's infrastructure and reduce system costs, and free up conveyance capacity to the benefit of all member agencies.

Table C-3: Calculation of Supplies Contributing to Regional Self-Reliance

Water Supplies Contributing to Regional Self-Reliance (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045
Water Use Efficiency		1,403	3,514	1,388	1,324	1,294	1,203	1,188
Water Recycling								
Stormwater Capture and Use								
Advanced Water Technologies								
Conjunctive Use Projects								
Local and Regional Water Supply and Storage Projects	1,088	43	-	2,952	3,327	3,327	3,327	3,327
Other Programs and Projects the Contribute to Regional Self-Reliance								
Water Supplies Contributing to Regional Self-Reliance	1,088	1,446	3,514	4,340	4,651	4,621	4,530	4,515

Service Area Water Demands without Water Use Efficiency (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045
Service Area Water Demands without Water Use Efficiency Accounted For	12,719	13,024	13,079	13,321	13,455	13,634	13,785	13,956

Change in Regional Self Reliance (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045
Water Supplies Contributing to Regional Self-Reliance	1,088	1,446	3,514	4,340	4,651	4,621	4,530	4,515
Change in Water Supplies Contributing to Regional Self-Reliance		358	2,426	3,252	3,563	3,533	3,442	3,427

Percent Change in Regional Self Reliance (As Percent of Demand w/out WUE)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045
Percent of Water Supplies Contributing to Regional Self-Reliance	8.6%	11.1%	26.9%	32.6%	34.6%	33.9%	32.9%	32.3%
Change in Percent of Water Supplies Contributing to Regional Self-Reliance		2.5%	18.3%	24.0%	26.0%	25.3%	24.3%	23.8%

Metropolitan's costs are funded almost entirely from its service area, with the exception of grants and other assistance from government programs. Most of Metropolitan's revenues are collected directly from its member agencies. Properties within Metropolitan's service area pay a property tax that currently provides approximately 8 percent of the fiscal year 2021 annual budgeted revenues. The rest of Metropolitan's costs are funded through rates and charges paid by Metropolitan's member agencies for the wholesale services it provides to them.[1] Thus, Metropolitan's member agencies fund nearly all operations Metropolitan undertakes to reduce reliance on the Delta, including Colorado River Programs, storage facilities, Local Resources Programs and Conservation Programs within Metropolitan's service area.

Because of the integrated nature of Metropolitan's systems and operations, and the collective nature of Metropolitan's regional efforts, it is infeasible to quantify each of Metropolitan member agencies' individual reliance on the Delta. It is infeasible to attempt to segregate an entity and a system that were designed to work as an integrated regional cooperative.

In addition to the member agencies funding Metropolitan's regional efforts, they also invest in their own local programs to reduce their reliance on any imported water. Moreover, the customers of those member agencies may also invest in their own local programs to reduce water demand. However, to the extent those efforts result in reduction of demands on Metropolitan, that reduction does not equate to a like reduction of reliance on the Delta. Demands on Metropolitan are not commensurate with demands on the Delta because most of Metropolitan member agencies receive blended resources from Metropolitan as determined by Metropolitan—not the individual member agency—and for most member agencies, the blend varies from month-to-month and year-to-year due to hydrology, operational constraints, use of storage and other factors.

Colorado River Programs

As a regional cooperative of member agencies, Metropolitan invests in programs to ensure the continued reliability and sustainability of Colorado River supplies. Metropolitan was established to obtain an allotment of Colorado River water, and its first mission was to construct and operate the CRA. The CRA consists of five pumping plants, 450 miles of high voltage power lines, one electric substation, four regulating reservoirs, and 242 miles of aqueducts, siphons, canals, conduits and pipelines terminating at Lake Mathews in Riverside County. Metropolitan owns, operates, and manages the CRA. Metropolitan is responsible for operating, maintaining, rehabilitating, and repairing the CRA, and is responsible for obtaining and scheduling energy resources adequate to power pumps at the CRA's five pumping stations.

Colorado River supplies include Metropolitan's basic Colorado River apportionment, along with supplies that result from existing and committed programs, including supplies from the Imperial Irrigation District (IID)-Metropolitan Conservation Program, the implementation of the Quantification Settlement Agreement (QSA) and related agreements, and the exchange agreement with San Diego County Water Authority (SDCWA). The QSA established the baseline water use for each of the agreement parties and facilitates the transfer of water from agricultural agencies to urban uses. Since the QSA, additional programs have been implemented to increase Metropolitan's CRA supplies. These include the PVID Land Management,

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[1] A standby charge is collected from properties within the service areas of 21 of Metropolitan's 26 member agencies, ranging from $5 to $14.20 per acre annually, or per parcel if smaller than an acre. Standby charges go towards those member agencies' obligations to Metropolitan for the Readiness-to-Serve Charge. The total amount collected annually is approximately $43.8 million, approximately 2 percent of Metropolitan's fiscal year 2021 annual budgeted revenues.

Crop Rotation, and Water Supply Program, as well as the Lower Colorado River Water Supply Project. The 2007 Interim Guidelines provided for the coordinated operation of Lake Powell and Lake Mead, as well as the Intentionally Created Surplus (ICS) program that allows Metropolitan to store water in Lake Mead.

Storage Investments/Facilities

Surface and groundwater storage are critical elements of Southern California's water resources strategy and help Metropolitan reduce its reliance on the Delta. Because California experiences dramatic swings in weather and hydrology, storage is important to regulate those swings and mitigate possible supply shortages. Surface and groundwater storage provide a means of storing water during normal and wet years for later use during dry years, when imported supplies are limited. The Metropolitan system, for purposes of meeting demands during times of shortage, regulating system flows, and ensuring system reliability in the event of a system outage, provides over 1,000,000 acre-feet of system storage capacity. Diamond Valley Lake provides 810,000 acre-feet of that storage capacity, effectively doubling Southern California's previous surface water storage capacity. Other existing imported water storage available to the region consists of Metropolitan's raw water reservoirs, a share of the SWP's raw water reservoirs in and near the service area, and the portion of the groundwater basins used for conjunctive-use storage.

Since the early twentieth century, DWR and Metropolitan have constructed surface water reservoirs to meet emergency, drought/seasonal, and regulatory water needs for Southern California. These reservoirs include Pyramid Lake, Castaic Lake, Elderberry Forebay, Silverwood Lake, Lake Perris, Lake Skinner, Lake Mathews, Live Oak Reservoir, Garvey Reservoir, Palos Verdes Reservoir, Orange County Reservoir, and Metropolitan's Diamond Valley Lake (DVL). Some reservoirs such as Live Oak Reservoir, Garvey Reservoir, Palos Verdes Reservoir, and Orange County Reservoir, which have a total combined capacity of about 3,500 AF, are used solely for regulating purposes. The total gross storage capacity for the larger remaining reservoirs is 1,757,600 AF. However, not all of the gross storage capacity is available to Metropolitan; dead storage and storage allocated to others reduce the amount of storage that is available to Metropolitan to 1,665,200 AF.

Conjunctive use of the aquifers offers another important source of dry year supplies. Unused storage in Southern California groundwater basins can be used to optimize imported water supplies, and the development of groundwater storage projects allows effective management and regulation of the region's major imported supplies from the Colorado River and SWP. Over the years, Metropolitan has implemented conjunctive use through various programs in the service area; the following table lists the groundwater conjunctive use programs that have been developed in the region.

Program	Metropolitan Agreement Partners	Program Term	Max Storage AF	Dry-Year Yield AF/Yr
Long Beach Conjunctive Use Storage Project (Central Basin)	Long Beach	June 2002-2027	13,000	4,300
Foothill Area Groundwater Storage Program (Monkhill/ Raymond Basin)	Foothill MWD	February 2003-2028	9,000	3,000
Orange County Groundwater Conjunctive Use Program	MWDOC OCWD	June 2003-2028	66,000+	22,000
Chino Basin Conjunctive Use Programs	IEUA TVMWD Watermaster	June 2003-2028	100,000	33,000
Live Oak Basin Conjunctive Use Project (Six Basins)	TVMWD City of La Verne	October 2002-2027	3,000	1,000
City of Compton Conjunctive Use Project (Central Basin)	Compton	February 2005-2030	2,289	763
Long Beach Conjunctive Use Program Expansion in Lakewood (Central Basin)	Long Beach	July 2005-2030	3,600	1,200
Upper Claremont Basin Groundwater Storage Program (Six Basins)	TVMWD	Sept. 2005- 2030	3,000	1,000
Elsinore Basin Conjunctive Use Storage Program	Western MWD Elsinore Valley MWD	May 2008- 2033	12,000	4,000
TOTAL			**211,889**	**70,263**

Metropolitan Demand Management Programs

Demand management costs are Metropolitan's expenditures for funding local water resource development programs and water conservation programs. These Demand Management Programs incentivize the development of local water supplies and the conservation of water to reduce the need to import water to deliver to Metropolitan's member agencies. These programs are implemented below the delivery points between Metropolitan's and its member agencies' distribution systems and, as such, do not add any water to Metropolitan's supplies. Rather, the effect of these downstream programs is to produce a local supply of water for the local agencies and to reduce demands by member agencies for water imported through Metropolitan's system. The following discussions outline how Metropolitan funds local resources and conservation programs for the benefit of all of its member agencies and the entire Metropolitan service area. Notably, the history of demand management by Metropolitan's member agencies and the local agencies that purchase water from Metropolitan's members has spanned more than four decades. The significant history of the programs is another reason it would be difficult to attempt to assign a portion of such funding to any one individual member agency.

Local Resources Programs

In 1982, Metropolitan began providing financial incentives to its member agencies to develop new local supplies to assist in meeting the region's water needs. Because of Metropolitan's regional distribution system, these programs benefit all member agencies regardless of project location because they help to increase regional water supply reliability, reduce demands for imported water supplies, decrease the burden on Metropolitan's infrastructure, reduce system costs and free up conveyance capacity to the benefit of all the agencies that rely on water from Metropolitan.

For example, the Groundwater Replenishment System (GWRS) operated by the Orange County Water District is the world's largest water purification system for indirect potable reuse. It was funded, in part, by Metropolitan's member agencies through the Local Resources Program. Annually, the GWRS produces approximately 103,000 acre-feet of reliable, locally controlled, drought-proof supply of high-quality water to recharge the Orange County Groundwater Basin and protect it from seawater intrusion. The GWRS is a premier example of a regional project that significantly reduced the need to utilize imported water for groundwater replenishment in Metropolitan's service area, increasing regional and local supply reliability and reducing the region's reliance on imported supplies, including supplies from the State Water Project.

Metropolitan's local resource programs have evolved through the years to better assist Metropolitan's member agencies in increasing local supply production. The following is a description and history of the local supply incentive programs.

Local Projects Program

In 1982, Metropolitan initiated the Local Projects Program (LPP), which provided funding to member agencies to facilitate the development of recycled water projects. Under this approach, Metropolitan contributed a negotiated up-front funding amount to help finance project capital costs. Participating member agencies were obligated to reimburse Metropolitan over time. In 1986, the LPP was revised, changing the up-front funding approach to an incentive-based approach. Metropolitan contributed an amount equal to the avoided State Water Project pumping costs for each acre-foot of recycled water delivered to end-use consumers. This funding incentive was based on the premise that local projects resulted in the reduction of water imported from the Delta and the associated pumping cost. The incentive amount varied from year to year depending on the actual variable power cost paid for State Water Project imports. In 1990, Metropolitan's Board increased the LPP contribution to a fixed rate of $154 per acre-foot, which was calculated based on Metropolitan's avoided capital and operational costs to convey, treat, and distribute water, and included considerations of reliability and service area demands.

Groundwater Recovery Program

The drought of the early 1990s sparked the need to develop additional local water resources, aside from recycled water, to meet regional demand and increase regional water supply reliability. In 1991, Metropolitan conducted the Brackish Groundwater Reclamation Study which determined that large amounts of degraded groundwater in the region were not being utilized. Subsequently, the Groundwater Recovery Program (GRP) was established to assist the recovery of otherwise unusable groundwater degraded by minerals and other contaminants, provide access to the storage assets of the degraded groundwater, and maintain the quality of groundwater resources by reducing the spread of degraded plumes.

Local Resources Program

In 1995, Metropolitan's Board adopted the Local Resources Program (LRP), which combined the LPP and GRP into one program. The Board allowed for existing LPP agreements with a fixed incentive rate to convert to the sliding scale up to $250 per acre-foot, similar to GRP incentive terms. Those agreements that were converted to LRP are known as "LRP Conversions."

Competitive Local Projects Program

In 1998, the Competitive Local Resources Program (Competitive Program) was established. The Competitive Program encouraged the development of recycled water and recovered groundwater through a process that emphasized cost-efficiency to Metropolitan, timing new production according to regional need while minimizing program administration cost. Under the Competitive Program, agencies requested an incentive rate up to $250 per acre-foot of production over 25 years under a Request for Proposals (RFP) for the development of up to 53,000 acre-feet per year of new water recycling and groundwater recovery projects. In 2003, a second RFP was issued for the development of an additional 65,000 acre-feet of new recycled water and recovered groundwater projects through the LRP.

Seawater Desalination Program

Metropolitan established the Seawater Desalination Program (SDP) in 2001 to provide financial incentives to member agencies for the development of seawater desalination projects. In 2014, seawater desalination projects became eligible for funding under the LRP, and the SDP was ended.

2007 Local Resources Program

In 2006, a task force comprised of member agency representatives was formed to identify and recommend program improvements to the LRP. As a result of the task force process, the 2007 LRP was established with a goal of 174,000 acre-feet per year of additional local water resource development. The new program allowed for an open application process and eliminated the previous competitive process. This program offered sliding scale incentives of up to $250 per acre-foot, calculated annually based on a member agency's actual local resource project costs exceeding Metropolitan's prevailing water rate.

2014 Local Resources Program

A series of workgroup meetings with member agencies was held to identify the reasons why there was a lack of new LRP applications coming into the program. The main constraint identified by the member agencies was that the $250 per acre-foot was not providing enough of an incentive for developing new projects due to higher construction costs to meet water quality requirements and to develop the infrastructure to reach end-use consumers located further from treatment plants. As a result, in 2014, the Board authorized an increase in the maximum incentive amount, provided alternative payment structures, included onsite retrofit costs and reimbursable services as part of the LRP, and added eligibility for seawater desalination projects. The current LRP incentive payment options are structured as follows:

- Option 1 – Sliding scale incentive up to $340/AF for a 25-year agreement term
- Option 2 – Sliding scale incentive up to $475/AF for a 15-year agreement term
- Option 3 – Fixed incentive up to $305/AF for a 25-year agreement term

On-site Retrofit Programs

In 2014, Metropolitan's Board also approved the On-site Retrofit Pilot Program which provided financial incentives to public or private entities toward the cost of small-scale improvements to their existing irrigation and industrial systems to allow connection to existing recycled water pipelines. The On-site Retrofit Pilot Program helped reduce recycled water retrofit costs to the end-use consumer which is a key constraint that limited recycled water LRP projects from reaching full production capacity. The program incentive was equal to the actual eligible costs of the on-site retrofit, or $975 per acre-foot of up-front cost, which equates to $195 per acre-foot for an estimated five years of water savings ($195/AF x 5 years) multiplied by the average annual water use in previous three years, whichever is less. The Pilot Program lasted two years and was successful in meeting its goal of accelerating the use of recycled water.

In 2016, Metropolitan's Board authorized the On-site Retrofit Program (ORP), with an additional budget of $10 million. This program encompassed lessons learned from the Pilot Program and feedback from member agencies to make the program more streamlined and improve its efficiency. As of fiscal year 2019/20, the ORP has successfully converted 440 sites, increasing the use of recycled water by 12,691 acre-feet per year.

Stormwater Pilot Programs

In 2019, Metropolitan's Board authorized both the Stormwater for Direct Use Pilot Program and a Stormwater for Recharge Pilot Program to study the feasibility of reusing stormwater to help meet regional demands in Southern California. These pilot programs are intended to encourage the development, monitoring, and study of new and existing stormwater projects by providing financial incentives for their construction/retrofit and monitoring/reporting costs. These pilot programs will help evaluate the potential benefits delivered by stormwater capture projects and provide a basis for potential future funding approaches. Metropolitan's Board authorized a total of $12.5 million for the stormwater pilot programs ($5 million for the District Use Pilot and $7.5 million for the Recharge Pilot).

Current Status and Results of Metropolitan's Local Resource Programs

Today, nearly one-half of the total recycled water and groundwater recovery production in the region has been developed with an incentive from one or more of Metropolitan's local resource programs. During fiscal year 2020, Metropolitan provided about $13 million for production of 71,000 acre-feet of recycled water for non-potable and indirect potable uses. Metropolitan provided about $4 million to support projects that produced about 50,000 acre-feet of recovered groundwater for municipal use. Since 1982, Metropolitan has invested $680 million to fund 85 recycled water projects and 27 groundwater recovery projects that have produced a cumulative total of about 4 million acre-feet.

Conservation Programs

Metropolitan's regional conservation programs and approaches have a long history. Decades ago, Metropolitan recognized that demand management at the consumer level would be an important part of balancing regional supplies and demands. Water conservation efforts were seen as a way to reduce the need for imported supplies and offset the need to transport or store additional water into or within the Metropolitan service area. The actual conservation of water takes place at the retail consumer level. Regional conservation approaches have proven to be effective at reaching retail consumers throughout Metropolitan's service area and successfully implementing water saving devices, programs and practices. Through the pooling of funding by Metropolitan's member agencies, Metropolitan is able to engage in regional campaigns with wide-reaching impact. Regional investments in demand management programs, of which conservation is a key part along with local supply programs, benefit all member agencies regardless of project location. These programs help to increase regional water supply reliability, reduce demands for imported water supplies, decrease the burden on Metropolitan's infrastructure, reduce system costs, and free up conveyance capacity to the benefit of all member agencies.

Incentive-Based Conservation Programs

Conservation Credits Program

In 1988, Metropolitan's Board approved the Water Conservation Credits Program (Credits Program). The Credits Program is similar in concept to the Local Projects Program (LPP). The purpose of the Credits Program is to encourage local water agencies to implement effective water conservation projects through the use of financial incentives. The Credits Program provides financial assistance for water conservation projects that reduce demands on Metropolitan's imported water supplies and require Metropolitan's assistance to be financially feasible.

Initially, the Credits Program provided 50 percent of a member agency's program cost, up to a maximum of $75 per acre-foot of estimated water savings. The $75 Base Conservation Rate was established based Metropolitan's avoided cost of pumping SWP supplies. The Base Conservation Rate has been revisited by Metropolitan's Board and revised twice since 1988, from $75 to $154 per acre-foot in 1990 and from $154 to $195 per acre-foot in 2005.

In fiscal year 2020 Metropolitan processed more than 30,400 rebate applications totaling $18.9 million.

Member Agency Administered Program

Some member agencies also have unique programs within their service areas that provide local rebates that may differ from Metropolitan's regional program. Metropolitan continues to support these local efforts through a member agency administered funding program that adheres to the same funding guidelines as the Credits Program. The Member Agency Administered Program allows member agencies to receive funding for local conservation efforts that supplement, but do not duplicate, the rebates offered through Metropolitan's regional rebate program.

Water Savings Incentive Program

There are numerous commercial entities and industries within Metropolitan's service area that pursue unique savings opportunities that do not fall within the general rebate programs that Metropolitan provides. In 2012, Metropolitan designed the Water Savings Incentive Program (WSIP) to target these unique commercial and industrial projects. In addition to rebates for devices, under this program, Metropolitan provides financial incentives to businesses and industries that created their own custom water efficiency projects. Qualifying custom projects can receive funding for permanent water efficiency changes that result in reduced potable demand.

Non-Incentive Conservation Programs

In addition to its incentive-based conservation programs, Metropolitan also undertakes additional efforts throughout its service area that help achieve water savings without the use of rebates. Metropolitan's non-incentive conservation efforts include:

- residential and professional water efficient landscape training classes
- water audits for large landscapes
- research, development and studies of new water saving technologies
- advertising and outreach campaigns
- community outreach and education programs
- advocacy for legislation, codes, and standards that lead to increased water savings

Current Status and Results of Metropolitan's Conservation Programs

Since 1990, Metropolitan has invested $824 million in conservation rebates that have resulted in a cumulative savings of 3.27 million acre-feet of water. These investments include $450 million in turf removal and other rebates during the last drought which resulted in 175 million square feet of lawn turf removed. During fiscal year 2020, 1.06 million acre-feet of water is estimated to have been conserved. This annual total includes Metropolitan's Conservation Credits Program; code-based conservation achieved through Metropolitan-sponsored legislation; building plumbing codes and ordinances; reduced consumption resulting from changes in water pricing; and pre-1990 device retrofits.

Infeasibility of Accounting Regional Investments in Reduced Reliance Below the Regional Level

The accounting of regional investments that contribute to reduced reliance on supplies from the Delta watershed is straightforward to calculate and report at the regional aggregate level. However, any similar accounting is infeasible for the individual member agencies or their customers. As described above, the region (through Metropolitan) makes significant investments in projects, programs and other resources that reduce reliance on the Delta. In fact, all of Metropolitan's investments in Colorado River supplies, groundwater and surface storage, local resources development and demand management measures that reduce reliance on the Delta are collectively funded by revenues generated from the member agencies through rates and charges.

Metropolitan's revenues cannot be matched to the demands or supply production history of an individual agency, or consistently across the agencies within the service area. Each project or program funded by the region has a different online date, useful life, incentive rate and structure, and production schedule. It is infeasible to account for all these things over the life of each project or program and provide a nexus to each member agency’s contributions to Metropolitan’s revenue stream over time. Accounting at the regional level allows for the incorporation of the local supplies and water use efficiency programs done by member agencies and their customers through both the regional programs and through their own specific local programs. As shown above, despite the infeasibility of accounting reduced Delta reliance below the regional level, Metropolitan’s member agencies and their customers have together made substantial contributions to the region’s reduced reliance.

References

http://www.mwdh2o.com/WhoWeAre/Board/Board-Meeting/Board%20Archives/2017/12-Dec/Reports/064863458.pdf

http://www.mwdh2o.com/PDF_About_Your_Water/Annual_Achievement_Report.pdf

http://www.mwdh2o.com/WhoWeAre/Board/Board-Meeting/Board%20Archives/2016/12-Dec/Reports/064845868.pdf

http://www.mwdh2o.com/WhoWeAre/Board/Board-Meeting/Board%20Archives/2012/05%20-%20May/Letters/064774100.pdf

http://www.mwdh2o.com/WhoWeAre/Board/Board-Meeting/Board%20Archives/2020/10%20-%20Oct/Letters/10132020%20BOD%209-3%20B-L.pdf

http://www.mwdh2o.com/WhoWeAre/Board/Board-Meeting/Board%20Archives/2001/10-October/Letters/003909849.pdf

APPENDIX I

Energy Intensity Submittal Table

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Urban Water Supplier: *City of Beverly Hills*

Water Delivery Product

Retail Potable Deliveries

Table O 1B: Recommended Energy Reporting Total Utility Approach

Enter Start Date for Reporting Period	1/1/2020	**Urban Water Supplier Operational Control**		
End Date	12/31/2020			
☐ Is upstream embedded in the values reported?		**Sum of All Water Management Processes**	**Non-Consequential Hydropower**	
Water Volume Units Used	*AF*	Total Utility	Hydropower	Net Utility
Volume of Water Entering Process (volume unit)		*9565*		*9565*
Energy Consumed (kWh)		*1225525*		*1225525*
Energy Intensity (kWh/vol. converted to MG)		*393.2*		*393.2*

Quantity of Self-Generated Renewable Energy

kWh

Data Quality *(Estimate, Metered Data, Combination of Estimates and Metered Data)*

Metered Data

Data Quality Narrative:

Energy consumed is metered use for the City's booster pump stations from Southern California Edison billing data. Volume entering the distribution system is metered use from Metropolitan billing data.

Narrative:

With the City's wells and treatment plant non-operational in 2020, the only water management process to delivery water and consume energy was booster pump stations. The energy use excludes any use for well testing.

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CITY OF BEVERLY HILLS
2020 WATER SYSTEM
ENERGY USAGE

Cust Name	Meter Num	Reservoir/Pump Station	Service Street Addr	Billing Month Year	Meter Read Date	Stmt Rate	Kwh Usage
BEVERLY HILLS, CITY OF	345M-006271	Reservoir 5	495 TROUSDALE PL 5	Jan 2020	1/27/2020	TOU-PA2E	11,477
BEVERLY HILLS, CITY OF	345M-006271	Reservoir 5	495 TROUSDALE PL 5	Feb 2020	2/25/2020	TOU-PA2E	12,872
BEVERLY HILLS, CITY OF	345M-006271	Reservoir 5	495 TROUSDALE PL 5	Mar 2020	3/26/2020	TOU-PA2E	11,858
BEVERLY HILLS, CITY OF	345M-006271	Reservoir 5	495 TROUSDALE PL 5	Apr 2020	4/23/2020	TOU-PA2E	9,883
BEVERLY HILLS, CITY OF	345M-006271	Reservoir 5	495 TROUSDALE PL 5	May 2020	5/26/2020	TOU-PA2E	18,348
BEVERLY HILLS, CITY OF	345M-006271	Reservoir 5	495 TROUSDALE PL 5	Jun 2020	6/24/2020	TOU-PA2E	15,891
BEVERLY HILLS, CITY OF	345M-006271	Reservoir 5	495 TROUSDALE PL 5	Jul 2020	7/27/2020	TOU-PA2E	20,663
BEVERLY HILLS, CITY OF	345M-006271	Reservoir 5	495 TROUSDALE PL 5	Aug 2020	8/25/2020	TOU-PA2E	15,096
BEVERLY HILLS, CITY OF	345M-006271	Reservoir 5	495 TROUSDALE PL 5	Sep 2020	9/25/2020	TOU-PA2E	19,495
BEVERLY HILLS, CITY OF	345M-006271	Reservoir 5	495 TROUSDALE PL 5	Oct 2020	10/27/2020	TOU-PA2E	20,141
BEVERLY HILLS, CITY OF	345M-006271	Reservoir 5	495 TROUSDALE PL 5	Nov 2020	11/25/2020	TOU-PA2E	16,125
BEVERLY HILLS, CITY OF	345M-006271	Reservoir 5	495 TROUSDALE PL 5	Dec 2020	12/24/2020	TOU-PA2E	15,606
BEVERLY HILLS, CITY OF	259000-079688	Reservoir 4B	1180 LOMA VISTA DR	Jan 2020	1/27/2020	TOU-PA2E	17,616
BEVERLY HILLS, CITY OF	259000-079688	Reservoir 4B	1180 LOMA VISTA DR	Feb 2020	2/26/2020	TOU-PA2E	23,159
BEVERLY HILLS, CITY OF	259000-079688	Reservoir 4B	1180 LOMA VISTA DR	Mar 2020	3/26/2020	TOU-PA2E	16,524
BEVERLY HILLS, CITY OF	259000-079688	Reservoir 4B	1180 LOMA VISTA DR	Apr 2020	4/24/2020	TOU-PA2E	16,264
BEVERLY HILLS, CITY OF	259000-079688	Reservoir 4B	1180 LOMA VISTA DR	May 2020	5/27/2020	TOU-PA2E	28,998
BEVERLY HILLS, CITY OF	259000-079688	Reservoir 4B	1180 LOMA VISTA DR	Jun 2020	6/25/2020	TOU-PA2E	27,174
BEVERLY HILLS, CITY OF	259000-079688	Reservoir 4B	1180 LOMA VISTA DR	Jul 2020	7/28/2020	TOU-PA2E	30,086
BEVERLY HILLS, CITY OF	259000-079688	Reservoir 4B	1180 LOMA VISTA DR	Aug 2020	8/26/2020	TOU-PA2E	2,257
BEVERLY HILLS, CITY OF	259000-079688	Reservoir 4B	1180 LOMA VISTA DR	Sep 2020	9/25/2020	TOU-PA2E	31,814
BEVERLY HILLS, CITY OF	259000-079688	Reservoir 4B	1180 LOMA VISTA DR	Oct 2020	10/27/2020	TOU-PA2E	32,417
BEVERLY HILLS, CITY OF	259000-079688	Reservoir 4B	1180 LOMA VISTA DR	Nov 2020	11/25/2020	TOU-PA2E	25,508
BEVERLY HILLS, CITY OF	259000-079688	Reservoir 4B	1180 LOMA VISTA DR	Dec 2020	12/28/2020	TOU-PA2E	28,200
BEVERLY HILLS, CITY OF	345M-006092	Reservoir 6	1820 LOMA VISTA DR	Jan 2020	1/27/2020	TOU-PA2E	7,229
BEVERLY HILLS, CITY OF	345M-006092	Reservoir 6	1820 LOMA VISTA DR	Feb 2020	2/25/2020	TOU-PA2E	7,466
BEVERLY HILLS, CITY OF	345M-006092	Reservoir 6	1820 LOMA VISTA DR	Mar 2020	3/26/2020	TOU-PA2E	7,159
BEVERLY HILLS, CITY OF	345M-006092	Reservoir 6	1820 LOMA VISTA DR	Apr 2020	4/23/2020	TOU-PA2E	6,099
BEVERLY HILLS, CITY OF	345M-006092	Reservoir 6	1820 LOMA VISTA DR	May 2020	5/26/2020	TOU-PA2E	11,429
BEVERLY HILLS, CITY OF	345M-006092	Reservoir 6	1820 LOMA VISTA DR	Jun 2020	6/24/2020	TOU-PA2E	10,127
BEVERLY HILLS, CITY OF	345M-006092	Reservoir 6	1820 LOMA VISTA DR	Jul 2020	7/27/2020	TOU-PA2E	13,462
BEVERLY HILLS, CITY OF	345M-006092	Reservoir 6	1820 LOMA VISTA DR	Aug 2020	8/25/2020	TOU-PA2E	10,356
BEVERLY HILLS, CITY OF	345M-006092	Reservoir 6	1820 LOMA VISTA DR	Sep 2020	9/25/2020	TOU-PA2E	12,152
BEVERLY HILLS, CITY OF	345M-006092	Reservoir 6	1820 LOMA VISTA DR	Oct 2020	10/27/2020	TOU-PA2E	12,814
BEVERLY HILLS, CITY OF	345M-006092	Reservoir 6	1820 LOMA VISTA DR	Nov 2020	11/25/2020	TOU-PA2E	10,205
BEVERLY HILLS, CITY OF	345M-006092	Reservoir 6	1820 LOMA VISTA DR	Dec 2020	12/24/2020	TOU-PA2E	9,284
BEVERLY HILLS, CITY OF	345M-006844	Reservoir 3A	1148 LOMA LINDA DR	Jan 2020	1/27/2020	TOU-PA2E	7,938
BEVERLY HILLS, CITY OF	345M-006844	Reservoir 3A	1148 LOMA LINDA DR	Feb 2020	2/25/2020	TOU-PA2E	9,949
BEVERLY HILLS, CITY OF	345M-006844	Reservoir 3A	1148 LOMA LINDA DR	Mar 2020	3/26/2020	TOU-PA2E	7,922
BEVERLY HILLS, CITY OF	345M-006844	Reservoir 3A	1148 LOMA LINDA DR	Apr 2020	4/23/2020	TOU-PA2E	6,630
BEVERLY HILLS, CITY OF	345M-006844	Reservoir 3A	1148 LOMA LINDA DR	May 2020	5/26/2020	TOU-PA2E	10,036
BEVERLY HILLS, CITY OF	345M-006844	Reservoir 3A	1148 LOMA LINDA DR	Jun 2020	6/24/2020	TOU-PA2E	8,116
BEVERLY HILLS, CITY OF	345M-006844	Reservoir 3A	1148 LOMA LINDA DR	Jul 2020	7/27/2020	TOU-PA2E	10,606
BEVERLY HILLS, CITY OF	345M-006844	Reservoir 3A	1148 LOMA LINDA DR	Aug 2020	8/25/2020	TOU-PA2E	9,670
BEVERLY HILLS, CITY OF	345M-006844	Reservoir 3A	1148 LOMA LINDA DR	Sep 2020	9/25/2020	TOU-PA2E	9,895
BEVERLY HILLS, CITY OF	345M-006844	Reservoir 3A	1148 LOMA LINDA DR	Oct 2020	10/27/2020	TOU-PA2E	10,176
BEVERLY HILLS, CITY OF	345M-006844	Reservoir 3A	1148 LOMA LINDA DR	Nov 2020	11/25/2020	TOU-PA2E	8,547
BEVERLY HILLS, CITY OF	345M-006844	Reservoir 3A	1148 LOMA LINDA DR	Dec 2020	12/24/2020	TOU-PA2E	8,961
BEVERLY HILLS, CITY OF	V345N-001873	Woodland Reservoir	1045 WOODLAND DR	Jan 2020	1/2/2020	TOU-PA2E	11,667
BEVERLY HILLS, CITY OF	V345N-001873	Woodland Reservoir	1045 WOODLAND DR	Feb 2020	1/31/2020	TOU-PA2E	6,019
BEVERLY HILLS, CITY OF	V345N-001873	Woodland Reservoir	1045 WOODLAND DR	Mar 2020	3/3/2020	TOU-PA2E	0
BEVERLY HILLS, CITY OF	V345N-001873	Woodland Reservoir	1045 WOODLAND DR	Apr 2020	4/1/2020	TOU-PA2E	0
BEVERLY HILLS, CITY OF	V345N-001873	Woodland Reservoir	1045 WOODLAND DR	May 2020	5/1/2020	TOU-PA2E	0
BEVERLY HILLS, CITY OF	V345N-001873	Woodland Reservoir	1045 WOODLAND DR	Jun 2020	6/2/2020	TOU-PA2E	0
BEVERLY HILLS, CITY OF	V345N-001873	Woodland Reservoir	1045 WOODLAND DR	Jul 2020	7/2/2020	TOU-PA2E	0
BEVERLY HILLS, CITY OF	V345N-001873	Woodland Reservoir	1045 WOODLAND DR	Aug 2020	8/3/2020	TOU-PA2E	0
BEVERLY HILLS, CITY OF	V345N-001873	Woodland Reservoir	1045 WOODLAND DR	Sep 2020	9/1/2020	TOU-PA2E	0
BEVERLY HILLS, CITY OF	V345N-001873	Woodland Reservoir	1045 WOODLAND DR	Oct 2020	10/2/2020	TOU-PA2E	0
BEVERLY HILLS, CITY OF	V345N-001873	Woodland Reservoir	1045 WOODLAND DR	Nov 2020	11/2/2020	TOU-PA2E	0
BEVERLY HILLS, CITY OF	V345N-001873	Woodland Reservoir	1045 WOODLAND DR	Dec 2020	12/3/2020	TOU-PA2E	145
BEVERLY HILLS, CITY OF	254000-027819	Greystone Reservoir	501 DOHENY RD	Jan 2020	1/2/2020	TOU-PA2D	300
BEVERLY HILLS, CITY OF	254000-027819	Greystone Reservoir	501 DOHENY RD	Feb 2020	1/31/2020	TOU-PA2D	294

CITY OF BEVERLY HILLS
2020 WATER SYSTEM
ENERGY USAGE

Cust Name	Meter Num	Reservoir/Pump Station	Service Street Addr	Billing Month Year	Meter Read Date	Stmt Rate	Kwh Usage
BEVERLY HILLS, CITY OF	254000-027819	Greystone Reservoir	501 DOHENY RD	Mar 2020	3/3/2020	TOU-PA2D	325
BEVERLY HILLS, CITY OF	254000-027819	Greystone Reservoir	501 DOHENY RD	Apr 2020	4/1/2020	TOU-PA2D	280
BEVERLY HILLS, CITY OF	254000-027819	Greystone Reservoir	501 DOHENY RD	May 2020	5/1/2020	TOU-PA2D	284
BEVERLY HILLS, CITY OF	254000-027819	Greystone Reservoir	501 DOHENY RD	Jun 2020	6/2/2020	TOU-PA2D	297
BEVERLY HILLS, CITY OF	254000-027819	Greystone Reservoir	501 DOHENY RD	Jul 2020	7/2/2020	TOU-PA2D	270
BEVERLY HILLS, CITY OF	254000-027819	Greystone Reservoir	501 DOHENY RD	Aug 2020	8/3/2020	TOU-PA2D	286
BEVERLY HILLS, CITY OF	254000-027819	Greystone Reservoir	501 DOHENY RD	Sep 2020	9/1/2020	TOU-PA2D	259
BEVERLY HILLS, CITY OF	254000-027819	Greystone Reservoir	501 DOHENY RD	Oct 2020	10/2/2020	TOU-PA2D	272
BEVERLY HILLS, CITY OF	254000-027819	Greystone Reservoir	501 DOHENY RD	Nov 2020	11/2/2020	TOU-PA2D	237
BEVERLY HILLS, CITY OF	254000-027819	Greystone Reservoir	501 DOHENY RD	Dec 2020	12/3/2020	TOU-PA2D	207
BEVERLY HILLS, CITY OF	259000-051486	Greystone Reservoir	905 LOMA VISTA DR	Jan 2020	1/2/2020	TOU-PA2D	17,838
BEVERLY HILLS, CITY OF	259000-051486	Greystone Reservoir	905 LOMA VISTA DR	Feb 2020	1/31/2020	TOU-PA2D	28,186
BEVERLY HILLS, CITY OF	259000-051486	Greystone Reservoir	905 LOMA VISTA DR	Mar 2020	3/3/2020	TOU-PA2D	34,794
BEVERLY HILLS, CITY OF	259000-051486	Greystone Reservoir	905 LOMA VISTA DR	Apr 2020	4/1/2020	TOU-PA2D	22,570
BEVERLY HILLS, CITY OF	259000-051486	Greystone Reservoir	905 LOMA VISTA DR	May 2020	5/1/2020	TOU-PA2D	27,199
BEVERLY HILLS, CITY OF	259000-051486	Greystone Reservoir	905 LOMA VISTA DR	Jun 2020	6/2/2020	TOU-PA2D	43,582
BEVERLY HILLS, CITY OF	259000-051486	Greystone Reservoir	905 LOMA VISTA DR	Jul 2020	7/2/2020	TOU-PA2D	42,802
BEVERLY HILLS, CITY OF	259000-051486	Greystone Reservoir	905 LOMA VISTA DR	Aug 2020	8/3/2020	TOU-PA2D	45,255
BEVERLY HILLS, CITY OF	259000-051486	Greystone Reservoir	905 LOMA VISTA DR	Sep 2020	9/1/2020	TOU-PA2D	44,612
BEVERLY HILLS, CITY OF	259000-051486	Greystone Reservoir	905 LOMA VISTA DR	Oct 2020	10/2/2020	TOU-PA2D	45,713
BEVERLY HILLS, CITY OF	259000-051486	Greystone Reservoir	905 LOMA VISTA DR	Nov 2020	11/2/2020	TOU-PA2D	44,836
BEVERLY HILLS, CITY OF	259000-051486	Greystone Reservoir	905 LOMA VISTA DR	Dec 2020	12/3/2020	TOU-PA2D	39,933
BEVERLY HILLS, CITY OF	259000-047605	Green Acres Pump Stat	1131 BENEDICT CANYON DR	Jan 2020	1/2/2020	TOU-PA2D	53
BEVERLY HILLS, CITY OF	259000-047605	Green Acres Pump Stat	1131 BENEDICT CANYON DR	Feb 2020	1/31/2020	TOU-PA2D	52
BEVERLY HILLS, CITY OF	259000-047605	Green Acres Pump Stat	1131 BENEDICT CANYON DR	Mar 2020	3/3/2020	TOU-PA2D	56
BEVERLY HILLS, CITY OF	259000-047605	Green Acres Pump Stat	1131 BENEDICT CANYON DR	Apr 2020	4/1/2020	TOU-PA2D	51
BEVERLY HILLS, CITY OF	259000-047605	Green Acres Pump Stat	1131 BENEDICT CANYON DR	May 2020	5/1/2020	TOU-PA2D	52
BEVERLY HILLS, CITY OF	259000-047605	Green Acres Pump Stat	1131 BENEDICT CANYON DR	Jun 2020	6/2/2020	TOU-PA2D	57
BEVERLY HILLS, CITY OF	259000-047605	Green Acres Pump Stat	1131 BENEDICT CANYON DR	Jul 2020	7/2/2020	TOU-PA2D	52
BEVERLY HILLS, CITY OF	259000-047605	Green Acres Pump Stat	1131 BENEDICT CANYON DR	Aug 2020	8/3/2020	TOU-PA2D	56
BEVERLY HILLS, CITY OF	259000-047605	Green Acres Pump Stat	1131 BENEDICT CANYON DR	Sep 2020	9/1/2020	TOU-PA2D	51
BEVERLY HILLS, CITY OF	259000-047605	Green Acres Pump Stat	1131 BENEDICT CANYON DR	Oct 2020	10/2/2020	TOU-PA2D	55
BEVERLY HILLS, CITY OF	259000-047605	Green Acres Pump Stat	1131 BENEDICT CANYON DR	Nov 2020	11/2/2020	TOU-PA2D	56
BEVERLY HILLS, CITY OF	259000-047605	Green Acres Pump Stat	1131 BENEDICT CANYON DR	Dec 2020	12/3/2020	TOU-PA2D	55
BEVERLY HILLS, CITY OF	222013-827142	Sunset Reservoir	9650 SUNSET BLVD	Jan 2020	1/2/2020	TOU-PA2D	5,466
BEVERLY HILLS, CITY OF	222013-827142	Sunset Reservoir	9650 SUNSET BLVD	Feb 2020	1/31/2020	TOU-PA2D	5,284
BEVERLY HILLS, CITY OF	222013-827142	Sunset Reservoir	9650 SUNSET BLVD	Mar 2020	3/3/2020	TOU-PA2D	4,585
BEVERLY HILLS, CITY OF	222013-827142	Sunset Reservoir	9650 SUNSET BLVD	Apr 2020	4/1/2020	TOU-PA2D	5,410
BEVERLY HILLS, CITY OF	222013-827142	Sunset Reservoir	9650 SUNSET BLVD	May 2020	5/1/2020	TOU-PA2D	5,244
BEVERLY HILLS, CITY OF	222013-827142	Sunset Reservoir	9650 SUNSET BLVD	Jun 2020	6/2/2020	TOU-PA2D	5,833
BEVERLY HILLS, CITY OF	222013-827142	Sunset Reservoir	9650 SUNSET BLVD	Jul 2020	7/2/2020	TOU-PA2D	5,632
BEVERLY HILLS, CITY OF	222013-827142	Sunset Reservoir	9650 SUNSET BLVD	Aug 2020	8/3/2020	TOU-PA2D	6,081
BEVERLY HILLS, CITY OF	222013-827142	Sunset Reservoir	9650 SUNSET BLVD	Sep 2020	9/1/2020	TOU-PA2D	5,435
BEVERLY HILLS, CITY OF	222013-827142	Sunset Reservoir	9650 SUNSET BLVD	Oct 2020	10/2/2020	TOU-PA2D	5,366
BEVERLY HILLS, CITY OF	222013-827142	Sunset Reservoir	9650 SUNSET BLVD	Nov 2020	11/2/2020	TOU-PA2D	3,850
BEVERLY HILLS, CITY OF	222013-827142	Sunset Reservoir	9650 SUNSET BLVD	Dec 2020	12/3/2020	TOU-PA2D	3,779
BEVERLY HILLS, CITY OF	345M-006764	Sunset Reservoir	9598 SUNSET BLVD	Jan 2020	1/27/2020	TOU-PA2E	794
BEVERLY HILLS, CITY OF	345M-006764	Sunset Reservoir	9598 SUNSET BLVD	Feb 2020	2/25/2020	TOU-PA2E	1,007
BEVERLY HILLS, CITY OF	345M-006764	Sunset Reservoir	9598 SUNSET BLVD	Mar 2020	3/26/2020	TOU-PA2E	662
BEVERLY HILLS, CITY OF	345M-006764	Sunset Reservoir	9598 SUNSET BLVD	Apr 2020	4/24/2020	TOU-PA2E	660
BEVERLY HILLS, CITY OF	345M-006764	Sunset Reservoir	9598 SUNSET BLVD	May 2020	5/27/2020	TOU-PA2E	720
BEVERLY HILLS, CITY OF	345M-006764	Sunset Reservoir	9598 SUNSET BLVD	Jun 2020	6/24/2020	TOU-PA2E	654
BEVERLY HILLS, CITY OF	345M-006764	Sunset Reservoir	9598 SUNSET BLVD	Jul 2020	7/27/2020	TOU-PA2E	896
BEVERLY HILLS, CITY OF	345M-006764	Sunset Reservoir	9598 SUNSET BLVD	Aug 2020	8/25/2020	TOU-PA2E	648
BEVERLY HILLS, CITY OF	345M-006764	Sunset Reservoir	9598 SUNSET BLVD	Sep 2020	9/25/2020	TOU-PA2E	723
BEVERLY HILLS, CITY OF	345M-006764	Sunset Reservoir	9598 SUNSET BLVD	Oct 2020	10/27/2020	TOU-PA2E	938
BEVERLY HILLS, CITY OF	345M-006764	Sunset Reservoir	9598 SUNSET BLVD	Nov 2020	11/25/2020	TOU-PA2E	2,126
BEVERLY HILLS, CITY OF	345M-006764	Sunset Reservoir	9598 SUNSET BLVD	Dec 2020	12/24/2020	TOU-PA2E	924

TOTAL KWH 1,225,525

APPENDIX J

Water Rates Ordinance and Water Rate Study

AGENDA REPORT

Meeting Date: February 5, 2019

Item Number: D-8

To: Honorable Mayor & City Council

From: Laurence S. Wiener, City Attorney

Subject: AN ORDINANCE OF THE CITY OF BEVERLY HILLS TO MODIFY RATES AND CHARGES FOR WATER SERVICES AND FACILITIES FURNISHED BY THE CITY

Attachments: 1. Ordinance

RECOMMENDATION

It is recommended that the City Council waive the full reading and adopt the ordinance entitled "AN ORDINANCE OF THE CITY OF BEVERLY HILLS TO MODIFY RATES AND CHARGES FOR WATER SERVICES AND FACILITIES FURNISHED BY THE CITY."

INTRODUCTION

At its meeting of January 15, 2019, the City Council conducted a first reading of this ordinance and introduced it.

DISCUSSION

This ordinance modifies rates and charges for water services to restructure the consumption and fixed service charges based on the cost-of-service study, adds a water reliability charge, and substitutes a revenue stabilization rates schedule during water shortages instead of previous baseline methods.

FISCAL IMPACT

There is no fiscal impact for the cost-of-service component as revenues were adjusted in Phase 1 of the process. Current revenues will be reallocated amongst customers.

The Water Enterprise Fund will be supported by water reliability charge revenue of $6.5M during the remaining five and a half year implementation phase of the project, combined with $19M in General Fund contributions, $12.5M of Water Fund reserves and the issuance of water revenue bonds of approximately $31.85M (assuming an interest rate of 4% and associated interest costs of $23M.) The City's debt capacity is sufficient to issue the required $31.85M in revenue bonds with no negative impact to debt covenant ratios and City staff will examine options for reinvesting bond proceeds to minimize overall costs. Water Fund reserves will dip below the 50% of operating revenues target but will not dip below 25% of operating revenues. Reserves will be back to the 50% target by 2048/49.

The revenue stabilization rates will offset revenue losses during water shortage conditions. If revenue stabilization rates are not approved, reserves, to the extent they are available, may need to be used to offset revenue losses during water shortage conditions until temporary rates can go through the Proposition 218 noticing process or the old baseline process will be used.

Laurence S. Wiener, City Attorney
Approved By

Attachment 1

ORDINANCE NO. 19-O-_____

AN ORDINANCE OF THE CITY OF BEVERLY HILLS TO MODIFY RATES AND CHARGES FOR WATER SERVICES AND FACILITIES FURNISHED BY THE CITY

THE CITY COUNCIL OF THE CITY OF BEVERLY HILLS DOES ORDAIN AS FOLLOWS:

Section 1. The City Council of the City of Beverly Hills hereby finds as follows:

(a) The City Council is authorized pursuant to the California Health and Safety Code Section 5471 to prescribe, revise and collect rates and charges for water services and facilities furnished by the City.

(b) The City Council wishes to modify the rates and charges (the "rates") for water services and facilities furnished by the City, as provided in Exhibit A.

(c) The City Council identified the parcels upon which the proposed rates would be imposed and calculated the amount of the proposed rates.

(d) The City Clerk caused a notice of the time and place of a public hearing on the proposed rates to be mailed as required by Section 6 of Article XIIID of the California Constitution.

(e) Each notice described the amount of proposed rates, the basis upon which the amount of the proposed rates was calculated, the reason for the proposed rates, and the date time and location of a public hearing on the proposed rates.

(f) On January 15, 2019, the City Council conducted a public hearing on the proposed rates and heard and considered all objections and protests thereto and at the close of the public hearing, the City Council determined that written protests had not been presented by a majority of owners of the identified parcels.

Section 2. The City Council hereby approves the rates in the amounts and on the effective dates as provided in Exhibit A.

Section 3. The City Clerk shall cause this Ordinance to be published at least once in a newspaper of general circulation published and circulated in the City within fifteen (15) days after its passage, in accordance with Section 36933 of the Government Code; shall certify to the adoption of this Ordinance and shall cause this ordinance and her certification, together with proof of publication, to be entered in the Book of Ordinances of the Council of this City.

Section 4. This Ordinance shall go into effect and be in full force and effect at 12:01 a.m. on the thirty-first (31st) day after its passage.

Adopted:
Effective:

JULIAN A. GOLD, M.D.
Mayor of the City of Beverly Hills,
California

ATTEST:

(SEAL)
LOURDES SY-RODRIGUEZ
Assistant City Clerk

APPROVED AS TO FORM:

LAURENCE S. WIENER
City Attorney

APPROVED AS TO CONTENT:

MAHDI ALUZRI
City Manager

Don Harrison
for
JEFF S. MUIR
Director of Finance

EXHIBIT A

Fixed Service Charges-All Customers

Proposed Bi-Monthly Water Rates	Effective Date					
	1/1/2018		3/8/2019	1/1/2020	1/1/2021	1/1/2022
Meter Size	Bi-Monthly Service Charge (All Customers)					
1"	$44.66		$48.97	$50.44	$51.95	$53.51
1 1/2"	$77.41		$85.88	$88.46	$91.11	$93.84
2"	$116.72		$130.17	$134.08	$138.10	$142.24
3"	$208.43		$248.28	$255.73	$263.40	$271.30
4"	$339.44		$381.16	$392.59	$404.37	$416.50
6"	$666.96		$750.25	$772.76	$795.94	$819.82
Meter Size	Bi-Monthly Fire Service Charge (All Customers)					
2" or smaller	$27.20		$27.20	$28.02	$28.86	$29.73
2 1/2"	$40.56		$40.56	$41.78	$43.03	$44.32
3"	$59.08		$59.08	$60.85	$62.68	$64.56
4"	$114.11		$114.11	$117.53	$121.06	$124.69
6"	$311.62		$311.62	$320.97	$330.60	$340.52
8"	$652.26		$652.26	$671.83	$691.98	$712.74
10"	$1,164.63		$1,164.63	$1,199.57	$1,235.56	$1,272.63

Quantity Charge Rates and Water Reliability Charge-Inside City Customers

Customer Class		Volume Rates ($/HCF*)					
Single-Family Residential & Single-Family Irrigation							
Tier 1	0 up to 10	$4.02	0 up to 26	$3.34	$3.44	$3.54	$3.65
Tier 2	Over 10 up to 55	$5.30	Over 26 up to 48	$6.51	$6.71	$6.91	$7.12
Tier 3	Over 55 up to 120	$8.36	Over 48 up to 86	$9.58	$9.87	$10.17	$10.48
Tier 4	Over 120	$16.15	Over 86	$13.61	$14.02	$14.44	$14.87
Multi-Family Residential & Multi-Family Irrigation							
Tier 1	0 up to 4	$4.02	0 up to 8	$4.26	$4.39	$4.52	$4.66
Tier 2	Over 4 up to 9	$5.30	Over 8	$12.17	$12.54	$12.92	$13.31
Tier 3	Over 9 up to 16	$8.36					
Tier 4	Over 16	$16.15					
Non-Residential & Non-Residential Irrigation							
		$6.86		$6.63	$6.83	$7.03	$7.24
Customer Class		Water Reliability Charge ($/HCF*)					
All Customer Classes		n/a		$0.23	$0.24	$0.25	$0.26
*HCF (hundred cubic feet) = 748 gallons							

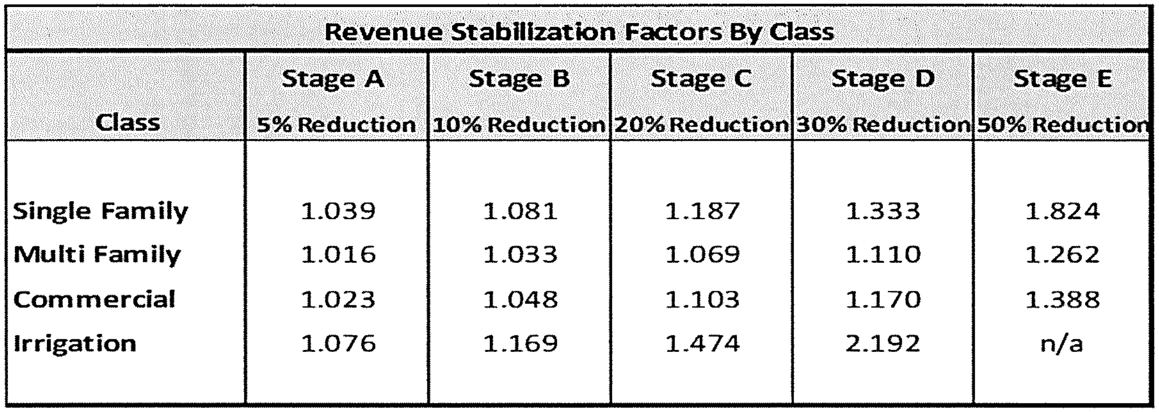
Quantity Charge Rates and Water Reliability Charge-Inside City Customers

Customer Class		Volume Rates ($/HCF*)					
Single-Family Residential & Single-Family Irrigation							
Tier 1	0 up to 10	$5.01	0 up to 26	$4.16	$4.28	$4.41	$4.54
Tier 2	Over 10 up to 55	$6.63	Over 26 up to 48	$7.33	$7.55	$7.78	$8.01
Tier 3	Over 55 up to 120	$10.45	Over 48 up to 86	$10.40	$10.71	$11.03	$11.36
Tier 4	Over 120	$20.18	Over 86	$14.43	$14.86	$15.31	$15.77
Multi-Family Residential & Multi-Family Irrigation							
Tier 1	0 up to 4	$5.01	0 up to 8	$5.08	$5.23	$5.39	$5.55
Tier 2	Over 4 up to 9	$6.63	Over 8	$12.99	$13.38	$13.78	$14.19
Tier 3	Over 9 up to 16	$10.45					
Tier 4	Over 16	$20.18					
Non-Residential & Non-Residential Irrigation							
		$8.58		$7.45	$7.67	$7.90	$8.14
Customer Class		**Water Reliability Charge ($/HCF*)**					
All Customer Classes		n/a		$0.38	$0.39	$0.40	$0.41
*HCF (hundred cubic feet) = 748 gallons							

The above rates are subject to an automatic adjustment to pass through the adopted increases or decreases in the wholesale charges for water established by the Metropolitan Water District of Southern California, as previously authorized by City Council Ordinance No. 17-0-2746.

Revenue Stabilization Rates Schedule

Upon the declaration of a water conservation stage pursuant to Article 3 of Chapter 4 of Title 9 of the Beverly Hills Municipal Code, the revenue stabilization factors for such stage, as provided below, shall be multiplied to the then applicable quantity charge rate for the customer class



Revenue Stabilization Factors By Class					
Class	Stage A 5% Reduction	Stage B 10% Reduction	Stage C 20% Reduction	Stage D 30% Reduction	Stage E 50% Reductio
Single Family	1.039	1.081	1.187	1.333	1.824
Multi Family	1.016	1.033	1.069	1.110	1.262
Commercial	1.023	1.048	1.103	1.170	1.388
Irrigation	1.076	1.169	1.474	2.192	n/a

CITY OF BEVERLY HILLS

Water Rate Study

January 5, 2019 – Final Report

CITY OF BEVERLY HILLS
345 Foothill Road
Beverly Hills, CA 90210

FINAL REPORT

WATER RATE STUDY

January 5, 2019

HF&H CONSULTANTS, LLC
201 North Civic Drive, Suite 230
Walnut Creek, CA 94596

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January 5, 2019

Ms. Shana Epstein
Director of Public Works
City of Beverly Hills
345 Foothill Road
Beverly Hills, CA 90210

Subject: Water Rate Study – Final Report

Dear Ms. Epstein:

We are pleased to submit this water rate study, which is the culmination of a lengthy study process that has encompassed a wide range of modifications and refinements including:

- Restructuring the quantity charge structures for the single and multi-family customer classes.
- The addition of irrigation customer classes.
- The addition of a water reliability charge quantity charge rate.
- The conversion of the Outside City rates to a cost-based differential.
- The addition of revenue stabilization factors for use during water shortages.

We would like to express our thanks to City staff and the members of the Public Works Commission and the Public Works Liaison Committee for their diligent efforts in assisting us with this study.

Very truly yours,

HF&H CONSULTANTS, LLC

John W. Farnkopf, P.E., Senior Vice President
Rick Simonson, C.M.C., Vice President

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ACRONYMS

AMI	Automated Meter Infrastructure
AWWA	American Water Works Association
EMU	Equivalent Meter Unit
FY	Fiscal Year
CCF or HCF	Hundred cubic feet of metered water sold; 748 gallons; a cube of water 4.6 feet on edge
CIP	Capital Improvement Project
GPD	Gallons Per Day
ISF	Internal Services Fund – reimbursement by the Water Fund for services provided by the General Fund
O&M	Operations and Maintenance
MWD	Metropolitan Water District of Southern California, the City's wholesale water supplier
PAYGo	Pay-As-You-Go, in reference to funding capital improvements from cash rather than from borrowed sources of revenue
PDR	La Brea Subarea Preliminary Design Report
WEP	Water Enterprise Plan – the program approved by the City Council to improve the City's water supply reliability includes personnel and capital expenses

ACKNOWLEDGEMENTS

City Council
  Mayor Julian A. Gold, M.D.
  Vice Mayor John A. Mirisch
  Councilmember Lili Bosse
  Councilmember Lester Friedman
  Councilmember Robert Wunderlich

Public Works Commission
  Chairperson Jerrold S. Felsenthal

Vice Chairperson Sandra Aronberg
Commissioner Jeff Wolfe (Ad Hoc Committee member)
Commissioner Joshua L. Greer (Ad Hoc Committee member)
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LIMITATIONS

This document was prepared solely for the City of Beverly Hills in accordance with the contract between the City and HF&H and is not in intended for use by any other party for any other purpose.

In preparing this study, we relied on information and instructions from the City, which we consider accurate and reliable and did not independently verify.

Rounding differences caused by stored values in electronic models may exist.

This document represents our understanding of relevant laws, regulations, and court decisions but should not be relied upon as legal advice. Questions concerning the interpretation of legal authorities referenced in this document should be referred to a qualified attorney.

WATER RATE STUDY

SECTION 1. EXECUTIVE SUMMARY

1.1 BACKGROUND

The City provides water service to residents and businesses in Beverly Hills (Inside City customers) and a portion of West Hollywood (Outside City customers). The City is presently entirely reliant on the Metropolitan Water District of Southern California for its potable water supply but has plans underway to develop local groundwater.

1.2 FINDINGS AND RECOMMENDATIONS

HF&H makes the following findings and recommendations.

1. **Annual rate increases.** Revenue generated by annual rate increases shall not exceed 3% in total, as previously approved by Council on December 19, 2017 for the period FY 2017-18 through FY 2021-22.

2. **Cost of service analysis of rate components.** A cost of service analysis was performed to allocate the revenue requirements to the components associated with the service (meter size) and quantity charges (volume of water used). The analysis indicated that the revenue from existing service charge rates is 5.5% below the cost of service and the revenue from existing quantity charge rates is 2.6% below the cost of service. Adjusting the respective rates accordingly will provide the additional 3% increase in revenue needed to cover the increase in the revenue requirement for FY 2018-19. (See **Table 4-6.**).

3. **Cost of service analysis of service charge revenue.** Service charges are charged for water and fire service. In order to generate 5.5% more revenue from service charges, water service charges should be increased 6.9%. No increase is recommended in fire service charges. Nor will there be a difference between inside and outside City customers.

4. **Cost of service analysis of quantity charge revenue.** In order to generate 2.6% more revenue from quantity charges, the cost of service analysis indicates that the quantity charge revenues for each class need to change as follows: 5.2% increase for single family residential customers; 6.6% increase for multi-family residential customers; and, a 5.4% decrease for commercial customers. (See **Table 4-6.**) These percentages are the necessary changes in revenue, not the changes in rates. Revenue changes are achieved by increasing or decreasing rates. In years when rates are not being restructured to align with the cost of service, all current rates would be increased or decreased by the respective percentages by class. However, in the current rate study, rates are being restructured to align with the cost of service. As

a result, different percentage increases in the service charge and Quantity Charges will occur. The derivation of these rate increases is explained in the next two sections of this report.

5. **Single family residential quantity charge rate structure.** Analysis of the single family tier structure indicates that the current number of four tiers should be retained but that the sizes of the tiers need to be adjusted to correspond with the service levels customers require ranging from non-seasonal base demand to average day, maximum day, and maximum hour peaking. (See **Tables 5-1 and 5-2.**)

6. **Multi-family residential quantity charge rate structure.** Analysis of multi-family customer water use data indicates that the range of demand service levels is very narrow across the range of consumption from base to extra capacity demand, indicating the current four-tier structure should be reduced to a two-tier structure. (See **Tables 5-3 and 5-4.**)

7. **Commercial quantity charge rate structure.** Analysis of customer billing data indicates that the current uniform quantity charge rate structure (no tiers) is still applicable. (See **Table 5-5.**)

8. **Outside City rates.** Outside City rates are currently 1.25 times higher than Inside City rates, which was an approximation of the additional cost to serve Outside City customers. It is recommended that the 1.25 multiplier be replaced with rates that are based on more exacting cost analysis. The additional costs identified should be applied to the quantity charges only. The service charges to both Inside City and Outside City customers will be the same. **(See Tables 5-9 and 5-14.)**

9. **Create irrigation customer classes.** Irrigation is a significant component of total water use in the City, particularly among single family customers. It is a discretionary water use that warrants special attention because it may need to be curtailed at higher levels during shortages. We recommend creating separate irrigation customer classes. (See **Section 5.5.**)

10. **Implement water shortage revenue stabilization factors.** Revenue stabilization factors are designed to offset the amount of revenue shortfall caused by conservation during specific Council-adopted water shortage stages. **(See Section 5.6.)**

11. **Implement a water reliability charge.** The City Council is undertaking the expansion of the City's water system in order to diversify and expand its sources of supply. By doing so, reliability will be improved during shortages. In addition, the need to rely on purchased water from Metropolitan Water District (MWD) will be reduced. In return for these benefits, a new, separate water reliability charge is proposed that would provide a steady source of funding over the lifecycle of the

Water Enterprise Plan (WEP). The water reliability charge is an additional uniform quantity charge rate that applies to both Inside and Outside City customers. The Inside City water reliability charge is less than the Outside City water reliability charge due to a subsidy provided from the Beverly Hills General Fund. **(See Section 5.7.)**

12. **Pass-through Charges.** The cost of MWD water is the single largest component of the City's revenue requirements. Because the City has no control over MWD's wholesale water rate, this cost is simply passed through to the City's customers. MWD provides projections of its future wholesale water rates, which are built into the rate projections in this study. California Government Code Section 53756 authorizes water suppliers to adjust their rates in response to changes in pass-through costs. As part of the Proposition 218 process, as the City did with last year's rate increase, we recommend that the City incorporate annual MWD pass-through adjustments in its rates. The pass-through adjustment allows Beverly Hills to adjust quantity charges to track any difference between the MWD rates that were included in the model and the actual rates adopted each year by MWD. The pass-through adjustment can be made by providing 30-day notice in the customer bills without triggering the need for a Proposition 218 protest process.

This report documents the rates proposed for adoption by the City. The first rate adjustment is proposed to become effective in March 8, 2019 with subsequent adjustments every January 1 thereafter, through January 2022. The City mailed notices to rate payers in compliance with the protest procedure provided for in Article XIIID. The noticed rates are the highest rates that the City Council can adopt.

Tables 1-1 through **1-3** summarizes the current and recommended quantity charge rates, service charge rates, and water reliability charge, respectively.

Table 1-1. Current and Recommended Quantity Charge Rates

Current Quantity Charge Rates			Recommended Quantity Charge Rates					
					$/HCF			
	Tier Size	$/HCF		Tier Size	3/8/2019	1/1/2020	1/1/2021	1/1/2022
Inside City								
Single Family			**Single Family**					
Tier 1	0 - 10 HCF	$4.02	Tier 1	0 - 26 HCF	$3.34	$3.44	$3.54	$3.65
Tier 2	11 - 55 HCF	$5.30	Tier 2	27 - 48 HCF	$6.51	$6.71	$6.91	$7.12
Tier 3	56 - 120 HCF	$8.36	Tier 3	49 - 86 HCF	$9.58	$9.87	$10.17	$10.48
Tier 4	Over 120 HCF	$16.15	Tier 4	Over 86 HCF	$13.61	$14.02	$14.44	$14.87
Multi Family			**Multi Family**					
Tier 1	0 - 4 HCF	$4.02	Tier 1	0 - 8 HCF	$4.26	$4.39	$4.52	$4.66
Tier 2	5 - 9 HCF	$5.30	Tier 2	Over 8 HCF	$12.17	$12.54	$12.92	$13.31
Tier 3	10 - 16 HCF	$8.36						
Tier 4	Over 16 HCF	$16.15						
Commercial		$6.86	**Commercial**		$6.63	$6.83	$7.03	$7.24
Outside City								
Single Family			**Single Family**					
Tier 1	0 - 10 HCF	$5.01	Tier 1	0 - 26 HCF	$4.16	$4.28	$4.41	$4.54
Tier 2	11 - 55 HCF	$6.63	Tier 2	27 - 48 HCF	$7.33	$7.55	$7.78	$8.01
Tier 3	56 - 120 HCF	$10.45	Tier 3	49 - 86 HCF	$10.40	$10.71	$11.03	$11.36
Tier 4	Over 120 HCF	$20.18	Tier 4	Over 86 HCF	$14.43	$14.86	$15.31	$15.77
Multi Family			**Multi Family**					
Tier 1	0 - 4 HCF	$5.01	Tier 1	0 - 8 HCF	$5.08	$5.23	$5.39	$5.55
Tier 2	5 - 9 HCF	$6.63	Tier 2	Over 8 HCF	$12.99	$13.38	$13.78	$14.19
Tier 3	10 - 16 HCF	$10.45						
Tier 4	Over 16 HCF	$20.18						
Commercial		$8.58	**Commercial**		$7.45	$7.67	$7.90	$8.14

Table 1-2. Current and Recommended Water Service Charge Rates

	Current		Recommended (Inside and Outside City)			
Meter Size	Inside City	Outside City	3/8/2019	1/1/2020	1/1/2021	1/1/2022
	$ per bi-monthly bill		$ per bi-monthly bill			
1"	$44.66	$55.83	$48.97	$50.44	$51.95	$53.51
1.5"	$77.41	$96.77	$85.88	$88.46	$91.11	$93.84
2"	$116.72	$145.91	$130.17	$134.08	$138.10	$142.24
3"	$208.43	$260.53	$248.28	$255.73	$263.40	$271.30
4"	$339.44	$424.30	$381.16	$392.59	$404.37	$416.50
6"	$666.96	$833.69	$750.25	$772.76	$795.94	$819.82
8"	$1,071.86	$1,339.82	$1,193.15	$1,228.94	$1,265.81	$1,303.78
10"	$1,857.96	$2,322.44	$3,112.42	$3,205.79	$3,301.96	$3,401.02

Table 1-3. Recommended Water Reliability Charge rates

	Effective Date			
Customer Class	**3/1/2019**	**1/1/2020**	**1/1/2021**	**1/1/2022**
	$/HCF	$/HCF	$/HCF	$/HCF
All Classes - Inside City	$0.23	$0.24	$0.25	$0.26
All Classes - Outside City	$0.38	$0.39	$0.40	$0.41

SECTION 2. INTRODUCTION

2.1 STUDY PURPOSE

The City is responsible for setting rates in compliance with California law. Voters passed Proposition 218 in November 1996, which enacted Article XIIID of the California Constitution. Article XIIID, Section 6, requires that fees and charges for water service shall not exceed the proportional cost of service.

One key purpose of this report is to document that the proposed rates comply with the relevant laws in California for setting tiered water rates. Another key purpose is to ensure that the rates generate sufficient revenue from conserving levels of demand to fund the water enterprises operating and capital costs as well as to maintain adequate reserves.

2.2 STUDY PROCESS

This study has been conducted in close collaboration with a working group of City staff, the City's Public Works Commission, the Public Works Commission's Rates Ad Hoc Committee, and the City's Public Works Liaison Committee. Over 30 meetings were held to develop alternative funding strategies, to review and refine the alternatives, and to select the preferred alternative.

2.3 CURRENT RATES

The City charges the sum of a service charge and a quantity charge, which are shown in **Tables 2-1** and **2-2.** This rate structure has been in effect for a number of years.

For single family residential and multi-family residential customers, the quantity charge varies depending on the amount of metered water use in each two-month billing period. This form of rate structure is referred to as a tiered or increasing block rate quantity charge. The quantity charges for single family residential and multi-family residential customers are the same as they increase across four tiers; the size of the tiers is smaller for multi-family residential customers. For example, Tier 1 water use is 0-4 HCF for multi-family residential customers and 0-10 HCF for single family residential customers; see **Figure 2-3**). Single family residential customers are billed per residence and multi-family residential customers are billed per dwelling unit.

For Commercial customers, the quantity charge is currently a constant amount that is not tiered. This form of rate structure is referred to as a uniform quantity charge. Commercial customers are billed bi-monthly per account. The Commercial quantity charge was tiered at one time but is currently a uniform charge regardless of the level of demand.

The service charge is fixed based on the size of the service connection. Customers pay the same service charge each billing period based on the size of their service connection.

The City currently charges Outside City water customers service and quantity charge rates that are 25% higher than Inside City rates. The purpose of the 1.25 multiplier is to recover the additional costs of serving customers located outside Beverly Hills.

Table 2-1. Current Bi-monthly Service Charge Rates

Meter Size	Inside City $/HCF	Outside City $/HCF
1"	$44.66	$55.83
1.5"	$77.41	$96.77
2"	$116.72	$145.91
3"	$208.43	$260.53
4"	$339.44	$424.30
6"	$666.96	$833.69
8"	$1,071.86	$1,339.82

Table 2-2. Current Bi-monthly Quantity Charge Rates

Customer Class	Tier Size	Inside City $/HCF	Outside City $/HCF
Single Family			
Tier 1	0 - 10 HCF	$4.02	$5.01
Tier 2	11 - 55 HCF	$5.30	$6.63
Tier 3	56 - 120 HCF	$8.36	$10.45
Tier 4	Over 120 HCF	$16.15	$20.18
Multi Family			
Tier 1	0 - 4 HCF	$4.02	$5.01
Tier 2	5 - 9 HCF	$5.30	$6.63
Tier 3	10 - 16 HCF	$8.36	$10.45
Tier 4	Over 16 HCF	$16.15	$20.18
Commercial	Uniform (no tiers)	$6.86	$8.58

SECTION 3. REVENUE REQUIREMENTS

To determine whether additional rate revenue is required, projected operating and capital expenses are compared with projected revenue from current rates. Annual surpluses and deficits are then applied to the reserve funds. Rates are then increased so that the expenses are covered and operating and capital reserves are maintained. At the December 19, 2017 City Council Meeting, Council approved annual revenue increases of 3% per year for the period FY 2017-18 through FY 2021-22. The following sections summarize the methodology for determining the annual revenue requirements, the necessary 3% annual revenue increases, and the projected impact these results will have on the Water Enterprise fund balance.

3.1 EXPENSE PROJECTIONS

A spreadsheet model was developed to derive revenue requirements for FY 2017-18 through FY 2021-22. The revenue requirements represent the costs that must be covered by revenue from rates and other sources, such as reserves. The City's operating and capital budget for FY 2017-18 served as the starting point for projecting the City's expenses and revenues over the five-year financial planning period. The escalation factors summarized in **Table 3-1** were incorporated in the model for projecting expenses and revenues.

Table 3-1. Key Modeling Assumptions

Expense Category	2017/18	2018/19	2019/20	2020/21	2021/22
Personnel	Per Budget	3.0%	3.0%	3.0%	3.0%
Material & Supplies	Per Budget	4.0%	4.0%	4.0%	4.0%
Contractual Services	Per Budget	3.0%	3.0%	3.0%	3.0%
ISF Charges	Per Budget	3.0%	3.0%	3.0%	3.0%
Proj. Admin. and CIP Mgmt. Charges	Per Budget	3.3%	3.3%	3.3%	3.0%
Miscellaneous	Per Budget	3.0%	3.0%	3.0%	3.0%
General Inflation	3.0%	3.0%	3.0%	3.0%	3.0%
MWD Cost of Water ($/AF)	$997.00	$1,034.00	$1,072.50	$1,107.50	$1,143.50
Construction Cost Inflation	2.5%	2.5%	2.5%	2.5%	2.5%
Water Sales (HCF)	4,178,352	4,318,340	4,418,488	4,518,986	4,619,886

The application of these assumptions to the O&M and capital expenses is summarized in **Table 3-2**.

Table 3-2. Total Annual Projected Net Revenue Requirements

	Budgeted	Projected			
	2017/18	2018/19	2019/20	2020/21	2021/22
O&M Expenses					
Personnel Services	$4,792,704	$4,933,172	$5,081,113	$5,233,492	$5,390,443
Materials and Supplies	$1,854,407	$1,910,039	$1,967,340	$2,026,360	$2,087,151
Purchased Water	$11,396,460	$12,176,961	$12,887,463	$13,594,949	$14,355,408
Contractual Services	$1,293,935	$1,332,753	$1,372,735	$1,413,917	$1,456,335
ISF Charges	$6,946,140	$7,154,525	$7,369,160	$7,590,235	$7,817,942
Project Admin. and CIP Mgmt. Charges	$1,383,498	$1,434,688	$1,482,032	$1,530,939	$1,581,460
Other Miscellaneous	$1,125,695	$1,159,465	$1,194,249	$1,230,077	$1,266,979
Subtotal, O&M Expenses	$28,792,838	$30,101,603	$31,354,093	$32,619,970	33,955,718
Capital Expenses					
Transfer to Reserves for PayGo Projs	$7,061,200	$7,061,200	$1,439,467	$1,940,615	$2,301,200
Debt Service on Existing Bond	$5,984,688	$5,995,488	$5,994,888	$4,927,425	$4,366,075
Subtotal, Capital Expenses	$13,045,888	$13,056,688	$7,434,355	$6,868,040	$6,667,275
Total Expenses	**$41,838,726**	**$43,158,290**	**$38,788,448**	**$39,488,010**	**$40,622,993**
Less: Non-Operating Revenues[1]	($924,357)	($930,359)	($936,540)	($942,907)	($949,465)
Contributions (from)/to Reserves	($3,827,639)	($4,019,575)	$1,502,700	$1,990,142	$2,077,774
Net Revenue Requirement	**$37,086,730**	**$38,208,357**	**$39,354,607**	**$40,535,246**	**$41,751,303**
% Change		3.0%	3.0%	3.0%	3.0%

[1] Non-operating revenues include late fees, ordinance violation penalties, interest earnings, etc.

The net revenue requirement for FY 2018-19 of $38,208,357 will be used in the cost of service analysis and rate design for rates effective March 8, 2019 (see **Sections 4 and 5**).

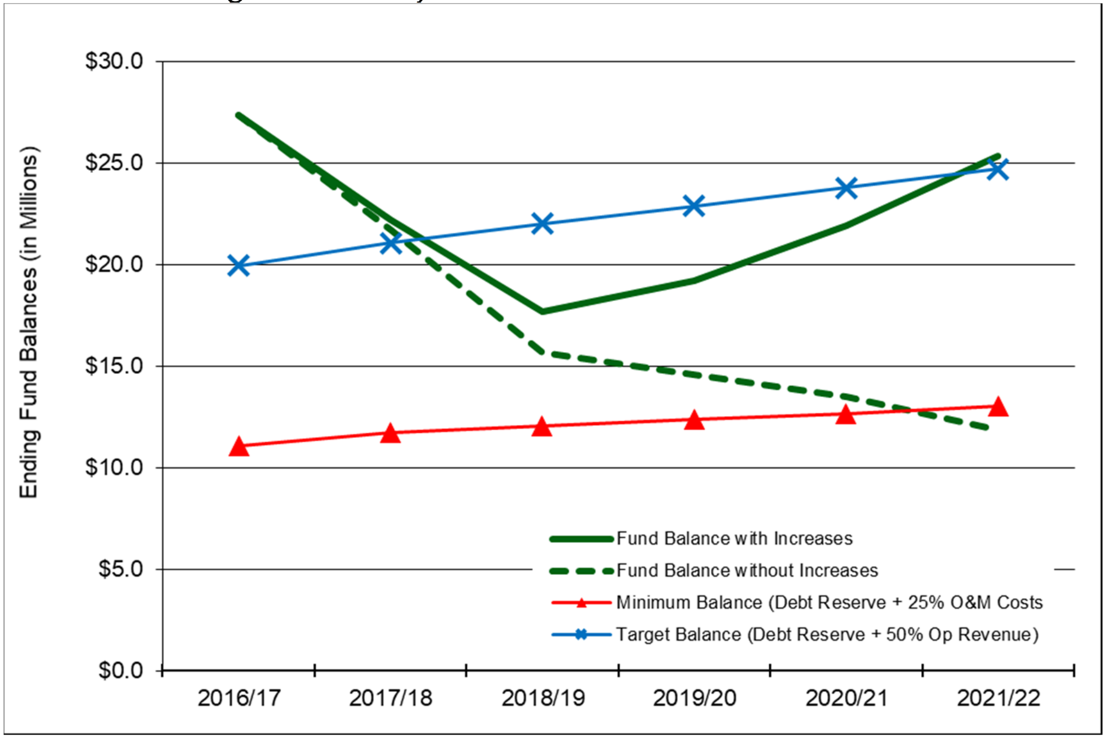
3.2 RESERVE FUNDS

The 3% annual revenue increases are required to cover the net O&M and capital expenses summarized in **Table 3-2**. In addition to covering annual expenses, water rates need to generate revenue to maintain adequate operations and capital reserves. To determine what constitutes adequate reserve amounts, the reserve balance was subdivided into operations and capital reserves. In this way, it is possible to set recommended target balances for each purpose.

Figure 3-1 shows the minimum fund balance (red line; triangle symbols) that is recommended. The minimum fund balance represents the working capital that is needed to meet month-to-month cash flow for O&M expenses and the required debt service reserve for the City's outstanding debt. **Figure 3-1** also shows the recommended target balance. The target balance is derived by adding a contingency for capital improvements to the minimum fund balance and is based on the City's current Council-approved policy, which states the target reserve is to equal the debt service reserve amount plus 50% of gross annual user revenue. With this contingency, the City should have sufficient cash on hand to fund its cash-funded capital improvements without cash flow constraints. This contingency is also available to help fund short-term deficits such as emergency expenditures and revenue shortfalls resulting from low water sales.

Figure 3-1 shows the combined balance for the operating and capital reserves that is projected based on the 3% annual revenue increases. With the proposed rate adjustments, the City's reserve fund balance (solid green line) will be above the minimum balance (red line with triangle symbols), which covers the City's operating reserve requirements and is projected to reach the target reserve balance (blue line with "X" symbols) by FY 2021-22.

Figure 3-1. Projected Year-End Reserve Balances



Revenue increases are achieved by increasing rates. In years when rates are not being restructured to align with the cost of service, rates would be increased by the same percentage to generate the required revenue increase. For example, the 3% revenue increase would be achieved with a 3% across-the-board increase in the current service charges and residential and commercial volumetric charges. Such was the case for FY 2017-18; however, in the current rate study for rates to be effective during FY 2018-19, rates are being restructured to align with the cost of service. As a result, different percentage increases in the service charge and quantity charges will occur. The derivation of these rate increases is explained in the next two sections of this report.

SECTION 4. COST OF SERVICE ANALYSIS

4.1 GENERAL APPROACH

The revenue requirement analysis establishes how much revenue is required from rates. The next step in the analysis is determining the cost of service by customer class. The cost of service analysis performed in this study follows a procedure that has been long established by the American Water Works Association (AWWA), which is referred to as the "base/extra capacity method." This method allocates the revenue requirements to the components of the rate structure.

The base/extra capacity method in the AWWA M1 Manual contains three categories: base, maximum day, and maximum hour. Base capacity is determined by the average daily flow during the year. The average daily flow determines how much base capacity is needed to provide that flow. Maximum day capacity is determined by the flow on the maximum day of the year. In other words, the maximum day capacity is greater than the base capacity, including the base capacity plus the additional capacity needed to provide for the maximum day flow of the year. Maximum hour capacity is determined by the flow during the maximum hour on the maximum day. In other words, the maximum hour capacity is greater than the maximum day capacity by the amount of peak hour that occurs during the maximum day flow.

We have refined AWWA's version of the base/extra capacity method. What AWWA considers "base" capacity is not purely base capacity because AWWA defines "base" as average day capacity. Average day capacity includes average peaking, which is greater than how "base" is defined in this report. In this report, "base" demand does not include peaking. We have introduced a fourth category that corresponds to base demand with no peaking, which we call Base Day. This Base Day demand is derived from average winter demand, when there is the least amount of peaking. Hence, in addition to Average Day, Maximum Day, and Maximum Hour categories, we have added Base Day.

4.2 COST OF SERVICE ALLOCATIONS

As the name implies, cost of service analysis (COS) is a process of determining how much water service costs to provide capacity to meet customer demands. In order to provide water service, infrastructure must be constructed, operated, and maintained, which must be paid for from cash or debt. The type and size of infrastructure depends on how much service customers require. Water systems are designed to provide sufficient capacity to meet customer demands for service wherever, whenever, and for as long as demanded.

Although each customer places unique demands on the system, water system design is based on the maximum or peak demand for service placed on the system by all customers during the peak demand period. The size of the infrastructure that is needed will depend on the maximum demand. Higher demands will obviously require larger, more costly infrastructure as well as increased operating and O&M costs. Here, the goal of a cost of service analysis is to allocate the cost of the capacity to meet the peak demand in proportion to how much of the capacity is required by each customer. The proportions correspond to the maximum amount of capacity provided by the infrastructure. This means that customers that place greater demands on the infrastructure – customers with greater service needs (i.e., higher peak demands) – will be apportioned a greater share of the operating and capital costs of the infrastructure required to meet that demand.

It is important to realize that once the peak demand is used to design the infrastructure, the capacity is available at all times, not just during peak demands. The capacity is available for the potential peak when it occurs. During off-peak demands, the same facilities are being used, but the capital cost of the facilities is determined by the peak demand only, and it is the peak demand that is used to allocate costs. Note that the costs are not allocated only to those who peak. Those who do not peak as much are also using the same facilities. Consequently, they are allocated a share of the costs of the facilities in proportion to their contribution to the peak demand, even though their contribution to peaking may be significantly less.

A cost of service analysis determines the unit cost of the services provided to the City's water customers. Inside City and Outside City customers, and each customer class therein, is charged the same unit cost for its share of the services that it requires. In this way, the total revenue requirement is proportioned between the fixed service charges and the quantity charges; the quantity charges are further proportioned among the customer classes. This methodology is consistent with industry standards promulgated by the American Water Works Association[1] and referred to as the "base/extra capacity method."

The analysis involves a sequence of steps that is summarized in **Figure 4-1**. The sequence leads to determining how much revenue should be recovered from fixed, service charges and from variable, quantity charges for each customer class. The derivation of the rates for the service and quantity charges is described in **Section 5**.

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[1] American Water Works Association, *Principles of Water Rates, Fees, and Charges* (Seventh Edition, 2017).

Figure 4-1. Cost-of-Service Analysis

Budget costs classfied according to function and allocated to base and extra capacity services

Costs of services allocated to rates that charge in proportion to service needs

Budgeted Costs (in thousands)	
O&M	
Water Supply - MWD	$12,177
Water Supply - Groundwater	$2,195
Water Quality	$1,325
Maintenance & Repair	$3,317
Water Services & Installs	$1,595
Capital Project O&M	$1,435
Conservation	$844
Fire Hyrdrants/Meters	$59
	$22,947
Capital	
PAYGo	$7,061
Debt Service	$5,995
	$13,057
Net Administrative Overhead	$2,205
Total	$38,208

Service Costs (in thousands)	
Demand Services	
Base Day	$19,298
Average Day	$7,177
Maximum Day	$4,159
Maximum Hour	$2,245
	$32,879
Customer Service	
Accounts	$910
Capacity	$4,419
	$5,329
Total	$38,208

Rate Components (in thousands)	
Quantity Charges	
Single Family	$17,390
By tier (4 tiers)	
Multi Family	$7,083
By tier (2 tiers)	
Commercial	$8,406
Uniform (no tiers)	
	$32,879
Service Charges	
By Meter Size	$5,329
Total	$38,208

Table 4-1 shows the derivation of the allocation factors associated with each level of demand. The factors are based on meter reading data from the City's automated meter infrastructure (AMI), which is capable of reading customer meters at hourly intervals. The AMI has a software interface known as Water Tracker, which allows customers to monitor their water use and allows aggregation of the data by customer class. This data can be aggregated to determine the flow that corresponds to the functions provided to meet customer demands:

- Base, non-seasonal demand, when there is minimal peaking.
- Average day demand, which includes non-seasonal demand plus average daily peaking.
- Maximum day demand, which includes average day demand plus peaking on the maximum day of the year.
- Maximum hour demand, which includes maximum day demand plus peaking at the maximum hour on the maximum day.

Table 4-1. Demand Allocation Factors - Systemwide

	Demand Service Levels				
	Base Day	Average Day	Maximum Day	Maximum Hour	
Demand (HCF per day)[1]	7,270	10,802	17,371		
÷24 hours	24	24	24		
Demand (HCF per hour)[1]	303	450	724	1,211	
Incremental Change		147	274	487	
Allocation Percentage Calculations					Total HCF
Base Day	303				303
% of Total	100%				100%
Average Day	303	147			450
% of Total	67%	33%			100%
Maximum Day	303	147	274		724
% of Total	42%	20%	38%		100%
Maximum Hour	303	147	274	487	1,211
% of Total	25%	12%	23%	40%	100%

[1] Source: 2017 AMI data

The flows shown in **Table 4-1** are the aggregate flows for the entire water system. The resulting factors are used to allocate the functionalized costs into the four demand service categories. In turn, the costs for each of the demand service categories are allocated among the customer classes using the AMI data aggregated at the customer class level (see discussion in **Section 5**).

For purposes of allocating costs associated with meeting Average Day demands, 67% is allocated to the Average Day service and 33% is allocated to the Base Day service, as shown in **Table 4-1**. Maximum Day demand includes Base Day, Average Day, and Maximum Day components. Maximum Hour demand has all four service levels of demand. While system capacity is essentially designed to meet peak demands, it is important to understand that the cost of facilities that are sized for peak demands is not borne by only customers that peak.

Using distribution pipelines as an example, they are sized to meet Maximum Hour demands. Even though they are sized for the highest level of service, lower peak demands are also accommodated by these pipelines. Hence, the cost of the pipelines is not allocated 100% to the Maximum Hour service level. The cost is apportioned across the lower service levels, too, as shown in **Table 4-2**. Thus the costs of peaking are shared by all customers and not exclusively allocated to those who peak the most.

Table 4-2. Demand Allocation Factors – Systemwide Flows

Operating and Capital Expenses	Demand Service Levels				Customer Service
	Non-Peaking	Extra Capacity Peaking			
	Base	Average Day	Maximum Day	Maximum Hour	
Source of Supply					
Groundwater extraction	67%	33%			
Water treatment	67%	33%			
MWD purchased water	67%	33%			
MWD readiness-to-serve charge					100%
Transmission					
Conveyance	42%	20%	38%		
Pumping	42%	20%	38%		
Balancing storage	42%	20%	38%		
Distribution					
Conveyance	25%	12%	23%	40%	
Pumping	25%	12%	23%	40%	
Water quality	25%	12%	23%	40%	
Balancing storage	25%	12%	23%	40%	
Conservation	25%	12%	23%	40%	
Customer Services					
Admin, billing, meter reading, installs					100%

Table 4-3 shows the allocation of the functionalized costs to the demand and customer service categories. Costs associated with the demand services are allocated using the factors in **Table 4-1**, which are based on systemwide AMI data. Costs associated with customer service are used for calculating water and fire service charges.

Table 4-3. Functional Cost Allocations (FY 2018-19)

Costs to be Allocated		**Allocation Factor**	Demand Services				**Subtotal - Demand Services**	**Subtotal - Customer Service**	**Total**
			Base Day	Average Day	Maximum Day	Maximum Hour			
O&M Expenses									
Water Supply									
Groundwater	$2,195,498	Average Day	$1,477,575	$717,923	$0	$0	$2,195,498	$0	$2,195,498
Water Treatment	$662,375	Average Day	$445,780	$216,595	$0	$0	$662,375	$0	$662,375
MWD - Quantity Charge	$10,968,651	Average Day	$7,381,927	$3,586,725	$0	$0	$10,968,651	$0	$10,968,651
MWD - Readiness-to-Serve Charge	$1,208,310	Customer Service	$0	$0	$0	$0	$0	$1,208,310	$1,208,310
Water Quality - Distribution	$662,375	Max Hour	$165,675	$80,498	$149,714	$266,488	$662,375	$0	$662,375
Maintenance & Repair	$3,317,471	Max Day	$1,388,334	$674,562	$1,254,575	$0	$3,317,471	$0	$3,317,471
Water Services & Installations	$1,595,271	Customer Service	$0	$0	$0	$0	$0	$1,595,271	$1,595,271
Capital Project O&M	$1,434,688	CIP Composite	$648,473	$315,079	$259,038	$60,255	$1,282,845	$151,843	$1,434,688
Conservation	$843,626	Max Hour	$211,011	$102,526	$190,681	$339,409	$843,626	$0	$843,626
Fire (e.g., hydrants, meters, etc.)	$58,812	Customer Service	$0	$0	$0	$0	$0	$58,812	$58,812
Subtotal - O&M Expenses	**$22,947,078**		**$11,718,774**	**$5,693,908**	**$1,854,008**	**$666,152**	**$19,932,842**	**$3,014,236**	**$22,947,078**
Capital Expenses									
PAYGo projects	$7,061,200	CIP Composite	$3,191,631	$1,550,747	$1,274,927	$296,560	$6,313,865	$747,335	$7,061,200
Debt Service	$5,995,488	D/S Composite	$1,718,078	$834,778	$1,552,550	$1,564,555	$5,669,961	$325,526	$5,995,488
Subtotal - Capital Expenses	**$13,056,688**		**$4,909,709**	**$2,385,526**	**$2,827,477**	**$1,861,115**	**$11,983,826**	**$1,072,861**	**$13,056,688**
		CIP Composite	*37.6%*	*18.3%*	*21.7%*	*14.3%*	*91.8%*	*8.2%*	*100.0%*
Total O&M and Capital	**$36,003,765**		**$16,628,484**	**$8,079,434**	**$4,681,485**	**$2,527,266**	**$31,916,669**	**$4,087,097**	**$36,003,765**
		Exp Composite	*46.2%*	*22.4%*	*13.0%*	*7.0%*	*88.6%*	*11.4%*	*100.0%*
Internal Service Funds (Overhead)	$7,154,525	Fixed/Variable	$4,525,823	$0	$0	$0	$4,525,823	$2,628,701	$7,154,525
Non-Operating Revenue	($930,358)	Customer Service	$0	$0	$0	$0	$0	($930,358)	($930,358)
Contribution From Reserves	($4,019,575)	Exp Composite	($1,856,457)	($902,014)	($522,656)	($282,152)	($3,563,278)	($456,297)	($4,019,575)
Net Revenue Requirement	**$38,208,357**		**$19,297,850**	**$7,177,421**	**$4,158,829**	**$2,245,114**	**$32,879,214**	**$5,329,144**	**$38,208,358**

Note: Numbers may not sum exactly due to rounding
Allocation factors from Table 4-2.

Table 4-4 shows the derivation of the customer class allocation factors that are applied to the demand service allocations at the bottom of **Table 4-3**. The allocation factors apportion the cost of the demand service among the customer classes. It can be seen that the allocation to single family customers increases with each level of demand because of the peak irrigation demands that single family customers place on the facilities relative to the multi-family and commercial classes. The resulting allocations establish the cost of providing service to each customer class for each level of demand.[2] The allocated demand service costs are used to determine the quantity charge rates for each class and for each tier for those classes with tiered rates.

Table 4-4. Demand Allocation Factors – Customer Classes

	Demand Services				Total
	Base Day	Average Day	Maximum Day	Maximum Hour	
Net Demand Services Revenue Requirement[1]	**$19,297,850**	**$7,177,421**	**$4,158,829**	**$2,245,114**	**$32,879,214**
Units of Service (HCF) by Customer Class[2]					
Single Family	3,318	6,065	10,969	1,039	
Multi Family	1,890	2,072	2,203	87	
Commercial	2,062	2,665	4,200	84	
Total Units of Service	7,270	10,802	17,371	1,211	
Proportional Allocation to Customer Classes					
(% of Total Units of Service)					
Single Family	45.64%	56.15%	63.14%	85.82%	
Multi Family	26.00%	19.18%	12.68%	7.21%	
Commercial	28.36%	24.67%	24.18%	6.97%	
Total	100.00%	100.00%	100.00%	100.00%	
Net Revenue Requirement by Customer Class					
Single Family	$8,807,681	$4,029,907	$2,626,081	$1,926,737	$17,390,405
Multi Family	$5,016,593	$1,376,746	$527,344	$161,921	$7,082,605
Commercial	$5,473,576	$1,770,767	$1,005,405	$156,456	$8,406,204
Total	**$19,297,850**	**$7,177,421**	**$4,158,829**	**$2,245,114**	**$32,879,214**

Note: Numbers may not sum exactly due to rounding

[1] Net demand services revenue requirement from Table 4-3.

[2] Source: 2017 AMI data.

The customer service costs are the basis for the water and fire service charge rates. Service charge rates are based on the size of the service connection and are independent of whether the customer is single family, multi-family, commercial, or irrigation. The derivation of the quantity and service charge rates is described in **Section 5**. Important conclusions about the cost of base and extra capacity demand are indicated in **Table 4-4**. $19.3 million (59%) of the total $32.9 million is related to non-seasonal base day demand.

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[2] Note that the flows for Base Day, Average Day, and Maximum Day are for 24-hour periods and that the flow for Maximum Hour is for a one-hour period.

In effect, if there were no peak demands, the facilities could be sized much smaller, reducing the cost to 59% of the current cost. However, peaking occurs and the cost to provide extra capacity for this service increases incrementally.

The resulting average cost of service allocations shown in **Table 4-5** indicate that Single Family Residential customers are the most costly to serve ($8.03 per HCF); Multi Family customers are the least costly to service ($7.03 per HCF) and Commercial customers are in between ($7.35 per HCF). These results are in line with expectations as those customer which tend to peak the most are more costly to serve. Analysis of the City's AMI data indicates Single Family customers peak the most and Multi Family customers peak the least.

Table 4-5. Average Cost of Service

	Quantity Charge Rev. Req.[1]	Proj. FY2018/19 Demand (HCF)	Average Cost per HCF
Single Family	$17,390,405	2,166,786	$8.03
Multi Family	$7,082,605	1,007,664	$7.03
Commercial	$8,406,204	1,143,890	$7.35
Total	$32,879,214	4,318,340	$7.61

Rates need to be designed to generate each class's share of the revenue requirement related to quantity charges and fixed service charges. **Table 4-6** compares the revenue projected from current rates to the cost of service by customer class for the quantity charges and the revenue projected from current rates to the cost of service for the fixed serve charge. **Table 4-6** indicates that the revenue from existing quantity charge rates differs from each class' share of the cost of service. Single family and multi-family quantity charge rates need to increase to bring them in line with the cost of serving the respective classes and commercial rates need to decrease; service charges for all classes need to general 5.5% more revenue in total.

Table 4-6. Current Rate Revenue Compared With the Cost of Service

		FY 2018-19	Difference	
Customer Class	**Current***	**COS**	**$**	**%**
Quantity Charges				
Single Family	$ 15,129,244	$ 15,914,148	$ 784,904	5.2%
Multi Family	$ 6,131,867	$ 6,538,400	$ 406,533	6.6%
Commercial	$ 8,179,100	$ 7,740,991	$ (438,109)	-5.4%
Subtotal	$ 29,440,211	$ 30,193,538	$ 753,327	2.6%
% of Total	*85.4%*	*87.5%*		
Service Charges	$ 5,049,510	$ 5,329,143	$ 279,633	5.5%
% of Total	*14.6%*	*15.5%*		
Grand Total	$ 34,489,721	$ 35,522,681	$ 1,032,960	3.0%

* Current revenue at current rates and projected FY 2018-19 demand

Section 5 provides the recommended modifications to the quantity charges and service charges in order to meet the current cost of service requirements shown in **Table 4-6**.

SECTION 5. RATE DESIGN

5.1 DESIGN OBJECTIVES

The rate design analysis links the revenue requirements identified in Section 2 with the water rates necessary to achieve full cost recovery. The focus of this process is to set rates and substantiate that each rate reflects its fair and proportionate share of system costs.

Setting rates in California is subject to key laws and court decisions of which Article XIIID of the California Constitution is most important. Article XIIID has three substantive provisions that must be met: (1) the revenue from rates must not exceed the cost of providing service, (2) the revenue from rates must be used for providing service, and (3) the fees and charges must be proportional to the cost of providing the service. In meeting these provisions, the water supplier is responsible for meeting the burden of proof. The first two provisions are more closely related to developing revenue requirements and revenue projections. The last provision is the primary objective in rate structure design.

The *San Juan Capistrano* decision is a 2015 appellate court decision that found that tiered rates must be proportionate to the cost of service across the range of consumption. While acknowledging that such an analysis may be complex, no formulas, rules, or specific procedures are prescribed in the decision for how to set tiered rates, only that each tier must be cost-based.

The City has historically charged water customers the combination of a fixed service charge and a variable quantity charge based on metered water use. As previously discussed, this is a very common set of charges that is prevalent throughout the water industry. This section explains the derivation of the Quantity and service charge rates that reflect the projected cost of service.

5.2 SUMMARY OF RATE DESIGN MODIFICATIONS

Based on discussion with City staff, the Public Works Commission, and the City Council/Public Works Liaison Committee, and careful review of the cost of service analysis, the following rate design elements were discussed, and in some cases modified from current, as noted. The calculation of rates and the rationale for any recommended modifications follow this section.

- Maintain three separate customer classes for quantity charge rates: single family, multi family, and commercial.
- Maintain four tiers for single family quantity charge rates and adjust the breakpoints of the four tiers based on current water demand patterns.

- Reduce the number of multi-family quantity charge tiers from four to two and adjust the breakpoints based on current water demand patterns.
- Maintain a uniform (no tiers) quantity charge rate for commercial customers.
- Replace the 1.25 multiplier on the quantity charge rates for outside city customers, which was an approximation of the additional cost to service outside city customers, with rates that are based on a more exacting cost analysis.
- Create irrigation rates for each customer class.
- Develop rate stabilization factors to be applied to quantity charge rates during declared water shortages to maintain revenue stability.
- Derive 15.0% of rate revenue from service charges rates, which is a slight increase from the current 14.6%, to maintain revenue stability.
- Develop a water reliability charge to cover the WEP costs.

5.3 QUANTITY CHARGE RATE DESIGN AND CALCULATIONS

The City has separate quantity charges for single family residential, multi-family residential, and commercial customers, which is appropriate as different levels of service are being provided to the average customer within each class. However, within the single family and multi-family customer classes, we have identified some recommended changes in the number and/or size of the tiers. Our analysis of historical customer water use data, by customer class, has led to our recommended changes. Each class' rate design is described below.

The quantity charges calculated in Section 5.3.A (Single Family Residential), Section 5.3.B (Multi Family Residential), and Section 5.3.C (Commercial), which are the same for Inside City and Outside City customers, reflect the cost to provide service before adjustments for contributions and services provided by the City's General Fund. Adjustments to these calculated rates due to the General Fund contributions and service impact the Inside City customer rates differently than Outside City customer rates. The rationale and calculations for adjusting the rates can be found in **Section 5.3.D** and the resulting adjusted quantity charge rates for Inside City and Outside City customers can be found in **Section 5.3.E**.

A. Single Family Residential Quantity Charges

Tiered rate structures are well suited to single family residential quantity charges because of the wide variation in peak demand patterns. The use of four tiers has been in place for the City's single family residential customers and continues to be appropriate. With four tiers, it is possible to size tiers corresponding to non-seasonal base demand, average day demand, maximum day demand, and maximum hour peak demand. The size of the tiers is based on the demand pattern for single family customers using AMI data. The proposed breakpoints align the cost associated with each level of demand with the demand in each tier.

The rate for each tier is calculated by dividing the cost of service associated with each tier (see **Table 4-4)** by the quantity of water subject to the rate in each tier. The size of the tiers is based on the demand pattern for single family customers using AMI data, which is summarized in **Table 5-1**. The division between each tier – the "breakpoint" – corresponds to the four base/extra capacity levels of demand.

Table 5-1. Single Family Tier Structure - Breakpoints

Single Family	Base Day	Average Day	Maximum Day	Maximum Hour
HCF per Day[1]	3,318	6,065	10,969	
÷ days per billing period	60	60	60	
HCF per billing period	199,079	363,900	658,146	
÷ Single Family dwelling units	7,623	7,623	7,623	
Average flow per dwelling unit (HCF)	**26**	**48**	**86**	**> 86**

[1] Source: 2017 AMI data.

The rate for each tier is the quotient of the cost of service divided by the demand within the tier. **Table 5-2** shows the step-wise calculation. For example, the Tier 1 rate applies to all billed water usage. Any bi-monthly water use that exceeds the Tier 1 breakpoint will be subject to the Tier 2 rate. The quantity charge will be the sum of the amounts for the successive tiers. Whereas low water use will only pay the Tier 1 quantity charge rate, high water use will pay the sum of the quantity charges for each tier. **Table 5-2** tabulates the cost increment for each of the four levels of demand. The quantity charge rate for each tier sums the increments that are added with each successive tier.

Table 5-2 shows the calculation of the per-unit cost to be paid by both Inside and Outside City single family customers, before adjustments for general fund contributions for non-operating lease revenue and general fund service reimbursements. The total revenue requirement for the class was distributed across the tiers as shown in **Table 4-4.**

Table 5-2. Single Family Tier Structure - Rates

Single Family Cost-of-Service per Unit	Tier 1 Base Day	Tier 2 Average Day	Tier 3 Maximum Day	Tier 4 Maximum Hour
Demand services revenue requirement[1]	**$8,807,681**	**$4,029,907**	**$2,626,081**	**$1,926,737**
Demand per Tier				
Tier 1: 0 - 26 HCF	892,880			
Tier 2: 27 - 48 HCF	418,778	418,778		
Tier 3: 49 - 86 HCF	376,905	376,905	376,905	
Tier 4: over 86 HCF	478,223	478,223	478,223	478,223
÷ Total HCF per Tier	**2,166,786**	**1,273,906**	**855,128**	**478,223**
Cost-of-Service per Unit (HCF)	**$4.06**	**$3.16**	**$3.07**	**$4.03**

Single Family Unit Cost Calculation	Tier 1	Tier 2	Tier 3	Tier 4
Maximum Hour Component				$4.03
Maximum Day Component			$3.07	$3.07
Average Day Component		$3.16	$3.16	$3.16
Base Day Component	$4.06	$4.06	$4.06	$4.06
Unit Cost per HCF (by Tier)	**$4.06**	**$7.23**	**$10.30**	**$14.33**

[1] Net revenue requirement from Table 4-4.

B. Multi-Family Residential Quantity Charges

The multi-family quantity charge rate structure is also tiered. The derivation of the multi-family quantity charge rate structure follows the same steps as the single family quantity charge rate structure. The size of the multi-family tiers is based on the demand pattern for multi-family customers using AMI data. For single family customers, the demand pattern is broader than it is for multi-family customers because of the variation in dwelling unit size, which is larger for single family customers, and in lot size, which for multi-family customers consists of common landscape area, if any. In both cases, smaller dwelling and lot sizes result in a much narrower range of demand for multi-family customers, as shown in **Table 5-3.** The separation between base, non-seasonal demand and peak demand is so close that the number of tiers for multi-family customers should be reduced from the current four tiers to two tiers to avoid tiers that are only one HCF in size.

Table 5-3. Multi Family Tier Structure - Breakpoints

Multi Family	Base Day	Average Day	Maximum Day	Maximum Hour
HCF per Day[1]	1,890	2,072	2,203	
÷ days per billing period	60	60	60	
HCF per billing period	113,389	124,320	132,162	
÷ Multi Family dwelling units	13,645	13,645	13,645	
Average flow per dwelling unit (HCF)	**8**	**9**	**10**	**> 10**

[1] Source: 2017 AMI data.

It is recommended that the Tier 1 breakpoint for the proposed rate structure be set at 8 HCF, which is the base day demand as shown in **Table 5-3**. With this breakpoint, the proposed Tier 1 rate remains at a similar amount as the current Tier 1 rate and the proposed Tier 2 rate is comparable to the current Tier 4 rate. With this design, the proposed Tier 1 rate remains affordable for base day demand, which includes minimal peaking. The proposed Tier 2 rate covers the costs associated with higher rates of peaking, which are attenuated compared to single family peaking but that nonetheless exist.

Table 5-4 shows the calculation of the per-unit cost to be paid by both Inside and Outside City multi-family customers, before adjustments for general fund contributions for non-operating lease revenue and general fund service reimbursements. The total revenue requirement for the class was distributed across the tiers as shown in **Table 4-4.**

Table 5-4. Multi Family Tier Structure - Rates

	Tier 1	**Tier 2**		
Multi Family Cost-of-Service per Unit	Base Day	Average Day	Maximum Day	Maximum Hour
Demand services revenue requirement[1]	**$5,016,593**	**$1,376,746**	**$527,344**	**$161,921**
Demand per Tier				
Tier 1: 0 - 8 HCF per Dwelling Unit	746,582			
Tier 2: Over 8 HCF per Dwelling Unit	261,082	261,082	261,082	261,082
÷ Total HCF per Tier	**1,007,664**	**261,082**	**261,082**	**261,082**
Cost-of-Service per Unit (HCF)	**$4.98**	**$5.27**	**$2.02**	**$0.62**

Multi Family Unit Cost Calculation	Tier 1	Tier 2
Maximum Hour Component		$0.62
Maximum Day Component		$2.02
Average Day Component		$5.27
Base Day Component	$4.98	$4.98
Unit Cost per HCF (by Tier)	**$4.98**	**$12.89**

Note: Numbers may not sum exactly due to rounding

[1] Net revenue requirement from Figure I-5.

C. Commercial Quantity Charges

The commercial quantity charges are a uniform, untiered rate that does not vary depending on the level of consumption. This structure has been in place for over ten years. We recommend maintaining the current structure because the commercial class is not homogeneous the way the residential classes are. The types of customers, the amounts of their water use, and the seasonality of their water use are so diverse as to make it problematic to determine the location of breakpoints. For that reason, tiered rates are not well suited for the commercial customer class.

Table 5-5 shows the calculation of the per-unit cost to be paid by both Inside and Outside City commercial customers, before adjustments for general fund contributions for non-operating lease revenue and general fund service reimbursements. The total revenue requirement for the commercial class was distributed across the tiers as shown in **Table 4-4.**

Table 5-5. Calculation of Commercial Quantity Charge Rate
(before General Fund contribution adjustments)

Commercial Cost-of-Service per Unit	Uniform Rate - No Tiers			
	Base Day	Average Day	Maximum Day	Maximum Hour
Demand services revenue requirement[1]	**$5,473,576**	**$1,770,767**	**$1,005,405**	**$156,456**
÷ Total HCF	**1,143,890**	**1,143,890**	**1,143,890**	**1,143,890**
Cost-of-Service per Unit (HCF)	**$4.79**	**$1.55**	**$0.88**	**$0.14**

Commercial Unit Cost Calculation	Uniform Rate
Maximum Hour Component	$0.14
Maximum Day Component	$0.88
Average Day Component	$1.55
Base Day Component	$4.79
Unit Cost per HCF	**$7.35**

D. Quantity Charge Rate Adjustments

The quantity charge rates summarized in **Table 5-6** reflect the cost to provide service before adjustments for contributions and services provided by the City's General Fund. At this point, both Inside City and Outside City customers would pay the same quantity charge rates because the services provided to Inside and Outside City customers are approximately the same.

Table 5-6. Summary of Cost-of-Service Quantity Charge Rates
(before General Fund contribution adjustments)

	Tier Size	$/HCF
Single Family[1]		
Tier 1	0 - 26 HCF	$4.06
Tier 2	27 - 48 HCF	$7.23
Tier 3	49 - 86 HCF	$10.30
Tier 4	Over 86 HCF	$14.33
Multi Family[2]		
Tier 1	0 - 8 HCF	$4.98
Tier 2	Over 8 HCF	$12.89
Commercial[3]	no tiers	$7.35

[1] From Table 5-2
[2] From Table 5-4
[3] From Table 5-6

During our analysis, we found the City's General Fund has contributed to the Water Enterprise in two ways: 1) the General Fund has reimbursed the Water Enterprise for the lease of two properties owned by the Water Enterprise but leased out at below market rates; and, 2) the General Fund has incurred costs to serve water customers for public safety services, governmental facilities, and right-of-way maintenance. These contributions have not been accounted for in the revenue requirement used to derive the quantity charge rates shown in **Table 5-6**. The contributions (one of cash and one of services) impact the quantity charge rates in different ways.

The following subsections discuss the rationale and calculations for adjusting the quantity charge rates for Inside City and Outside City customers. The adjusted quantity charge rates are summarized in **Section 5.3.E**.

Non-Operating Lease Revenue Credit

The Water Enterprise owns two properties that are no longer used to provide water service. One property is located at 333 La Cienega/Robertson Yard and was formerly the site of the City's water treatment plant. The other property is located at 345 Foothill and previously used by Water Enterprise for storage. Both properties are now leased for non-utility purposes. The City has entered into leases of these properties, at below-market rates, and has agreed to reimburse the Water Enterprise at market rates starting in FY 2016-17. The differential between the market and below-market rates has been estimated (based on a market survey done by the City) to be $3,109,000.

The revenue from the general fund for these leases will be credited to the quantity charge rates shown in **Table 5-6**, for both Inside City and Outside City customers because these revenues are the result of leasing properties that are owned by the Water Enterprise and both Inside City and Outside City customers support the Water Enterprise. **Table 5-7** shows the calculation and the resulting credit to each tier within each customer class at $0.72 per HCF. Originally, the Public Works Commission was presented with a recommendation which provided the lease revenue credit to only the Inside City customers, which resulted in a $0.82 per HCF credit to Inside City customers and no credit to Outside City customers. However, the Public Works Commission has recommended spreading the lease revenue credit to both Inside City and Outside City customers.

Table 5-7. Quantity Charge Rate Adjustment for Lease Revenue Credit

	FY 2018-19
Lease Revenue Contributions	$3,109,000
Total Projected Flow (HCF)	4,318,340
Lease Revenue Credit ($/HCF)	$0.72

General Fund Services Provided to the Water Enterprise

Generally speaking, City enterprise funds receive administrative services from the General Fund for which reimbursement is appropriately due. One category of these services is considered governmental overhead of which the City Manager, City Attorney, Finance, IT, and Human Resources are examples. The reimbursements from the enterprises are typically based on overhead cost allocation plans that derive the reimbursements using commonly accepted cost allocation formulae. The Water Enterprise currently reimburses the General Fund for overhead through the annual budgeting process.

A second category of services is related to specific activities that are directly charged to the enterprise. Public Works engineering associated with enterprise capital improvements is an example. The Water Enterprise also reimburses the General Fund for these services.

A third category of services is typically not considered to be overhead (therefore not included in the annual overhead cost allocation payment from the Water Enterprise to the General Fund) and is not charged directly as is the case with the second category. These services can include public safety, the use of governmental facilities such as city halls and corporation yards, and right-of-way maintenance.

As part of the cost of service analysis, we conducted a cost-based analysis[3] which indicated the City's General Fund is projected to incur approximately $2,440,000 in costs to

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[3] *Cost Allocation Study*. Prepared for the City of Beverly Hills by HF&H Consultants, LLC. November 6, 2017.

provide public safety, governmental facilities, and right-of-way maintenance to the Water Enterprise. Of the total $2,440,000, the General Fund incurs $2,015,000 per year to serve Inside City customers and $425,000 per year to serve Outside City customers.

For Inside City customers, these costs are covered by property taxes paid to the City; therefore, no adjustment to the quantity charge rates will be made to the Inside City customers for this item.[4]

Outside City customers do not contribute property taxes to the City; therefore, an adjustment needs to be made to the Outside City quantity charges rates so the General Fund can recoup the cost of these services. The reimbursement by Outside City customers (through the quantity charge rate adjustment) for public safety services, governmental facilities, and right-of-way maintenance is required to maintain parity with Inside City customers, which has previously been paying the entire cost through property tax revenue.

The entire $425,000 cost can be recovered by adding $0.82 per HCF **(**see **Table 5-8)** to the Outside City quantity charges for its single family, multi family, and commercial customers.

Table 5-8. Quantity Charge Rate Adjustment for General Fund Services

		Inside City Customers				Outside City Customers			
Service	**FY 2018-19 Projected Cost[1]**	Allocation[2]		Less: Amount Covered by Property Taxes	Net needed from Rates	Allocation[2]		Less: Amount Covered by Property	Net needed from Rates
Public Safety	$743,050	82.6%	$613,759	($613,759)	$0	17.4%	$129,291	$0	$129,291
Government Facility	$359,066	82.6%	$296,588	($296,588)	$0	17.4%	$62,477	$0	$62,477
Right-of-Way Maintenance	$1,340,947	82.6%	$1,107,622	($1,107,622)	$0	17.4%	$233,325	$0	$233,325
	$2,443,063			($2,017,970)	$0			$0	$425,093
								Proj. FY 2018-19 Flow (HCF)	516,562
				Quantity Charge rate adjustment:	None	Quantity Charge rate adjustment: ($ per HCF)			$0.82

[1] Cost Allocation Study. Prepared for the City of Beverly Hills by HF&H Consultants, LLC. November 6, 2017.

[2] Based on proportional share of total water connections

E. Adjusted Quantity Charge Rates

Table 5-9 summarizes the recommended FY 2018-19 quantity charge rates, to be effective March 8, 2019. The recommended rates reflect the cost of service calculations that resulted in the common FY 2018-19 quantity charge rates paid by both Inside City and Outside City customers (see **Table 5-6**), with the recommended adjustments to reflect the contributions made by the City's General Fund (discussed in **Section 5.3.B**).

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[4] The City plans to continue to cover Beverly Hills' share of these three enterprise reimbursements with property tax revenue and not to include them in the Inside City quantity charge water rates.

Table 5-9. Recommended FY 2018-19 Quantity Charge Rates (effective 3/8/2019)

		Cost-of-Service Analysis	Adjustments		
	Tier Size	$/HCF[1]	Lease Revenue[2]	General Fund Cost Allocation[3]	Total ($/HCF)
Inside City					
Single Family					
Tier 1	0 - 26 HCF	$4.06	($0.72)	$0.00	$3.34
Tier 2	27 - 48 HCF	$7.23	($0.72)	$0.00	$6.51
Tier 3	49 - 86 HCF	$10.30	($0.72)	$0.00	$9.58
Tier 4	Over 86 HCF	$14.33	($0.72)	$0.00	$13.61
Multi Family					
Tier 1	0 - 8 HCF	$4.98	($0.72)	$0.00	$4.26
Tier 2	Over 8 HCF	$12.89	($0.72)	$0.00	$12.17
Commercial		$7.35	($0.72)	$0.00	$6.63
Outside City					
Single Family					
Tier 1	0 - 26 HCF	$4.06	($0.72)	$0.82	$4.16
Tier 2	27 - 48 HCF	$7.23	($0.72)	$0.82	$7.33
Tier 3	49 - 86 HCF	$10.30	($0.72)	$0.82	$10.40
Tier 4	Over 86 HCF	$14.33	($0.72)	$0.82	$14.43
Multi Family					
Tier 1	0 - 8 HCF	$4.98	($0.72)	$0.82	$5.08
Tier 2	Over 8 HCF	$12.89	($0.72)	$0.82	$12.99
Commercial		$7.35	($0.72)	$0.82	$7.45

[1] From Table 5-6
[2] From Table 5-7
[3] From Table 5-8

Table 5-10 compares the current and recommended quantity charge rates to be effective March 8, 2019 (derived in **Table 5-9**) with subsequent 3% annual adjustments, which corresponds with the respective annual increases in the Water Enterprises revenue requirement as shown in **Table 3-2.**

Table 5-10. Current and Recommended Quantity Charge Rates

Current Quantity Charge Rates			Recommended Quantity Charge Rates					
					$/HCF			
	Tier Size	$/HCF		Tier Size	3/8/2019	1/1/2020	1/1/2021	1/1/2022
Inside City								
Single Family			**Single Family**					
Tier 1	0 - 10 HCF	$4.02	Tier 1	0 - 26 HCF	$3.34	$3.44	$3.54	$3.65
Tier 2	11 - 55 HCF	$5.30	Tier 2	27 - 48 HCF	$6.51	$6.71	$6.91	$7.12
Tier 3	56 - 120 HCF	$8.36	Tier 3	49 - 86 HCF	$9.58	$9.87	$10.17	$10.48
Tier 4	Over 120 HCF	$16.15	Tier 4	Over 86 HCF	$13.61	$14.02	$14.44	$14.87
Multi Family			**Multi Family**					
Tier 1	0 - 4 HCF	$4.02	Tier 1	0 - 8 HCF	$4.26	$4.39	$4.52	$4.66
Tier 2	5 - 9 HCF	$5.30	Tier 2	Over 8 HCF	$12.17	$12.54	$12.92	$13.31
Tier 3	10 - 16 HCF	$8.36						
Tier 4	Over 16 HCF	$16.15						
Commercial		$6.86	**Commercial**		$6.63	$6.83	$7.03	$7.24
Outside City								
Single Family			**Single Family**					
Tier 1	0 - 10 HCF	$5.01	Tier 1	0 - 26 HCF	$4.16	$4.28	$4.41	$4.54
Tier 2	11 - 55 HCF	$6.63	Tier 2	27 - 48 HCF	$7.33	$7.55	$7.78	$8.01
Tier 3	56 - 120 HCF	$10.45	Tier 3	49 - 86 HCF	$10.40	$10.71	$11.03	$11.36
Tier 4	Over 120 HCF	$20.18	Tier 4	Over 86 HCF	$14.43	$14.86	$15.31	$15.77
Multi Family			**Multi Family**					
Tier 1	0 - 4 HCF	$5.01	Tier 1	0 - 8 HCF	$5.08	$5.23	$5.39	$5.55
Tier 2	5 - 9 HCF	$6.63	Tier 2	Over 8 HCF	$12.99	$13.38	$13.78	$14.19
Tier 3	10 - 16 HCF	$10.45						
Tier 4	Over 16 HCF	$20.18						
Commercial		$8.58	**Commercial**		$7.45	$7.67	$7.90	$8.14

5.4 SERVICE CHARGE RATES

Service charge rates are fixed rates charged per account that are billed each billing period. The service charge rates are graduated in proportion to the capacity of the service serving a property. Service charge rates are charged for water service and for those customers with separate services for fire service.

A. Water Service Charge Rates

The cost of service analysis determined how much of the revenue requirement is attributable to the customer service function. The function has two components – customer accounts and customer capacity – each of which is itemized in the cost of service analysis in **Table 5-12**. Costs attributable to customer accounts are allocated to customers in proportion to the number of accounts. Costs attributable to customer capacity are allocated to customers in proportion to the capacity of their services. The sum of the two components equals the service charge rate per connection.

Table 5-11 lists the units of service corresponding to each of the cost components. The 9,923 meters are used for apportioning the customer accounts cost component.

Capacity costs associated with the distribution system are apportioned among the connections in proportion to the capacity associated with each connection. Accounts are converted to Equivalent Meter Units (EMUs) to apportion the customer capacity cost component. An EMU represents the number of 1-inch meters to which a larger meter is equivalent. For example, a 2-inch meter provides 3.2 times as much capacity as a 1-inch meter. The capacity multipliers are based on the safe maximum operating capacity by meter size per the current AWWA standards included in Table B-2 of AWWA's M-1 manual, seventh edition. For example, the 1,121 2-inch meters equal 3,587 EMUs. There are 16,251 total EMUs. In effect, the 9,923 services of various sizes have the equivalent capacity as 16,251 1-inch meters.

Table 5-11. Service Charge Units of Service

Service Size	Total # of Meters	Meter Ratings (gpm)	Capacity Multiplier*	EMUs
	a	b	c = b ÷ 50	d = a * c
1"	6,671	50	1.00	6,671
1-1/2"	1,879	100	2.00	3,758
2"	1,121	160	3.20	3,587
3"	147	320	6.40	941
4"	87	500	10.00	870
6"	17	1,000	20.00	340
8"	0	1,600	32.00	0
10"	1	4,200	84.00	84
Total Meters	**9,923**		**Total EMUs**	**16,251**

* Capacity multiplier assumes 1" meter = 1 EMU = 50 gals/min

Table 5-12 derives the unit costs for the customer accounts and customer capacity cost components. Each account is allocated $12.07 for the customer account cost component. That amount represents the costs incurred to maintain an account regardless of the capacity of the service. Each account is also allocated $36.91 per EMU. That amount represents a portion of the cost of providing distribution system capacity for each account, and increases based on the capacity of the meter.

Table 5-12. Service Charge Unit Costs

FY 2018-19 Customer Service Expenses	Customer Account Component	Customer Capacity Component	Total
O&M Expenses	1,314,939	1,699,297	$3,014,236
Capital Expenses	$560,872	$511,989	$1,072,861
Administrative Overhead	$173,886	$2,454,815	$2,628,701
Non-Operating Revenue	($1,139,780)	($246,875)	($1,386,655)
Total FY 2018-19	**$909,918**	**$4,419,226**	**$5,329,143**
Less: Fire Service Revenue	($191,542)	($820,376)	($1,011,918)
Net Revenue Requirement	$718,376	$3,598,850	$4,317,225
Units of Service	**9,923**	**16,251**	
	Meters	EMUs	
Unit Cost (bi-monthly)	**$12.07**	**$36.91**	
	per Account	per EMU	

Source: FY 2015-19 Customer Service Expenses from Table 4-3
Source: Units of service from Figure 5-11

Table 5-13 combines the customer service and capacity components into a single service charge for each size service.

Table 5-13. Recommended Monthly Service Charge Rates (effective 3/8/2019)

Service Size	Account Component ($/bi-month)	Capacity Component $/EMU	 Capacity Multiplier	 Total	Fixed Service Charge ($/bi-month)
	a	b	c	d = b * c	e = a + d
1"	$12.07	$36.91	1.00	$36.91	$48.97
1-1/2"	$12.07	$36.91	2.00	$73.82	$85.88
2"	$12.07	$36.91	3.20	$118.11	$130.17
3"	$12.07	$36.91	6.40	$236.22	$248.28
4"	$12.07	$36.91	10.00	$369.09	$381.16
6"	$12.07	$36.91	20.00	$738.18	$750.25
8"	$12.07	$36.91	32.00	$1,181.09	$1,193.15
10"	$12.07	$36.91	84.00	$3,100.36	$3,112.42

Source: Figures 5-11 and 5-12.

Tables 5-14 compares the current and recommended service charge rates. Historically, the City charged separate rates for Inside and Outside City customers. We recommend a single set of service charge rates that does not differentiate between a customer's location within the City's service area. In this way, the increased cost of serving Outside City customers will be recovered from only the quantity Charge rates.

The service charge rates projected for 1/1/2020 and the subsequent two years are based on the proposed rates to be effective March 8, 2019 with 3% annual adjustments, which corresponds with the respective annual increases in the Water Enterprises revenue requirement as shown in **Figure 3-2.**

Table 5-14. Current and Recommended Water Service Charge Rates

	Current		Recommended (Inside and Outside City)			
Meter Size	Inside City	Outside City	3/8/2019	1/1/2020	1/1/2021	1/1/2022
	$ per bi-monthly bill		$ per bi-monthly bill			
1"	$44.66	$55.83	$48.97	$50.44	$51.95	$53.51
1.5"	$77.41	$96.77	$85.88	$88.46	$91.11	$93.84
2"	$116.72	$145.91	$130.17	$134.08	$138.10	$142.24
3"	$208.43	$260.53	$248.28	$255.73	$263.40	$271.30
4"	$339.44	$424.30	$381.16	$392.59	$404.37	$416.50
6"	$666.96	$833.69	$750.25	$772.76	$795.94	$819.82
8"	$1,071.86	$1,339.82	$1,193.15	$1,228.94	$1,265.81	$1,303.78
10"	$1,857.96	$2,322.44	$3,112.42	$3,205.79	$3,301.96	$3,401.02

B. Fire Service Charge Rates

All customers pay service charges based on the size of their connection. Some customers have additional Fire Service connections. Fire Service connections are for sprinkler systems that provide water on a stand-by basis for fire suppression. Revenue from fire service charges covers about 3% of the total revenue requirement. The cost of service analysis is currently limited in deriving the full cost of fire service because costs directly related to fire service are not identified in the budget. As a result, the allocation is limited by the level of detail in the budget's cost breakdown. For that reason, it would be appropriate to maintain the current Fire Service rates on March 8, 2019 until such time as budget detail is sufficient to allow for thorough cost of service analysis.

It is recommended that the Outside City Fire Service rates be set equal to the Inside City Fire Service rates effective March 8, 2019. Subsequently, each January 1 thereafter, we recommend 3% annual adjustments which correspond with the respective annual increases in the projected revenue requirement as shown in **Figure 3-2.**

Table 5-15. Current and Recommended Bi-monthly Fire Service Rates

	Current		Recommended (Inside and Outside City)			
Meter Size	Inside City	Outside City	3/8/2019	1/1/2020	1/1/2021	1/1/2022
2" or smaller	$27.20	$34.00	$27.20	$28.02	$28.86	$29.73
2 1/2"	$40.56	$50.71	$40.56	$41.78	$43.03	$44.32
3"	$59.08	$73.86	$59.08	$60.85	$62.68	$64.56
4"	$114.11	$142.64	$114.11	$117.53	$121.06	$124.69
6"	$311.62	$389.53	$311.62	$320.97	$330.60	$340.52
8"	$652.26	$815.32	$652.26	$671.83	$691.98	$712.74
10"	$1,164.63	$1,455.79	$1,164.63	$1,199.57	$1,235.56	$1,272.63

5.5 IRRIGATION CUSTOMER CLASS AND RATES

Meeting the needs for irrigation is an increasing challenge in California. Legislation has been in place that calls for a 20% reduction in urban water use by 2020. The Governor recently signed SB 606 which places further conditions on urban water suppliers to eliminate excessive water use. Irrigation is one of the easiest types of water use to eliminate excessive use. Improving irrigation efficiency is facilitated by separately metering irrigation. This is recognized by the City, which is requiring new customers with potentially significant irrigation to install separate irrigation meters. Requiring the installation of separate irrigation services leads to creating an irrigation class or classes.

It is not uncommon to see a single irrigation class. This class is typically for large turf irrigation at municipal parks, industrial parks, and commercial sites such as golf courses. Residential irrigation is usually not included. In Beverly Hills' case, separate irrigation meters can be mandatory for any class – single family, multi family, and commercial (which includes municipal irrigation). In this case, it is appropriate to establish irrigation classes within the single family, multi family, and commercial classes.

A. Review of Current Irrigation Water Use

In our review of water use during 2017, we found the following:

- There are currently 245 irrigation meters in place, which is 2.5% of the total meters currently connected.
- The aggregated outdoor water use from irrigation meters is currently only 3% of total water use in the City by all customer classes.
- The quantity charge revenue from the aggregated irrigation customers is 12% of the total seasonal quantity charge revenue. This is not surprising because irrigation demand is inherently seasonal. If the irrigation class were to double in size, it could amount to a quarter of the seasonal demand.
- In non-drought years, variations in seasonal water demand can fluctuate by 5% to 10%, which is slightly greater than the current total demand of the aggregated irrigation customers.

- The growth in the number of irrigation services is likely to vary by irrigation subclass.

None of the irrigation subclasses is currently large enough to warrant a separate rate because the number of services in each subclass is so small.

B. Recommendation

The proposed irrigation subclasses would be charged the same rates as the domestic subclass within each class. These irrigation customers would pay service and quantity charges as though they were domestic customers. However, during water shortages, it is proposed that irrigation water use would be reduced six times more than domestic water use.

It was recommended that the City review the irrigation quantity charge rates in the future to evaluate whether to continue to charge irrigation customers the same quantity charge rates as the domestic customers in the same class.

The point at which the irrigation customers become a large enough class in the aggregate to warrant a separate rate is not an absolute point. The class should be large enough so that seasonal fluctuations are not so great that deriving cost allocation factors based on demand are reasonably stable. The problem is compounded because irrigation demand is inherently seasonal. Multi-year averages of irrigation demand can smooth the fluctuations.

A doubling in size of the irrigation class would be a reasonable point to re-evaluate whether a separate rate is warranted for the aggregated irrigation class. However, at twice its size, the irrigation class would still be a distant third in size compared with the domestic subclasses. At that time, the question should also be considered as to whether a change is warranted simply because it becomes possible to calculate a separate irrigation rate with reasonable stability. It is possible that, if the cost of service analysis accounts for the fact that irrigation water may be interruptible during water shortage conditions, therefore less reliable, a new irrigation rate may be lower than continuing to charge the irrigation subclasses the same rate as the domestic subclasses.

5.6 WATER SHORTAGE REVENUE STABILIZATION FACTORS

During prolonged shortages, customers are required to conserve or even ration their water use. These shortages can include locally declared water shortages caused by facility operations, State mandated reductions, or natural disasters including droughts. The magnitude of the water savings can significantly reduce water sales revenue from quantity charges.

During shortages, costs do not decrease in direct proportion to decreases in water use because typically over 70% of the costs are fixed regardless of how much water is supplied. Hence, a 10% reduction in water use may only reduce costs about 3% (i.e., 10% of the 30% of costs that vary in proportion to water use). Because the City only receives 15% of its revenue from fixed charges, a 10% reduction in water sales results in an 8.5% reduction in revenue (i.e., 10% of 85% of the revenue from quantity charges). This means that, in a year-long 10% shortage, 97% of the costs are incurred while only 91.5% of the revenue is received, which is a 5.5% revenue shortfall.

Ten percent shortages are not uncommon or as severe as the 2016 shortage, when the State mandated a 32% reduction for the City. Reserves may be able to cover the revenue shortfall during brief rationing periods. For longer or more severe rationing periods, rate increases are needed to offset this revenue shortfall in order to maintain service levels. On average, the rate increases are designed to be revenue neutral. In other words, customers that reduce their demand by the required amount will pay quantity charge rates, which when multiplied by their reduced demand, will generate only enough quantity charge revenue to cover costs.

The City proposes to use Water Shortage Revenue Stabilization Factors to make the rate adjustments that are needed during shortages declared by the City Council to offset the revenue shortfalls caused by conservation. Although the rate increases are designed to be revenue neutral, they must be implemented in compliance with the Proposition 218 protest process. Revenue stabilization adjustments can be implemented that would eliminate the need for a Proposition 218 process every time revenue-neutral adjustments are needed during shortages.

A. Methodology

Since the passage of Proposition 218, water shortages have occurred that have led an increasing number of water suppliers to adopt revenue stabilization adjustments that do not trigger the Proposition 218 protest process each time an adjustment is made. This is accomplished by including the Water Shortage Revenue Stabilization Adjustment procedure in the Proposition 218 notice at the time rates are adopted in compliance with Proposition 218. The notice describes the process, which rate payers have the right to protest. Barring a majority protest, the adjustment process is adopted as part of the rate increase and can be implemented as needed during the term of the adopted rate increases.

The adjustment process includes factors by which quantity charge rates are adjusted in conjunction with the reduction stages in the Water Shortage Contingency Plan. The factors are only applied to the quantity charge rates and not to the service charge rates to give effect only to customer's changes in water demand. The City's current *Water Shortage Contingency Plan* is based on the same reduction in water use for all classes in each of the five stages. As part of the recommended Water Shortage Revenue Stabilization Adjustments, it is proposed that the shortage reductions will vary by customer class. Each class' reduction will be determined by reducing "outdoor" water use (seasonal water use) six times more than "indoor" (average winter water use) water use.[5] It is assumed that seasonal "outdoor" water demand is primarily for irrigation, which is a lower beneficial use than non-seasonal "indoor" demand, which is primarily related to health and safety needs.

B. Analysis

Based on calendar year 2017 AMI data, the resulting reductions are summarized in **Table 5-16.** The reductions shown represent the customer class reductions required to achieve the reduction associated with each shortage stage. The customer class reductions are greater or less than the overall average for each stage depending on how much of each class' water demand is seasonal.

Table 5-16. Shortage Reductions by Class

Shortage Reductions By Class					
	Stage A	Stage B	Stage C	Stage D	Stage E
Class	5% Reduction	10% Reduction	20% Reduction	30% Reduction	50% Reduction
Single Family	6%	12%	24%	36%	58%
Multi Family	3%	5%	11%	16%	31%
Commercial	4%	7%	15%	22%	40%
Irrigation	11%	22%	45%	67%	100%

Table 5-17 shows the calculation of each customer class' respective shortage reduction required during each shortage stage. The annual demand for each class is separated into indoor and outdoor water use where indoor water use is defined as the period from January through March multiplied times four to get the annualized indoor water use over 12 months. Subtracting indoor water use from the total annual water use determines the seasonal outdoor water use. In the case of the irrigation customer class, all of the demand is considered to be outdoor water use.

The percentage reductions for each customer class required to achieve the overall reduction for a particular stage are derived so that outdoor consumption is reduced six times indoor consumption. In a Stage A shortage, a 1.9% reduction in indoor water use and an 11.4% reduction in outdoor water use are required to achieve an overall 5% reduction. Applying the same reduction factors to each class results in different overall reductions for the class based on the relative proportions of their indoor and outdoor water use.

To achieve the 5% Stage A reduction, single family and irrigation customers are required to conserve more than 5% because they have higher seasonal use compared to multi-

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[5] This 6-to-1 reduction formula was implemented by the San Francisco Public Utilities Commission during the 1987-1992 drought.

family and commercial customers. This pattern is consistently repeated for Stages A, B, C, and D. Note that the 50% reduction required in Stage E is so great that all outdoor water use is eliminated and indoor water use has to be cut back 24.5%, which is a 4.8-to-1.0 relationship, not 6.0-to-1.0. In Stage E, a 100% reduction in water use by irrigation customers is required.

Table 5-17. Calculation of Shortage Reductions by Stage and Customer Class

5% Stage A Reduction

	Baseline Annual Demand (HCF)			Reductions					
Class	**Total**	**Indoor**	**Outdoor**	**Indoor**	**Outdoor**	**Indoor**	**Outdoor**	**Total**	**Total**
Single Family	2,124,994	1,172,836	952,157	1.9%	11.4%	22,239	108,326	130,564	6%
Multi Family	737,223	676,030	61,193	1.9%	11.4%	12,818	6,962	19,780	3%
Commercial	898,704	717,328	181,376	1.9%	11.4%	13,602	20,635	34,236	4%
Irrigation	113,132	-	113,132	1.9%	11.4%	-	12,871	12,871	11%
Total	3,874,052	2,566,194	1,307,859	1.9%	11.4%	48,659	148,793	197,452	**5%**

10% Stage B Reduction

	Baseline Annual Demand (HCF)			Reductions					
Class	**Total**	**Indoor**	**Outdoor**	**Indoor**	**Outdoor**	**Indoor**	**Outdoor**	**Total**	**Total**
Single Family	2,124,994	1,172,836	952,157	3.7%	22.3%	43,633	212,537	256,170	12%
Multi Family	737,223	676,030	61,193	3.7%	22.3%	25,150	13,659	38,809	5%
Commercial	898,704	717,328	181,376	3.7%	22.3%	26,687	40,486	67,173	7%
Irrigation	113,132	-	113,132	3.7%	22.3%	-	25,253	25,253	22%
Total	3,874,052	2,566,194	1,307,859	3.7%	22.3%	95,470	291,936	387,405	**10%**

20% Stage C Reduction

	Baseline Annual Demand (HCF)			Reductions					
Class	**Total**	**Indoor**	**Outdoor**	**Indoor**	**Outdoor**	**Indoor**	**Outdoor**	**Total**	**Total**
Single Family	2,124,994	1,172,836	952,157	7.4%	44.6%	87,265	425,075	512,340	24%
Multi Family	737,223	676,030	61,193	7.4%	44.6%	50,300	27,318	77,619	11%
Commercial	898,704	717,328	181,376	7.4%	44.6%	53,373	80,972	134,346	15%
Irrigation	113,132	-	113,132	7.4%	44.6%	-	50,506	50,506	45%
Total	3,874,052	2,566,194	1,307,859	7.4%	44.6%	190,939	583,871	774,810	**20%**

30% Stage D Reduction

	Baseline Annual Demand (HCF)			Reductions					
Class	**Total**	**Indoor**	**Outdoor**	**Indoor**	**Outdoor**	**Indoor**	**Outdoor**	**Total**	**Total**
Single Family	2,124,994	1,172,836	952,157	11.2%	67.0%	130,898	637,612	768,510	36%
Multi Family	737,223	676,030	61,193	11.2%	67.0%	75,451	40,978	116,428	16%
Commercial	898,704	717,328	181,376	11.2%	67.0%	80,060	121,459	201,518	22%
Irrigation	113,132	-	113,132	11.2%	67.0%	-	75,759	75,759	67%
Total	3,874,052	2,566,194	1,307,859	11.2%	67.0%	286,409	875,807	1,162,216	**30%**

50% Stage E Reduction

	Baseline Annual Demand (HCF)			Reductions					
Class	**Total**	**Indoor**	**Outdoor**	**Indoor**	**Outdoor**	**Indoor**	**Outdoor**	**Total**	**Total**
Single Family	2,124,994	1,172,836	952,157	24.5%	100.0%	287,551	952,157	1,239,708	58%
Multi Family	737,223	676,030	61,193	24.5%	100.0%	165,746	61,193	226,939	31%
Commercial	898,704	717,328	181,376	24.5%	100.0%	175,871	181,376	357,247	40%
Irrigation	113,132	-	113,132	24.5%	100.0%	-	113,132	113,132	100%
Total	3,874,052	2,566,194	1,307,859	24.5%	100.0%	629,168	1,307,859	1,937,026	**50%**

The service charge rates are fixed and generate about 15% of the total rate revenue regardless of shortages. The remaining 85% of revenue is generated by the quantity charge rates. In deriving the revenue stabilization factors, the factors will only apply to the quantity charge rates because fluctuations in water use correlate with fluctuations in variable costs. Each customer class has its own set of revenue stabilization factors corresponding to its reduction in each stage of shortage.

The formula for the revenue stabilization factors comprises conservation and variable cost components. The conservation component adjusts to account for the required reduction in water demand. The variable cost component adjusts to account for the portion of variable costs that is covered by the quantity charges. The revenue stabilization factors are the product of the conservation component multiplied by the variable cost component. Each component is defined as follows:

Revenue Stabilization Factor = Conservation Component multiplied times Variable Cost Component, where

Conservation Component = $1/(1 - a)$, where

a = required percentage reduction, which varies by customer class.

Variable Cost Component = $(b - (c * a))/b$, where

a = required percentage reduction, which varies by customer class;

b = percentage of revenue from total service and quantity charges for all customer classes that is attributable to quantity charges, an amount that is currently 85%; and

c = percentage of total revenue requirement covered by service and quantity charges that varies based on fluctuations in demand, an amount that is currently 35%.[6]

The following example illustrates how the formula determined the 1.039 revenue stabilization factor in **Table 5-18** for the single family customer class in a Stage A shortage in which an overall conservation goal of 5% if required.

Conservation Component: $1/(1 - a) = 1/(1 - 0.0614) = 1.0654$, where

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[6] The cost of MWD water is the largest example of a variable cost, which varies with water demand.

a = required percentage reduction is 6.14% for the single family customer class (see **Figure V-17**, where a rounded 6% is shown).

Variable Cost Component: $(b - (c * a))/b$ = (0.85 - (0.35 * 0.0614))/0.85 = 0.9747, where

a = 6.14% reduction for single family customers in a Stage A shortage.

b = 85% of total rate revenue is generated by quantity charges; and

c = 35% of revenue requirement is related to variable costs.

Revenue Stabilization Factor = 1.0654 * 0.9747 = 1.0385 or 1.039 rounded.

The single family residential quantity charge rates in effect under non-shortage conditions would be multiplied by 1.039 to derive the quantity charge rates to be in effect during a Stage A water shortage. **Table 5-18** shows the adjustment factors that would be applied to the rates that would normally be in effect absent declared shortages.[7]

Table 5-18. Water Shortage Revenue Stabilization Factors by Class

Revenue Stabilization Factors By Class					
	Stage A	**Stage B**	**Stage C**	**Stage D**	**Stage E**
Class	**5% Reduction**	**10% Reduction**	**20% Reduction**	**30% Reduction**	**50% Reduction**
Single Family	1.039	1.081	1.187	1.333	1.824
Multi Family	1.016	1.033	1.069	1.110	1.262
Commercial	1.023	1.048	1.103	1.170	1.388
Irrigation	1.076	1.169	1.474	2.192	n/a

To be applied to the non-shortage rates in effect prior to the shortage has been declared.

C. Implementation

The recommended water shortage revenue stabilization adjustments in **Table 5-18** are implemented only during periods of declared shortages. The adjustments can go in either direction from stage to stage depending on whether the level of reduction is increasing or decreasing during the shortage. At least 30 days prior to making the adjustment, notice must be provided to rate payers, which can be included in the customer's bills. No protest process is required.

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[7] In Stage E, there is no adjustment factor in **Table 5-18** for irrigation because irrigation is 100% curtailed. Irrigation water use in Stage E is prohibited and would be subject to sanctions.

They act similarly to the pass-through adjustment for the cost of MWD purchased water, which was incorporated into the Proposition 218 notice in last year's rate increase. The pass-through adjustment allows the City to adjust quantity charge rates to track any difference between the MWD rates that were included in the model and the actual rates adopted each year by MWD. The pass-through adjustment can also be made by providing 30-day notice in the customer bills without triggering the need for a Proposition 218 protest process.

5.7 WATER RELIABILITY CHARGE

The City Council is considering the development of local water supplies in order to diversify and expand its sources of supply. By doing so, reliability will be improved during shortages. In addition, the need to rely on purchased water from Metropolitan Water District will be reduced. In return for these benefits, a new, separate water reliability charge is proposed that would provide a steady source of funding over the lifecycle of the WEP project.

The water reliability charge will pay for the cost of developing local water supplies that will augment existing water supplies, thereby improving reliability by reducing the impact of water shortages. This new charge would be created so that customers will understand and help pay for the improved level of service that will lessen the level of cutback during shortages.

This new charge would be uniformly applied to all water use, on a per-HCF basis. The effect of applying an equal, uniform rate to all water use is that the same cost of additional reliability is paid for all water used by all customers. The principle is that all customers get the same benefit of improved reliability regardless of their customer class or their level of water use.

To determine the necessary per-unit charge to fund the La Brea Subarea water reliability project, we develop a 30-year cash flow model (See Appendix A-1 and A-2). The capital expenses are based on the La Brea Subarea Preliminary Design Report (PDR) prepared by Michael Baker International, in association with Richard C. Slade & Associates, LLC and Carollo Engineers. The La Brea Subarea project is anticipated to add 1,700 acre feet per year of additional ground water supply to the City, which amounts to approximately 18% of the Water Enterprise's total water supply. The project includes the following components:

1. Three (3) groundwater production wells in the La Brea Subarea
2. Raw water transmission main from the production wells to the Foothill Water Treatment Plant (approximately 4 miles)

The project is anticipated to be producing the 1,700 acre feet of groundwater by FY 2023-24. Projected expenses for the project are based on the PDR, which projects a cost of

$60.3M ($55.8 million in capital expenses and $4.5 million in additional staffing and O&M expenses; **Table 5-19**) to bring the La Brea Subarea wells to full production by FY 2023-24. Certain adjustments were made to the PDR cost projections through discussions with staff. For example, land acquisitions were originally projected to occur in FY 2016-17 and FY 2017-18; while some of the land was acquired in 2018, the remaining acquisitions are now projected to occur between now and the end of FY 2019-20. The land acquisition costs in the cash-flow analysis were inflated and shifted to later dates to reflect the new projections. After start up, operating costs are estimated to be $2.15 million 2018 dollars) annually.

Table 5-19. Projected Water Reliability Construction Costs

	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
Capital Expenses								
Preliminary Design Report	$0	$874,182	$0	$0	$0	$0	$0	
Land Acquisition (3rd Well Site)	$9,000,000	$2,787,250	$2,787,250	$0	$0	$0	$0	
CEQA	$0	$327,818	$0	$0	$0	$0	$0	
Final Design	$0	$1,678,092	$1,296,326	$1,335,216	$0	$0	$0	
Engineerings Svcs During Const.	$0	$542,766	$559,049	$575,821	$593,095	$610,888	$0	
Construction Mgmt and Inspection	$0	$687,503	$708,128	$729,372	$751,254	$773,791	$0	
Well Drilling (3 sites)	$0	$1,122,941	$2,313,258	$0	$0	$0	$0	
Transmission Main	$0	$0	$3,664,342	$3,774,272	$3,887,500	$0	$0	
Well Equipping (3 sites)	$0	$464,553	$0	$3,107,874	$3,201,110	$0	$0	
Treatment Plant	$0	$0	$0	$0	$3,092,381	$3,200,302	$0	
System Permitting & Testing	$0	$0	$0	$0	$0	$660,375	$680,186	
Total Capital Expenses	$9,000,000	$8,485,106	$11,328,354	$9,522,555	$11,525,340	$5,245,356	$680,186	$55,786,896
Operational Expenses								
O&M per PDR	$0	$0	$0	$347,782	$358,216	$368,962	$380,031	
Additional City Staffing								
Project Manager 3	$0	$206,837	$212,895	$219,135	$225,562	$232,182	$239,000	
Water Treatment Operator 1	$0	$0	$0	$0	$0	$163,573	$168,480	
Pump/Well Mechanic	$0	$109,273	$112,551	$115,927	$119,405	$122,987	$126,677	
Pump/Well Electrician	$0	$109,273	$112,551	$115,927	$119,405	$122,987	$126,677	
Total Operational Expenses	$0	$425,382	$437,997	$798,772	$822,588	$1,010,692	$1,040,866	$4,536,298
Annual Expenditures (until start up)	$9,000,000	$8,910,488	$11,766,351	$10,321,327	$12,347,928	$6,256,049	$1,721,052	$60,323,193

Due to the front loading of capital expenses during the first six to seven years of the project, simply raising water rates would be too much of a burden on current rate payers. Therefore, working with staff, and input from the Public Works Commission and Public Works Liaison Committee, we developed the following funding strategy, which would require a combination of the water reliability charge, issuing debt, and the use of reserves.

1. **$41.85 million Revenue Bond.** To be issued in FY 2019-20 for a 30-year term at 4% interest. Annual debt service payments would be made from revenues generated by the water reliability charge.

2. **Water Enterprise Reserves.** $12,500,000 in reserves is available during the construction period, on an as-needed basis. The reserves are drawn down during the construction period and subsequently restored as quickly as possible from revenues generated from the water reliability charge.
3. **Water Reliability Charge Revenue.** Revenue generated by the water reliability charge, over a 30-year period, will be used to cover annual O&M costs, restore reserves, and make debt service payments for any debt-funded costs during construction.

We developed a 30-year cash flow model to calculate the uniform quantity charge rates to be charged equally to Inside City and Outside City customers (see **Appendix A-1**), on all water use, and the same rate for all customer classes (i.e., single family, multi family, and commercial). Based on the funding strategy described above, the average unit cost equals $0.38 per HCF starting in 2019, with annual $0.01 increases through 2049.

The potential is being explored whereby the City of Beverly Hills' general fund would subsidize a portion of the water reliability charge for Inside City customers through a $10 million cash contribution during the construction phase of the project. With a $10 million subsidy, the water reliability charge for Inside City customers would be reduced from $0.38 per HCF to $0.23 per HCF starting in 2019. The Outside City customer rate would not change. We modeled the impacts of the $10 million cash contribution (see **Appendix A-2**). The $10 million contribution would reduce the amount of the revenue bond to be issued from $41.85 million to $31.85 million, saving approximately $7.1 million in interest expense over the 30-year period. The combination of the $10 million cash contribution and the $7.1 million in interest cost savings results in a subsidy to the Inside City water reliability charge of $0.15 per HCF. The Outside City customer water reliability charge remains unchanged. The results are summarized in **Table 5-20**.

Table 5-20. Summary of Water Reliability Charge Analyses and Recommended Rates

Assumptions:	**No GF Subsidy**	**With GF Subsidy**	
Bond (30yrs, 4.0%)	$41.85M	$31.85M	
Total Interest Incurred	$30.5M	$23.4M	
Contribution from Reserves	$12.5M	$12.5M	
General Fund Subsidy Amount	--	$10M	
Interest Savings from GF Subsidy	--	$7.1M	
Inside City Subsidy for 30 years ($/hcf)	$0.00	$0.15	
Rates per HCF			
Annual Rate Increase	1 cent per HCF	1 cent per HCF	
	Inside & Outside	**Inside**	**Outside**
Fiscal Year	$/HCF		
FY 2018-19 (Year 1)	$0.38	$0.23	$0.38
FY 2019-20	$0.39	$0.24	$0.39
FY 2020-21	$0.40	$0.25	$0.40
FY 2021-22	$0.41	$0.26	$0.41
FY 2022-23	$0.42	$0.27	$0.42
FY 2023-24	$0.43	$0.28	$0.43
FY 2024-25	$0.44	$0.29	$0.44
FY 2025-26	$0.45	$0.30	$0.45
FY 2026-27	$0.46	$0.31	$0.46
FY 2027-28	$0.47	$0.32	$0.47
FY 2028-29	$0.48	$0.33	$0.48
FY 2029-30	$0.49	$0.34	$0.49
FY 2030-31	$0.50	$0.35	$0.50
FY 2031-32	$0.51	$0.36	$0.51
FY 2032-33	$0.52	$0.37	$0.52
FY 2033-34	$0.53	$0.38	$0.53
FY 2034-35	$0.54	$0.39	$0.54
FY 2035-36	$0.55	$0.40	$0.55
FY 2036-37	$0.56	$0.41	$0.56
FY 2037-38	$0.57	$0.42	$0.57
FY 2038-39	$0.58	$0.43	$0.58
FY 2039-40	$0.59	$0.44	$0.59
FY 2040-41	$0.60	$0.45	$0.60
FY 2041-42	$0.61	$0.46	$0.61
FY 2042-43	$0.62	$0.47	$0.62
FY 2043-44	$0.63	$0.48	$0.63
FY 2044-45	$0.64	$0.49	$0.64
FY 2045-46	$0.65	$0.50	$0.65
FY 2046-47	$0.66	$0.51	$0.66
FY 2047-48	$0.67	$0.52	$0.67
FY 2048-49 (Year 30)	$0.68	$0.53	$0.68
Total Revenue from Charges (Year 1 through Year 30)			
Inside City Customers	$60.4M	$43.3M	
Outside City Customers	$8.0M	$8.0M	
Total	$68.8M	$51.4M	

SECTION 6. CUSTOMER BILL IMPACTS

Based on the recommended quantity charge rates summarized in **Table 5-10**, the recommended service charge rates summarized in **Table 5-14**, and the recommended water reliability charge rates summarized in **Table 5-20** (with general fund subsidy)**,** the bi-monthly customer bill impacts were evaluated.

Tables 6-1 through **6-3** provides sample bills impacts for Inside City customers. **Tables 6-4** through **6-6** provide sample bills impacts for Outside City customers. Each table includes the bill impacts for low (half of average), average, and high (three time average) water use for each customer class. The multi-family sample bill impacts are based on a 10-unit complex which is the most-common size within the City's service area.

Table 6-1. Bill Impacts – Inside City Customers – Low Water Use

	Meter Size	Water Use (HCF)	Current Bill	Proposed 3/8/2019	1/1/2020	1/1/2021	1/1/2022
Single Family	1"	24					
Service Charge			$44.66	$48.97	$50.44	$51.95	$53.51
Quantity Charge			$114.40	$80.16	$82.56	$85.04	$87.59
Water Reliability Charge			$0.00	$5.52	$5.76	$6.00	$6.24
Total Bill			$159.06	$134.65	$138.76	$142.99	$147.34
$ Change				($24.41)	$4.11	$4.23	$4.35
Multi Family (10 units)	1"	45					
Service Charge			$44.66	$48.97	$50.44	$51.95	$53.51
Quantity Charge			$213.80	$213.00	$219.39	$225.97	$232.75
Water Reliability Charge			$0.00	$10.35	$10.80	$11.25	$11.70
Total Bill			$258.46	$272.32	$280.63	$289.17	$297.96
per Dwelling Unit			$25.85	$27.23	$28.06	$28.92	$29.80
$ Change per Dwelling Unit				$1.39	$0.83	$0.85	$0.88
Commercial	1"	63					
Service Charge			$44.66	$48.97	$50.44	$51.95	$53.51
Quantity Charge			$432.18	$417.69	$430.22	$443.13	$456.42
Water Reliability Charge			$0.00	$14.49	$15.12	$15.75	$16.38
Total Bill			$476.84	$481.15	$495.78	$510.83	$526.31
$ Change				$4.31	$14.63	$15.05	$15.48

Table 6-2. Bill Impacts – Inside City Customers – Average Water Use

	Meter Size	Water Use (HCF)	Current Bill	Proposed 3/8/2019	1/1/2020	1/1/2021	1/1/2022
Single Family	1"	48					
Service Charge			$44.66	$48.97	$50.44	$51.95	$53.51
Quantity Charge			$241.60	$230.06	$236.96	$244.07	$251.39
Water Reliability Charge			$0.00	$11.04	$11.52	$12.00	$12.48
Total Bill			$286.26	$290.07	$298.92	$308.02	$317.38
$ Change				$3.81	$8.85	$9.10	$9.36
Multi Family (10 units)	1"	90					
Service Charge			$44.66	$48.97	$50.44	$51.95	$53.51
Quantity Charge			$425.80	$462.50	$476.38	$490.67	$505.39
Water Reliability Charge			$0.00	$20.70	$21.60	$22.50	$23.40
Total Bill			$470.46	$532.17	$548.41	$565.12	$582.30
per Dwelling Unit			$47.05	$53.22	$54.84	$56.51	$58.23
$ Change per Dwelling Unit				$6.17	$1.62	$1.67	$1.72
Commercial	1.5"	126					
Service Charge			$77.41	$85.88	$88.46	$91.11	$93.84
Quantity Charge			$864.36	$835.38	$860.44	$886.25	$912.84
Water Reliability Charge			$0.00	$28.98	$30.24	$31.50	$32.76
Total Bill			$941.77	$950.24	$979.14	$1,008.86	$1,039.45
$ Change				$8.47	$28.90	$29.73	$30.58

Table 6-3. Bill Impacts – Inside City Customers – High Water Use

	Meter Size	Water Use (HCF)	Current Bill	Proposed			
				3/8/2019	1/1/2020	1/1/2021	1/1/2022
Single Family	1.5"	144					
Service Charge			$77.41	$85.88	$88.46	$91.11	$93.84
Quantity Charge			$1,209.70	$1,383.48	$1,424.98	$1,467.73	$1,511.77
Water Reliability Charge			$0.00	$33.12	$34.56	$36.00	$37.44
Total Bill			$1,287.11	$1,502.48	$1,548.00	$1,594.84	$1,643.05
$ Change				$215.37	$45.52	$46.84	$48.21
Multi Family (10 units)	1.5"	270					
Service Charge			$77.41	$85.88	$88.46	$91.11	$93.84
Quantity Charge			$2,787.50	$2,653.10	$2,732.69	$2,814.67	$2,899.11
Water Reliability Charge			$0.00	$62.10	$64.80	$67.50	$70.20
Total Bill			$2,864.91	$2,801.08	$2,885.95	$2,973.28	$3,063.16
per Dwelling Unit			$286.49	$280.11	$288.59	$297.33	$306.32
$ Change per Dwelling Unit				($6.38)	$8.49	$8.73	$8.99
Commercial	2"	378					
Service Charge			$116.72	$130.17	$134.08	$138.10	$142.24
Quantity Charge			$2,593.08	$2,506.14	$2,581.32	$2,658.76	$2,738.53
Water Reliability Charge			$0.00	$86.94	$90.72	$94.50	$98.28
Total Bill			$2,709.80	$2,723.25	$2,806.12	$2,891.36	$2,979.05
$ Change				$13.45	$82.87	$85.24	$87.69

Table 6-4. Bill Impacts – Outside City Customers – Low Water Use

	Meter Size	Water Use (HCF)	Current Bill	Proposed 3/8/2019	1/1/2020	1/1/2021	1/1/2022
Single Family	1"	24					
Service Charge			$55.83	$48.97	$50.44	$51.95	$53.51
Quantity Charge			$142.92	$99.84	$102.84	$105.92	$109.10
Water Reliability Charge			$0.00	$9.12	$9.36	$9.60	$9.84
Total Bill			$198.75	$157.93	$162.63	$167.47	$172.45
$ Change				($40.82)	$4.70	$4.84	$4.98
Multi Family (10 units)	1"	45					
Service Charge			$55.83	$48.97	$50.44	$51.95	$53.51
Quantity Charge			$266.70	$254.00	$261.62	$269.47	$277.55
Water Reliability Charge			$0.00	$17.10	$17.55	$18.00	$18.45
Total Bill			$322.53	$320.07	$329.61	$339.42	$349.51
per Dwelling Unit			$32.25	$32.01	$32.96	$33.94	$34.95
$ Change per Dwelling Unit				($0.25)	$0.95	$0.98	$1.01
Commercial	1"	63					
Service Charge			$55.83	$48.97	$50.44	$51.95	$53.51
Quantity Charge			$540.54	$469.35	$483.43	$497.93	$512.87
Water Reliability Charge			$0.00	$23.94	$24.57	$25.20	$25.83
Total Bill			$596.37	$542.26	$558.44	$575.09	$592.21
$ Change				($54.11)	$16.18	$16.65	$17.13

Table 6-5. Bill Impacts – Outside City Customers – Average Water Use

	Meter Size	Water Use (HCF)	Current Bill	Proposed 3/8/2019	Proposed 1/1/2020	Proposed 1/1/2021	Proposed 1/1/2022
Single Family	1"	48					
Service Charge			$55.83	$48.97	$50.44	$51.95	$53.51
Quantity Charge			$302.04	$269.42	$277.50	$285.83	$294.40
Water Reliability Charge			$0.00	$18.24	$18.72	$19.20	$19.68
Total Bill			$357.87	$336.63	$346.66	$356.98	$367.59
$ Change				($21.24)	$10.03	$10.32	$10.61
Multi Family (10 units)	1"	90					
Service Charge			$55.83	$48.97	$50.44	$51.95	$53.51
Quantity Charge			$531.90	$536.30	$552.39	$568.96	$586.03
Water Reliability Charge			$0.00	$34.20	$35.10	$36.00	$36.90
Total Bill			$587.73	$619.47	$637.93	$656.91	$676.44
per Dwelling Unit			$58.77	$61.95	$63.79	$65.69	$67.64
$ Change per Dwelling Unit				$3.17	$1.85	$1.90	$1.95
Commercial	1.5"	126					
Service Charge			$96.77	$85.88	$88.46	$91.11	$93.84
Quantity Charge			$1,081.08	$938.70	$966.86	$995.87	$1,025.74
Water Reliability Charge			$0.00	$47.88	$49.14	$50.40	$51.66
Total Bill			$1,177.85	$1,072.46	$1,104.46	$1,137.38	$1,171.25
$ Change				($105.39)	$32.00	$32.92	$33.87

Table 6-6. Bill Impacts – Outside City Customers – High Water Use

	Meter Size	Water Use (HCF)	Current Bill	Proposed			
				3/8/2019	1/1/2020	1/1/2021	1/1/2022
Single Family	1.5"	144					
Service Charge			$96.77	$85.88	$88.46	$91.11	$93.84
Quantity Charge			$1,512.02	$1,501.56	$1,546.61	$1,593.01	$1,640.80
Water Reliability Charge			$0.00	$54.72	$56.16	$57.60	$59.04
Total Bill			$1,608.79	$1,642.16	$1,691.22	$1,741.72	$1,793.68
$ Change				$33.37	$49.06	$50.49	$51.96
Multi Family (10 units)	1.5"	270					
Service Charge			$96.77	$85.88	$88.46	$91.11	$93.84
Quantity Charge			$3,483.20	$2,874.50	$2,960.74	$3,049.56	$3,141.04
Water Reliability Charge			$0.00	$102.60	$105.30	$108.00	$110.70
Total Bill			$3,579.97	$3,062.98	$3,154.49	$3,248.67	$3,345.59
per Dwelling Unit			$358.00	$306.30	$315.45	$324.87	$334.56
$ Change per Dwelling Unit				($51.70)	$9.15	$9.42	$9.69
Commercial	2"	378					
Service Charge			$145.91	$130.17	$134.08	$138.10	$142.24
Quantity Charge			$3,243.24	$2,816.10	$2,900.58	$2,987.60	$3,077.23
Water Reliability Charge			$0.00	$143.64	$147.42	$151.20	$154.98
Total Bill			$3,389.15	$3,089.91	$3,182.08	$3,276.90	$3,374.45
$ Change				($299.24)	$92.17	$94.82	$97.55

APPENDIX A.

WATER RELIABILITY CHARGE CASH FLOW

Water Reliability Charge 30-year Cash Flow Analysis (No General Fund contribution)

		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
1	**Assumptions**												
2	Annual Inflation - Expenses	3.0%											
3	Annual Interest Rate - Bonds	4.0%											
4	Annual Interest Rate - GF Loan	3.0%											
5	WR Charge Year 1 (2019) - unsubsidized	$0.38											
6	Annual change in WR Charge	$0.01											
7	Inside City Subsidy ($/HCF)	$0.00											
8													
9	**Results**												
10	Inside City WRC Revenue	$60,420,000											
11	Outside City WRC Revenue	$7,950,000											
12	**2049** Ending Cash Balance	($369,492)											
13	Annual Ending Cash Balance	$0	$406,512	$29,742,261	$18,721,034	$5,716,205	$746,256	$554,304	$392,174	$284,017	$230,162	$230,949	$286,726
14	Interest on Bond(s)	$30,752,015											
15	Interest on GF Loan	$0											
16	Reserves Remaining to be Paid	$0											
17	Fiscal Year Ending:	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
18	**Revenues**												
19	Water Reliability Charge Revenue												
20	Inside City Customers												
21	Inside City Flow (HCF)		1,900,000	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000
22	$/HCF WR Charge		$0.38	$0.39	$0.40	$0.41	$0.42	$0.43	$0.44	$0.45	$0.46	$0.47	$0.48
23	Subtotal - Inside City	$0	$722,000	$1,482,000	$1,520,000	$1,558,000	$1,596,000	$1,634,000	$1,672,000	$1,710,000	$1,748,000	$1,786,000	$1,824,000
24	Outside City Customers												
25	Inside City Flow (HCF)		250,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000
26	$/HCF WR Charge		$0.38	$0.39	$0.40	$0.41	$0.42	$0.43	$0.44	$0.45	$0.46	$0.47	$0.48
27	Subtotal - Outside City	$0	$95,000	$195,000	$200,000	$205,000	$210,000	$215,000	$220,000	$225,000	$230,000	$235,000	$240,000
28													
29	Total Water Reliability Charge Revenue	$0	$817,000	$1,677,000	$1,720,000	$1,763,000	$1,806,000	$1,849,000	$1,892,000	$1,935,000	$1,978,000	$2,021,000	$2,064,000
30													
31	General Fund Contributions	$9,000,000											
32	General Fund Loans												
33	Bond Proceeds			$41,845,000									
34	Transfer in from Reserves	$0	$8,500,000	$0	$0	$0	$1,900,000	$2,100,000	$0	$0			
35	**Total Revenue**	**$9,000,000**	**$9,317,000**	**$43,522,000**	**$1,720,000**	**$1,763,000**	**$3,706,000**	**$3,949,000**	**$1,892,000**	**$1,935,000**	**$1,978,000**	$2,021,000	$2,064,000
36													
37													
38	**Expenditures**												
39	Capital Expenses												
40	Preliminary Design Report	$0	$874,182	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
41	Land Acquisition (3rd Well Site)	$9,000,000	$2,787,250	$2,787,250	$0	$0	$0	$0	$0	$0	$0	$0	$0
42	CEQA	$0	$327,818	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
43	Final Design	$0	$1,678,092	$1,296,326	$1,335,216	$0	$0	$0	$0	$0	$0	$0	$0
44	Engineerings Svcs During Const (ESDC)	$0	$542,766	$559,049	$575,821	$593,095	$610,888	$0	$0	$0	$0	$0	$0
45	Construction Mgmt and Inspection	$0	$687,503	$708,128	$729,372	$751,254	$773,791	$0	$0	$0	$0	$0	$0
46	Well Drilling (3 sites)	$0	$1,122,941	$2,313,258	$0	$0	$0	$0	$0	$0	$0	$0	$0
47	Transmission Main	$0	$0	$3,664,342	$3,774,272	$3,887,500	$0	$0	$0	$0	$0	$0	$0
48	Well Equipping (3 sites)	$0	$464,553	$0	$3,107,874	$3,201,110	$0	$0	$0	$0	$0	$0	$0
49	Treatment Plant	$0	$0	$0	$0	$3,092,381	$3,200,302	$0	$0	$0	$0	$0	$0
50	System Permitting & Testing	$0	$0	$0	$0	$0	$660,375	$680,186	$0	$0	$0	$0	$0
51	Subtotal Capital Expenses	$9,000,000	$8,485,106	$11,328,354	$9,522,555	$11,525,340	$5,245,356	$680,186	$0	$0	$0	$0	$0
52													
53	Operational Expenses												
54	O&M per PDR	$0	$0	$0	$347,782	$358,216	$368,962	$380,031	$1,467,870	$1,511,906	$1,557,263	$1,603,981	$1,652,100
55	Additional Staffing												
56	Project Manager 3	$0	$206,837	$212,895	$219,135	$225,562	$232,182	$239,000	$246,170	$253,556	$261,162	$268,997	$277,067
57	Water Treatment Operator 1	$0	$0	$0	$0	$0	$163,573	$168,480	$173,535	$178,741	$184,103	$189,626	$195,315
58	Pump/Well Mechanic	$0	$109,273	$112,551	$115,927	$119,405	$122,987	$126,677	$130,477	$134,392	$138,423	$142,576	$146,853
59	Pump/Well Electrician	$0	$109,273	$112,551	$115,927	$119,405	$122,987	$126,677	$130,477	$134,392	$138,423	$142,576	$146,853
60	Total Operational Expenses	$0	$425,382	$437,997	$798,772	$822,588	$1,010,692	$1,040,866	$2,148,530	$2,212,986	$2,279,375	$2,347,756	$2,418,189
61													
62	Debt Service			$2,419,900	$2,419,900	$2,419,900	$2,419,900	$2,419,900	$2,419,900	$2,419,900	$2,419,900	$2,419,900	$2,419,900
63	Reserves Repayment												
64													
65	Less: MWD Water Purchase Savings								($2,514,300)	($2,589,729)	($2,667,421)	($2,747,443)	($2,829,867)
66													
67	**Net Expenditures/(Cost Savings)**	**$9,000,000**	**$8,910,488**	**$14,186,251**	**$12,741,227**	**$14,767,828**	**$8,675,949**	**$4,140,952**	**$2,054,130**	**$2,043,157**	**$2,031,855**	**$2,020,213**	**$2,008,223**
68													
69	**Net Operating Suprlus/(Shortfall)**	$0	$406,512	$29,335,749	($11,021,227)	($13,004,828)	($4,969,949)	($191,952)	($162,130)	($108,157)	($53,855)	$787	$55,777
70	**Cash Balance for WR Expenditures**	**$0**	**$406,512**	**$29,742,261**	**$18,721,034**	**$5,716,205**	**$746,256**	**$554,304**	**$392,174**	**$284,017**	**$230,162**	**$230,949**	$286,726

Water Reliability Charge 30-year Cash Flow Analysis (No General Fund contribution)

		2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
1	**Assumptions**												
2	Annual Inflation - Expenses												
3	Annual Interest Rate - Bonds												
4	Annual Interest Rate - GF Loan												
5	WR Charge Year 1 (2019) - unsubsidized												
6	Annual change in WR Charge												
7	Inside City Subsidy ($/HCF)												
8													
9	**Results**												
10	Inside City WRC Revenue												
11	Outside City WRC Revenue												
12	**2049** Ending Cash Balance												
13	Annual Ending Cash Balance	$397,853	$564,702	$787,653	$1,067,099	$1,403,446	$1,297,110	$1,248,521	$1,258,122	$1,326,367	$1,453,727	$1,640,685	$1,387,738
14	Interest on Bond(s)												
15	Interest on GF Loan												
16	Reserves Remaining to be Paid												
17	Fiscal Year Ending:	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**
18	**Revenues**												
19	Water Reliability Charge Revenue												
20	Inside City Customers												
21	Inside City Flow (HCF)	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000
22	$/HCF WR Charge	$0.49	$0.50	$0.51	$0.52	$0.53	$0.54	$0.55	$0.56	$0.57	$0.58	$0.59	$0.60
23	Subtotal - Inside City	$1,862,000	$1,900,000	$1,938,000	$1,976,000	$2,014,000	$2,052,000	$2,090,000	$2,128,000	$2,166,000	$2,204,000	$2,242,000	$2,280,000
24	Outside City Customers												
25	Inside City Flow (HCF)	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000
26	$/HCF WR Charge	$0.49	$0.50	$0.51	$0.52	$0.53	$0.54	$0.55	$0.56	$0.57	$0.58	$0.59	$0.60
27	Subtotal - Outside City	$245,000	$250,000	$255,000	$260,000	$265,000	$270,000	$275,000	$280,000	$285,000	$290,000	$295,000	$300,000
28													
29	Total Water Reliability Charge Revenue	$2,107,000	$2,150,000	$2,193,000	$2,236,000	$2,279,000	$2,322,000	$2,365,000	$2,408,000	$2,451,000	$2,494,000	$2,537,000	$2,580,000
30													
31	General Fund Contributions												
32	General Fund Loans												
33	Bond Proceeds												
34	Transfer in from Reserves												
35	**Total Revenue**	$2,107,000	$2,150,000	$2,193,000	$2,236,000	$2,279,000	$2,322,000	$2,365,000	$2,408,000	$2,451,000	$2,494,000	$2,537,000	$2,580,000
36													
37													
38	**Expenditures**												
39	Capital Expenses												
40	Preliminary Design Report	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
41	Land Acquisition (3rd Well Site)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
42	CEQA	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
43	Final Design	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
44	Engineerings Svcs During Const (ESDC)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
45	Construction Mgmt and Inspection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
46	Well Drilling (3 sites)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
47	Transmission Main	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
48	Well Equipping (3 sites)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
49	Treatment Plant	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
50	System Permitting & Testing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
51	Subtotal Capital Expenses	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
52													
53	Operational Expenses												
54	O&M per PDR	$1,701,663	$1,752,713	$1,805,295	$1,859,454	$1,915,237	$1,972,694	$2,031,875	$2,092,831	$2,155,616	$2,220,285	$2,286,893	$2,355,500
55	Additional Staffing												
56	Project Manager 3	$285,379	$293,940	$302,759	$311,841	$321,197	$330,832	$340,757	$350,980	$361,510	$372,355	$383,525	$395,031
57	Water Treatment Operator 1	$201,174	$207,210	$213,426	$219,829	$226,424	$233,216	$240,213	$247,419	$254,842	$262,487	$270,362	$278,472
58	Pump/Well Mechanic	$151,259	$155,797	$160,471	$165,285	$170,243	$175,351	$180,611	$186,029	$191,610	$197,359	$203,279	$209,378
59	Pump/Well Electrician	$151,259	$155,797	$160,471	$165,285	$170,243	$175,351	$180,611	$186,029	$191,610	$197,359	$203,279	$209,378
60	Total Operational Expenses	$2,490,735	$2,565,457	$2,642,421	$2,721,693	$2,803,344	$2,887,444	$2,974,068	$3,063,290	$3,155,188	$3,249,844	$3,347,339	$3,447,759
61													
62	Debt Service	$2,419,900	$2,419,900	$2,419,900	$2,419,900	$2,419,900	$2,419,900	$2,419,900	$2,419,900	$2,419,900	$2,419,900	$2,419,900	$2,419,900
63	Reserves Repayment						$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$1,000,000
64													
65	Less: MWD Water Purchase Savings	($2,914,763)	($3,002,206)	($3,092,272)	($3,185,040)	($3,280,591)	($3,379,009)	($3,480,379)	($3,584,791)	($3,692,334)	($3,803,104)	($3,917,197)	($4,034,713)
66													
67	**Net Expenditures/(Cost Savings)**	**$1,995,872**	**$1,983,152**	**$1,970,049**	**$1,956,554**	**$1,942,653**	**$2,428,336**	**$2,413,589**	**$2,398,399**	**$2,382,754**	**$2,366,640**	**$2,350,042**	**$2,832,947**
68													
69	**Net Operating Suplrus/(Shortfall)**	$111,128	$166,848	$222,951	$279,446	$336,347	($106,336)	($48,589)	$9,601	$68,246	$127,360	$186,958	($252,947)
70	**Cash Balance for WR Expenditures**	$397,853	$564,702	$787,653	$1,067,099	$1,403,446	$1,297,110	$1,248,521	$1,258,122	$1,326,367	$1,453,727	$1,640,685	$1,387,738

Water Reliability Charge 30-year Cash Flow Analysis (No General Fund contribution)

		2042	2043	2044	2045	2046	2047	2048	2049
1	**Assumptions**								
2	Annual Inflation - Expenses								
3	Annual Interest Rate - Bonds								
4	Annual Interest Rate - GF Loan								
5	WR Charge Year 1 (2019) - unsubsidized								
6	Annual change in WR Charge								
7	Inside City Subsidy ($/HCF)								
8									
9	**Results**								
10	Inside City WRC Revenue								
11	Outside City WRC Revenue								
12	**2049** Ending Cash Balance								
13	Annual Ending Cash Balance	$1,195,400	$1,064,199	$994,679	$987,401	$1,042,941	$1,161,894	$1,344,873	($369,492)
14	Interest on Bond(s)								
15	Interest on GF Loan								
16	Reserves Remaining to be Paid								
17	Fiscal Year Ending:	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**
18	**Revenues**								
19	Water Reliability Charge Revenue								
20	Inside City Customers								
21	Inside City Flow (HCF)	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000	1,900,000
22	$/HCF WR Charge	$0.61	$0.62	$0.63	$0.64	$0.65	$0.66	$0.67	$0.68
23	Subtotal - Inside City	$2,318,000	$2,356,000	$2,394,000	$2,432,000	$2,470,000	$2,508,000	$2,546,000	$1,292,000
24	Outside City Customers								
25	Inside City Flow (HCF)	500,000	500,000	500,000	500,000	500,000	500,000	500,000	250,000
26	$/HCF WR Charge	$0.61	$0.62	$0.63	$0.64	$0.65	$0.66	$0.67	$0.68
27	Subtotal - Outside City	$305,000	$310,000	$315,000	$320,000	$325,000	$330,000	$335,000	$170,000
28									
29	Total Water Reliability Charge Revenue	$2,623,000	$2,666,000	$2,709,000	$2,752,000	$2,795,000	$2,838,000	$2,881,000	$1,462,000
30									
31	General Fund Contributions								
32	General Fund Loans								
33	Bond Proceeds								
34	Transfer in from Reserves								
35	**Total Revenue**	$2,623,000	$2,666,000	$2,709,000	$2,752,000	$2,795,000	$2,838,000	$2,881,000	$1,462,000
36									
37									
38	**Expenditures**								
39	Capital Expenses								
40	Preliminary Design Report	$0	$0	$0	$0	$0	$0	$0	$0
41	Land Acquisition (3rd Well Site)	$0	$0	$0	$0	$0	$0	$0	$0
42	CEQA	$0	$0	$0	$0	$0	$0	$0	$0
43	Final Design	$0	$0	$0	$0	$0	$0	$0	$0
44	Engineerings Svcs During Const (ESDC)	$0	$0	$0	$0	$0	$0	$0	$0
45	Construction Mgmt and Inspection	$0	$0	$0	$0	$0	$0	$0	$0
46	Well Drilling (3 sites)	$0	$0	$0	$0	$0	$0	$0	$0
47	Transmission Main	$0	$0	$0	$0	$0	$0	$0	$0
48	Well Equipping (3 sites)	$0	$0	$0	$0	$0	$0	$0	$0
49	Treatment Plant	$0	$0	$0	$0	$0	$0	$0	$0
50	System Permitting & Testing	$0	$0	$0	$0	$0	$0	$0	$0
51	Subtotal Capital Expenses	$0	$0	$0	$0	$0	$0	$0	$0
52									
53	Operational Expenses								
54	O&M per PDR	$2,426,165	$2,498,950	$2,573,919	$2,651,136	$2,730,670	$2,812,590	$2,896,968	$2,983,877
55	Additional Staffing								
56	Project Manager 3	$406,882	$419,089	$431,661	$444,611	$457,949	$471,688	$485,839	$500,414
57	Water Treatment Operator 1	$286,827	$295,431	$304,294	$313,423	$322,826	$332,511	$342,486	$352,761
58	Pump/Well Mechanic	$215,659	$222,129	$228,793	$235,657	$242,726	$250,008	$257,508	$265,234
59	Pump/Well Electrician	$215,659	$222,129	$228,793	$235,657	$242,726	$250,008	$257,508	$265,234
60	Total Operational Expenses	$3,551,192	$3,657,728	$3,767,460	$3,880,484	$3,996,898	$4,116,805	$4,240,309	$4,367,518
61									
62	Debt Service	$2,419,900	$2,419,900	$2,419,900	$2,419,900	$2,419,900	$2,419,900	$2,419,900	$2,419,900
63	Reserves Repayment	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,500,000
64									
65	Less: MWD Water Purchase Savings	($4,155,755)	($4,280,427)	($4,408,840)	($4,541,105)	($4,677,339)	($4,817,659)	($4,962,189)	($5,111,054)
66									
67	**Net Expenditures/(Cost Savings)**	**$2,815,338**	**$2,797,201**	**$2,778,520**	**$2,759,279**	**$2,739,460**	**$2,719,047**	**$2,698,021**	**$3,176,365**
68									
69	**Net Operating Suprlus/(Shortfall)**	($192,338)	($131,201)	($69,520)	($7,279)	$55,540	$118,953	$182,979	($1,714,365)
70	**Cash Balance for WR Expenditures**	$1,195,400	$1,064,199	$994,679	$987,401	$1,042,941	$1,161,894	$1,344,873	($369,492)

Water Reliability Charge 30-year Cash Flow Analysis (with $10 million General Fund contribution)

		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
1	**Assumptions**												
2	Annual Inflation - Expenses	3.0%											
3	Annual Interest Rate - Bonds	4.0%											
4	Annual Interest Rate - GF Loan	3.0%											
5	WR Charge Year 1 (2019) - unsubsidized	$0.38											
6	Annual change in WR Charge	$0.01											
7	Inside City Subsidy ($/HCF)	$0.15											
8													
9	**Results**												
10	Inside City WRC Revenue	$43,320,000											
11	Outside City WRC Revenue	$7,950,000											
12	**2049** Ending Cash Balance	($120,462)											
13	Annual Ending Cash Balance	$0	$10,121,512	$29,465,562	$18,452,636	$5,456,108	$494,460	$310,809	$156,980	$57,124	$11,570	$20,658	$84,736
14	Interest on Bond(s)	$23,402,985											
15	Interest on GF Loan	$0											
16	Reserves Remaining to be Paid	$0											
17	Fiscal Year Ending:	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
18	**Revenues**												
19	Water Reliability Charge Revenue												
20	Inside City Customers												
21	Inside City Flow (HCF)		1,900,000	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000
22	$/HCF WR Charge		$0.23	$0.24	$0.25	$0.26	$0.27	$0.28	$0.29	$0.30	$0.31	$0.32	$0.33
23	Subtotal - Inside City	$0	$437,000	$912,000	$950,000	$988,000	$1,026,000	$1,064,000	$1,102,000	$1,140,000	$1,178,000	$1,216,000	$1,254,000
24	Outside City Customers												
25	Inside City Flow (HCF)		250,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000
26	$/HCF WR Charge		$0.38	$0.39	$0.40	$0.41	$0.42	$0.43	$0.44	$0.45	$0.46	$0.47	$0.48
27	Subtotal - Outside City	$0	$95,000	$195,000	$200,000	$205,000	$210,000	$215,000	$220,000	$225,000	$230,000	$235,000	$240,000
28													
29	Total Water Reliability Charge Revenue	$0	$532,000	$1,107,000	$1,150,000	$1,193,000	$1,236,000	$1,279,000	$1,322,000	$1,365,000	$1,408,000	$1,451,000	$1,494,000
30													
31	General Fund Contributions	$9,000,000	$10,000,000										
32	General Fund Loans												
33	Bond Proceeds			$31,845,000									
34	Transfer in from Reserves	$0	$8,500,000	$0	$0	$0	$1,900,000	$2,100,000	$0	$0			
35	**Total Revenue**	**$9,000,000**	**$19,032,000**	**$32,952,000**	**$1,150,000**	**$1,193,000**	**$3,136,000**	**$3,379,000**	**$1,322,000**	**$1,365,000**	**$1,408,000**	$1,451,000	$1,494,000
36													
37													
38	**Expenditures to Start Up**												
39	Capital Expenses												
40	Preliminary Design Report	$0	$874,182	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
41	Land Acquisition (3rd Well Site)	$9,000,000	$2,787,250	$2,787,250	$0	$0	$0	$0	$0	$0	$0	$0	$0
42	CEQA	$0	$327,818	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
43	Final Design	$0	$1,678,092	$1,296,326	$1,335,216	$0	$0	$0	$0	$0	$0	$0	$0
44	Engineerings Svcs During Const (ESDC)	$0	$542,766	$559,049	$575,821	$593,095	$610,888	$0	$0	$0	$0	$0	$0
45	Construction Mgmt and Inspection	$0	$687,503	$708,128	$729,372	$751,254	$773,791	$0	$0	$0	$0	$0	$0
46	Well Drilling (3 sites)	$0	$1,122,941	$2,313,258	$0	$0	$0	$0	$0	$0	$0	$0	$0
47	Transmission Main	$0	$0	$3,664,342	$3,774,272	$3,887,500	$0	$0	$0	$0	$0	$0	$0
48	Well Equipping (3 sites)	$0	$464,553	$0	$3,107,874	$3,201,110	$0	$0	$0	$0	$0	$0	$0
49	Treatment Plant	$0	$0	$0	$0	$3,092,381	$3,200,302	$0	$0	$0	$0	$0	$0
50	System Permitting & Testing	$0	$0	$0	$0	$0	$660,375	$680,186	$0	$0	$0	$0	$0
51	Total Capital Expenses	$9,000,000	$8,485,106	$11,328,354	$9,522,555	$11,525,340	$5,245,356	$680,186	$0	$0	$0	$0	$0
52													
53	Operational Expenses												
54	O&M per PDR	$0	$0	$0	$347,782	$358,216	$368,962	$380,031	$1,467,870	$1,511,906	$1,557,263	$1,603,981	$1,652,100
55	Additional Staffing												
56	Project Manager 3	$0	$206,837	$212,895	$219,135	$225,562	$232,182	$239,000	$246,170	$253,556	$261,162	$268,997	$277,067
57	Water Treatment Operator 1	$0	$0	$0	$0	$0	$163,573	$168,480	$173,535	$178,741	$184,103	$189,626	$195,315
58	Pump/Well Mechanic	$0	$109,273	$112,551	$115,927	$119,405	$122,987	$126,677	$130,477	$134,392	$138,423	$142,576	$146,853
59	Pump/Well Electrician	$0	$109,273	$112,551	$115,927	$119,405	$122,987	$126,677	$130,477	$134,392	$138,423	$142,576	$146,853
60	Total Operational Expenses	$0	$425,382	$437,997	$798,772	$822,588	$1,010,692	$1,040,866	$2,148,530	$2,212,986	$2,279,375	$2,347,756	$2,418,189
61													
62	Debt Service			$1,841,600	$1,841,600	$1,841,600	$1,841,600	$1,841,600	$1,841,600	$1,841,600	$1,841,600	$1,841,600	$1,841,600
63	Reserves Repayment												
64													
65	Less: MWD Water Purchase Savings								($2,514,300)	($2,589,729)	($2,667,421)	($2,747,443)	($2,829,867)
66													
67	**Net Expenditures/(Cost Savings)**	**$9,000,000**	**$8,910,488**	**$13,607,950**	**$12,162,926**	**$14,189,527**	**$8,097,648**	**$3,562,651**	**$1,475,829**	**$1,464,856**	**$1,453,554**	**$1,441,912**	**$1,429,922**
68													
69	**Net Operating Suprlus/(Shortfall)**	$0	$10,121,512	$19,344,050	($11,012,926)	($12,996,527)	($4,961,648)	($183,651)	($153,829)	($99,856)	($45,554)	$9,088	$64,078
70	**Cash Balance for WR Expenditures**	**$0**	**$10,121,512**	**$29,465,562**	**$18,452,636**	**$5,456,108**	**$494,460**	**$310,809**	**$156,980**	**$57,124**	**$11,570**	**$20,658**	$84,736

Water Reliability Charge 30-year Cash Flow Analysis (with $10 million General Fund contribution)

		2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
1	**Assumptions**												
2	Annual Inflation - Expenses												
3	Annual Interest Rate - Bonds												
4	Annual Interest Rate - GF Loan												
5	WR Charge Year 1 (2019) - unsubsidized												
6	Annual change in WR Charge												
7	Inside City Subsidy ($/HCF)												
8													
9	**Results**												
10	Inside City WRC Revenue												
11	Outside City WRC Revenue												
12	**2049** Ending Cash Balance												
13	Annual Ending Cash Balance	$4,164	$4,314	$5,566	$4,313	$4,961	$4,926	$5,638	$5,540	$6,086	$6,747	$7,006	$7,360
14	Interest on Bond(s)												
15	Interest on GF Loan												
16	Reserves Remaining to be Paid												
17	Fiscal Year Ending:	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
18	**Revenues**												
19	Water Reliability Charge Revenue												
20	Inside City Customers												
21	Inside City Flow (HCF)	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000
22	$/HCF WR Charge	$0.34	$0.35	$0.36	$0.37	$0.38	$0.39	$0.40	$0.41	$0.42	$0.43	$0.44	$0.45
23	Subtotal - Inside City	$1,292,000	$1,330,000	$1,368,000	$1,406,000	$1,444,000	$1,482,000	$1,520,000	$1,558,000	$1,596,000	$1,634,000	$1,672,000	$1,710,000
24	Outside City Customers												
25	Inside City Flow (HCF)	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000
26	$/HCF WR Charge	$0.49	$0.50	$0.51	$0.52	$0.53	$0.54	$0.55	$0.56	$0.57	$0.58	$0.59	$0.60
27	Subtotal - Outside City	$245,000	$250,000	$255,000	$260,000	$265,000	$270,000	$275,000	$280,000	$285,000	$290,000	$295,000	$300,000
28													
29	Total Water Reliability Charge Revenue	$1,537,000	$1,580,000	$1,623,000	$1,666,000	$1,709,000	$1,752,000	$1,795,000	$1,838,000	$1,881,000	$1,924,000	$1,967,000	$2,010,000
30													
31	General Fund Contributions												
32	General Fund Loans												
33	Bond Proceeds												
34	Transfer in from Reserves												
35	**Total Revenue**	$1,537,000	$1,580,000	$1,623,000	$1,666,000	$1,709,000	$1,752,000	$1,795,000	$1,838,000	$1,881,000	$1,924,000	$1,967,000	$2,010,000
36													
37													
38	**Expenditures to Start Up**												
39	Capital Expenses												
40	Preliminary Design Report	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
41	Land Acquisition (3rd Well Site)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
42	CEQA	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
43	Final Design	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
44	Engineerings Svcs During Const (ESDC)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
45	Construction Mgmt and Inspection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
46	Well Drilling (3 sites)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
47	Transmission Main	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
48	Well Equipping (3 sites)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
49	Treatment Plant	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
50	System Permitting & Testing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
51	Total Capital Expenses	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
52													
53	Operational Expenses												
54	O&M per PDR	$1,701,663	$1,752,713	$1,805,295	$1,859,454	$1,915,237	$1,972,694	$2,031,875	$2,092,831	$2,155,616	$2,220,285	$2,286,893	$2,355,500
55	Additional Staffing												
56	Project Manager 3	$285,379	$293,940	$302,759	$311,841	$321,197	$330,832	$340,757	$350,980	$361,510	$372,355	$383,525	$395,031
57	Water Treatment Operator 1	$201,174	$207,210	$213,426	$219,829	$226,424	$233,216	$240,213	$247,419	$254,842	$262,487	$270,362	$278,472
58	Pump/Well Mechanic	$151,259	$155,797	$160,471	$165,285	$170,243	$175,351	$180,611	$186,029	$191,610	$197,359	$203,279	$209,378
59	Pump/Well Electrician	$151,259	$155,797	$160,471	$165,285	$170,243	$175,351	$180,611	$186,029	$191,610	$197,359	$203,279	$209,378
60	Total Operational Expenses	$2,490,735	$2,565,457	$2,642,421	$2,721,693	$2,803,344	$2,887,444	$2,974,068	$3,063,290	$3,155,188	$3,249,844	$3,347,339	$3,447,759
61													
62	Debt Service	$1,841,600	$1,841,600	$1,841,600	$1,841,600	$1,841,600	$1,841,600	$1,841,600	$1,841,600	$1,841,600	$1,841,600	$1,841,600	$1,841,600
63	Reserves Repayment	$200,000	$175,000	$230,000	$289,000	$344,000	$402,000	$459,000	$518,000	$576,000	$635,000	$695,000	$755,000
64													
65	Less: MWD Water Purchase Savings	($2,914,763)	($3,002,206)	($3,092,272)	($3,185,040)	($3,280,591)	($3,379,009)	($3,480,379)	($3,584,791)	($3,692,334)	($3,803,104)	($3,917,197)	($4,034,713)
66													
67	**Net Expenditures/(Cost Savings)**	**$1,617,571**	**$1,579,851**	**$1,621,748**	**$1,667,253**	**$1,708,352**	**$1,752,035**	**$1,794,288**	**$1,838,099**	**$1,880,453**	**$1,923,339**	**$1,966,741**	**$2,009,646**
68													
69	**Net Operating Suprlus/(Shortfall)**	($80,571)	$149	$1,252	($1,253)	$648	($35)	$712	($99)	$547	$661	$259	$354
70	**Cash Balance for WR Expenditures**	$4,164	$4,314	$5,566	$4,313	$4,961	$4,926	$5,638	$5,540	$6,086	$6,747	$7,006	$7,360

Water Reliability Charge 30-year Cash Flow Analysis (with $10 million General Fund contribution)

		2042	2043	2044	2045	2046	2047	2048	2049
1	Assumptions								
2	Annual Inflation - Expenses								
3	Annual Interest Rate - Bonds								
4	Annual Interest Rate - GF Loan								
5	WR Charge Year 1 (2019) - unsubsidized								
6	Annual change in WR Charge								
7	Inside City Subsidy ($/HCF)								
8									
9	Results								
10	Inside City WRC Revenue								
11	Outside City WRC Revenue								
12	**2049** Ending Cash Balance								
13	Annual Ending Cash Balance	$8,323	$8,423	$9,204	$10,227	$14,068	$14,322	$15,602	($120,462)
14	Interest on Bond(s)								
15	Interest on GF Loan								
16	Reserves Remaining to be Paid								
17	Fiscal Year Ending:	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**
18	**Revenues**								
19	Water Reliability Charge Revenue								
20	Inside City Customers								
21	Inside City Flow (HCF)	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000	1,900,000
22	$/HCF WR Charge	$0.46	$0.47	$0.48	$0.49	$0.50	$0.51	$0.52	$0.53
23	Subtotal - Inside City	$1,748,000	$1,786,000	$1,824,000	$1,862,000	$1,900,000	$1,938,000	$1,976,000	$1,007,000
24	Outside City Customers								
25	Inside City Flow (HCF)	500,000	500,000	500,000	500,000	500,000	500,000	500,000	250,000
26	$/HCF WR Charge	$0.61	$0.62	$0.63	$0.64	$0.65	$0.66	$0.67	$0.68
27	Subtotal - Outside City	$305,000	$310,000	$315,000	$320,000	$325,000	$330,000	$335,000	$170,000
28									
29	Total Water Reliability Charge Revenue	$2,053,000	$2,096,000	$2,139,000	$2,182,000	$2,225,000	$2,268,000	$2,311,000	$1,177,000
30									
31	General Fund Contributions								
32	General Fund Loans								
33	Bond Proceeds								
34	Transfer in from Reserves								
35	**Total Revenue**	$2,053,000	$2,096,000	$2,139,000	$2,182,000	$2,225,000	$2,268,000	$2,311,000	$1,177,000
36									
37									
38	**Expenditures to Start Up**								
39	Capital Expenses								
40	Preliminary Design Report	$0	$0	$0	$0	$0	$0	$0	$0
41	Land Acquisition (3rd Well Site)	$0	$0	$0	$0	$0	$0	$0	$0
42	CEQA	$0	$0	$0	$0	$0	$0	$0	$0
43	Final Design	$0	$0	$0	$0	$0	$0	$0	$0
44	Engineerings Svcs During Const (ESDC)	$0	$0	$0	$0	$0	$0	$0	$0
45	Construction Mgmt and Inspection	$0	$0	$0	$0	$0	$0	$0	$0
46	Well Drilling (3 sites)	$0	$0	$0	$0	$0	$0	$0	$0
47	Transmission Main	$0	$0	$0	$0	$0	$0	$0	$0
48	Well Equipping (3 sites)	$0	$0	$0	$0	$0	$0	$0	$0
49	Treatment Plant	$0	$0	$0	$0	$0	$0	$0	$0
50	System Permitting & Testing	$0	$0	$0	$0	$0	$0	$0	$0
51	Total Capital Expenses	$0	$0	$0	$0	$0	$0	$0	$0
52									
53	Operational Expenses								
54	O&M per PDR	$2,426,165	$2,498,950	$2,573,919	$2,651,136	$2,730,670	$2,812,590	$2,896,968	$2,983,877
55	Additional Staffing								
56	Project Manager 3	$406,882	$419,089	$431,661	$444,611	$457,949	$471,688	$485,839	$500,414
57	Water Treatment Operator 1	$286,827	$295,431	$304,294	$313,423	$322,826	$332,511	$342,486	$352,761
58	Pump/Well Mechanic	$215,659	$222,129	$228,793	$235,657	$242,726	$250,008	$257,508	$265,234
59	Pump/Well Electrician	$215,659	$222,129	$228,793	$235,657	$242,726	$250,008	$257,508	$265,234
60	Total Operational Expenses	$3,551,192	$3,657,728	$3,767,460	$3,880,484	$3,996,898	$4,116,805	$4,240,309	$4,367,518
61									
62	Debt Service	$1,841,600	$1,841,600	$1,841,600	$1,841,600	$1,841,600	$1,841,600	$1,841,600	$1,841,600
63	Reserves Repayment	$815,000	$877,000	$938,000	$1,000,000	$1,060,000	$1,127,000	$1,190,000	$215,000
64									
65	Less: MWD Water Purchase Savings	($4,155,755)	($4,280,427)	($4,408,840)	($4,541,105)	($4,677,339)	($4,817,659)	($4,962,189)	($5,111,054)
66									
67	**Net Expenditures/(Cost Savings)**	**$2,052,037**	**$2,095,900**	**$2,138,219**	**$2,180,978**	**$2,221,159**	**$2,267,746**	**$2,309,720**	**$1,313,064**
68									
69	**Net Operating Suprlus/(Shortfall)**	$963	$100	$781	$1,022	$3,841	$254	$1,280	($136,064)
70	**Cash Balance for WR Expenditures**	$8,323	$8,423	$9,204	$10,227	$14,068	$14,322	$15,602	($120,462)

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APPENDIX K

Hazard Mitigation Plan

Beverly Hills Local Hazard Mitigation Action Plan, 2017-2022
Found at the following link:

https://www.beverlyhills.org/cbhfiles/storage/files/3081611509478555524/BeverlyHillsFinalLHMAP5.29.pdf

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