



**APPENDIX K**

**Utilities and Service Systems**



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**APPENDIX K.1**

**Site 2 Utilities Report**



**DTLA SOUTH PARK PROPERTIES SITE 2 PROJECT  
(1117 SOUTH OLIVE STREET LOS ANGELES CA 90015)**

**UTILITY INFRASTRUCTURE TECHNICAL REPORT: WATER, WASTEWATER, AND ENERGY  
SEPTEMBER 2021**

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## Table of Contents

Appendices.....	iii
Appendix 1 – Related Projects Utility Demand Calculations.....	iii
<b>1. INTRODUCTION.....</b>	<b>4</b>
<b>1.1. PROJECT DESCRIPTION.....</b>	<b>4</b>
<b>1.2. SCOPE OF WORK .....</b>	<b>4</b>
<b>2. REGULATORY FRAMEWORK.....</b>	<b>4</b>
<b>2.1. WATER.....</b>	<b>4</b>
<b>2.2. WASTEWATER.....</b>	<b>5</b>
<b>2.3. ENERGY .....</b>	<b>8</b>
<b>3. ENVIRONMENTAL SETTING.....</b>	<b>10</b>
<b>3.1. WATER.....</b>	<b>10</b>
<b>3.2. WASTEWATER.....</b>	<b>11</b>
<b>3.3. ENERGY .....</b>	<b>12</b>
<b>4. SIGNIFICANCE THRESHOLDS.....</b>	<b>13</b>
<b>4.1. WASTEWATER.....</b>	<b>14</b>
<b>4.2. ENERGY .....</b>	<b>15</b>
<b>5. METHODOLOGY .....</b>	<b>16</b>
<b>5.1. WATER.....</b>	<b>16</b>
<b>5.2. WASTEWATER.....</b>	<b>17</b>
<b>5.3. ENERGY .....</b>	<b>18</b>
<b>6. PROJECT IMPACTS .....</b>	<b>18</b>
<b>6.1. CONSTRUCTION .....</b>	<b>18</b>
<b>6.1.1. WATER .....</b>	<b>18</b>
<b>6.1.2. WASTEWATER .....</b>	<b>19</b>
<b>6.1.3. ENERGY .....</b>	<b>19</b>
<b>6.2. OPERATION .....</b>	<b>20</b>
<b>6.2.1. WATER .....</b>	<b>20</b>
<b>6.2.2. ENERGY .....</b>	<b>24</b>
<b>6.3. CUMULATIVE IMPACTS .....</b>	<b>25</b>
<b>6.3.1 WATER .....</b>	<b>25</b>
<b>6.3.2 WASTEWATER .....</b>	<b>26</b>
<b>6.3.3 ENERGY .....</b>	<b>27</b>



## **Appendices**

Appendix 1 – Related Projects Utility Demand Calculations

Exhibit 1 – LADWP “Information of Fire Flow Availability Request” (IFFAR) Results

Exhibit 2 – LADWP “Service Advisory Report” (SAR) Results and Water Will Serve Letter

Exhibit 3 – City of Los Angeles “Sewer Capacity Availability Report” (SCAR) Results

Exhibit 4 – LADWP Approved Power Will-Serve Letter

Exhibit 5 – SoCal Gas Approved Will-Serve Letter

## **1. INTRODUCTION**

### **1.1. PROJECT DESCRIPTION**

The proposed Site 2 building would include 51 stories, in addition to six subterranean levels for parking, for a total of 491,515 square feet of floor area. The proposed building would include 536 residential units; 6,163 square feet of ground floor retail space; an amenity deck with swimming pool, community recreation, lounge, and fitness areas; a sky lounge with outdoor deck; 594 automobile parking spaces; 23 short-term bicycle racks and 212 long term-bicycle lockers, and pedestrian improvements along 11th Street and S. Olive Street, including improved amenities and an active street frontage. Site 2 would be approximately 583 feet in height and have a Floor Area Ratio (FAR) of 9.13:1.

### **1.2. SCOPE OF WORK**

As a part of the Sustainable Communities Environmental Assessment for the Project, the purpose of this report is to analyze the potential impact of the Project to the existing water, wastewater, and energy infrastructure system.

## **2. REGULATORY FRAMEWORK**

### **2.1. WATER**

The City of Los Angeles Department of Water and Power (LADWP) is responsible for providing water supply to the City while complying with Local, State, and Federal regulations.

Below are the State and Regional water supply regulations:

- California Code of Regulations (CCR), Title 20, Chapter 4, Article 4, Section 1605 establishes water efficiency standards for all new plumbing fixtures and Section 1608 prohibits the sale of fixtures that do not comply with the regulations.
- 2013 California Green Building Standards Code, CCR, Title 24, Part 11, adopted on January 1, 2014 (CALGreen), requires a water use reduction of 20% above the baseline cited in the CALGreen code book. The code applies to family homes, state buildings, health facilities, and commercial buildings.
- California Urban Water Management Planning Act of 1984 requires water suppliers to adopt an Urban Water Management Plan (UWMP).
- Metropolitan Water District (MWD) official reports and policies as outlined in its Regional UWMP, Water Surplus and Drought Management Plan, Water Supply Allocation Plan, and Integrated Resources Plan.

- LADWP’s 2015 UWMP outlines the City’s long-term water resources management strategy. The 2015 UWMP was approved by the LADWP Board of Water and Power Commissioners on June 7, 2016.
- Senate Bill 610 and Senate Bill 221, approved on October 9, 2001, require land use agencies to perform a detailed analysis of available water supply when approving large developments. Historically, public water suppliers (PWS) simply provided a “will serve” letter to developers. SB 610, Public Resources Code (PRC) and Section 10910-10915 of the State Water Code requires lead agencies to request a Water Supply Assessment (WSA) from the local water purveyor prior to project approval. If the projected water demand associated with a proposed development is included in the most recent UWMP, the development is considered to have sufficient water supply per California Water Code Section 10910, and a WSA is not required. All projects that meet any of the following criteria require a WSA:
  - 1) A proposed residential development of more than 500 dwelling units.
  - 2) A proposed shopping center or business establishment of more than 500,000 square feet of floor space or employing more than 1,000 persons
  - 3) A proposed commercial office building of more than 250,000 square feet of floor space or employing more than 1,000 persons
  - 4) A proposed hotel or motel of more than 500 rooms
  - 5) A proposed industrial, manufacturing, or processing plant or industrial park of more than 40 acres of land, more than 650,000 square feet of floor area, or employing more than 1,000 persons
  - 6) A mixed-use project that falls in one or more of the above-identified categories
  - 7) A project not falling in one of the above-identified categories but that would demand water equal or greater than the amount required by a 500-dwelling unit project.

As this Project is a mixed-use development that meets item 1 above, LADWP has completed a WSA for this Project.

## **2.2. WASTEWATER**

The City of Los Angeles has one of the largest sewer systems in the world including more than 6,600 miles of sewers serving a population of more than four million. The Los Angeles sewer system is comprised of three systems: Hyperion Sanitary Sewer System, Terminal Island Water Reclamation Plant Sanitary Sewer System, and Los Angeles Regional Sanitary Sewer System. To comply with Waste Discharge Requirements

(WDRs), a Sewer System Management Plan (SSMP) was prepared for each of these systems.

The Project Site lies within the Hyperion Service Area served by the Hyperion Sanitary Sewer System. In January 2019, a Sewer System Management Plan (SSMP) was prepared for the Hyperion Sanitary Sewer System pursuant to the State Water Control Board's (SWRCB) May 2, 2006 Statewide General Waste Discharge Requirements (WDRs)<sup>1</sup>.

Sewer permit allocation for projects that discharge into the Hyperion Treatment Plant is regulated by Ordinance No. 166,060 adopted by the City in 1990. The Ordinance established an additional annual allotment of 5.0 million gallons per day, of which 34.5 percent (1.725 million gallons per day) is allocated for priority projects, 8 percent (0.4 million gallons per day) for public benefit projects, and 57.5 percent (2.875 million gallons per day) for non-priority projects (of which 65 percent is for residential project and 35 percent for non-residential projects).

The City of Los Angeles Municipal Code (LAMC) includes regulations that allow the City to assure available sewer capacity for new projects and fees for improvements to the infrastructure system. LAMC Section 64.15 requires that the City perform a Sewer Capacity Availability Request (SCAR) when any person seeks a sewer permit to connect a property to the City's sewer collection system, proposes additional discharge through their existing public sewer connection, or proposes a future sewer connection or future development that is anticipated to generate 10,000 gallons or more of sewage per day. A SCAR is an analysis of the existing sewer collection system to determine if there is adequate capacity existing in the sewer collection system to safely convey the newly generated sewage to the appropriate sewage treatment plant.

LAMC Section 64.11.2 requires the payment of fees for new connections to the sewer system to assure the sufficiency of sewer infrastructure. New connections to the sewer system are assessed a Sewerage Facilities Charge. The rate structure for the Sewerage Facilities Charge is based upon wastewater flow strength, as well as volume. The determination of wastewater strength for each applicable project is based on City guidelines for the average wastewater concentrations of two parameters (biological oxygen demand and suspended solids) for each type of land use. Fees paid to the Sewerage Facilities Charge fees are deposited in the City's Sewer Construction and Maintenance Fund for sewer and sewage-related purposes, including but not limited to industrial waste control and water reclamation purposes.

In addition, the City establishes design criteria for sewer systems to assure that new infrastructure provides sewer capacity and operating characteristics to meet City Standards (Bureau of Engineering Special Order No. SO06-0691). Per the Special Order, laterals sewers, which are sewers 18 inches or less in diameter, must be designated for a

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<sup>1</sup> City of Los Angeles Department of Public Works, LA Sanitation, Sewer System Management Plan, Hyperion Sanitary Sewer System, January 2019.

planning period of 100 years. The Special Order also requires that sewers be designated so that the peak dry weather flow depth during their planning period shall not exceed one-half the pipe diameter.<sup>2</sup>

In 2006 the City approved the Integrated Resources Plan, which incorporates a Wastewater Facilities Plan.<sup>3</sup> The Integrated Resources Program was developed to meet future wastewater needs of more than 4.3 million residents expected to live within the City by 2020. In order to meet future demands posed by increased wastewater generation, the City has chosen to expand its current overall treatment capacity, while maximizing the potential to reuse recycled water through irrigation, and other approved uses.

In addition, the Bureau of Sanitation and LADWP have collaborated to develop The *One Water LA 2040 Plan* (Plan). The Plan takes a holistic and collaborative approach to consider all of the City's water resources from surface water, groundwater, potable water, wastewater, recycled water, dry-weather runoff, and stormwater as "One Water." The Plan also identifies multi-departmental and multi-agency integration opportunities to manage water in a more efficient, cost effective, and sustainable manner. The Plan represents the City's continued and improved commitment to proactively manage all its water resources and implement innovative solutions, driven by the Sustainable City pLAN. The Plan will help guide strategic decisions for integrated water projects, programs, and policies within the City.<sup>4</sup>

As part of the Plan, an updated Wastewater Facilities Plan (WWFP) was developed. The purpose of the WWFP is to guide LASAN with its decision making related to the implementation of system improvements to its wastewater collection and treatment facilities. The WWFP provides the underlying documentation to make informed decisions when considering investments to repair, replace, or enhance existing facilities and construct new water conveyance or treatment facilities through year 2040. This WWFP is an update of the Wastewater Facilities Plan that was included in the 2006 Water Integrated Resources Plan (Water IRP). This WWFP incorporates expansions, upgrades, and enhancements made since 2006 and builds upon Los Angeles Department of Water and Power's (LADWP) 2015 Urban Water Management Plan (UWMP). It is anticipated that the WWFP will be updated in approximately ten years to incorporate system modifications as well as changes in flow conditions, regulatory framework, and overall vision for wastewater system operations and water reuse.

The WWFP provides recommendations for each plant on how to best utilize the water reuse opportunities and provide environmental stewardship. Among the water reuse opportunities explored are non-potable reuse (NPR) and potable reuse, groundwater augmentation, raw water augmentation, and treated water augmentation. The WWFP

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<sup>2</sup> City of Los Angeles, L.A. CEQA Thresholds Guide, Your Resource for Planning CEQA Analysis in Los Angeles, M-Public Utilities, 2006. <http://www.environmentla.org/programs/thresholds/M-Public%20Utilities.pdf>

<sup>3</sup> City of Los Angeles, Department of Public Works, LA Sewers Website, Integrated Resources Plan Facilities Plan, Summary Report, December 2006. <https://www.lacitysan.org/san/sandocview?docname=CNT025148>

<sup>4</sup> One Water LA 2040 Executive Summary, <http://www.onewaterla.org>

used a trigger-based CIP process for the future integration opportunities, which is similar to the approach that was used for the IRP.<sup>5</sup>

## 2.3. ENERGY

### 2.3.1. ELECTRICITY

The *2017 Power Strategic Long-Term Resource Plan (SLTRP)*<sup>6</sup> document serves as a comprehensive 20-year roadmap that guides the Los Angeles Department of Water and Power's (LADWP) Power System in its efforts to supply reliable electricity in an environmentally responsible and cost-effective manner. The 2017 SLTRP re-examines and expands its analysis on the 2016 Power Integrated Resource Plan recommended case with updates in line with latest regulatory framework, and updates to case scenario assumptions that include a 65 percent renewable portfolio standard by 2050.

The 2017 SLTRP provides detailed analysis and results of several new PIRP resource cases which investigated the economic and environmental impact of increased local solar and various levels of transportation electrification. In analyzing the PIRP cases and recommending a strategy to best meet the future electric needs of Los Angeles, the SLTRP uses system modeling tools to analyze and determine the long-term economic, environmental, and operational impact of alternative resource portfolios by simulating the integration of new resource alternatives within their existing mix of assets and providing the analytic results to inform the selection of a recommended case.

The SLTRP also includes a general assessment of the revenue requirements and rate impacts that support the recommended resource plan through 2037. While this assessment will not be as detailed and extensive as more recent-year fiscal analyses, it clearly outlines the general requirements for future analyses. As a long-term planning process, the SLTRP examines a 20-year horizon in order to secure adequate supplies of electricity. In that respect, it is LADWP's desire that the SLTRP contribute towards future rate actions, by presenting and discussing the programs and projects required to fulfill our City Charter mandate of delivering reliable electric power to the City of Los Angeles.

Regulatory interpretations of primary regulations and state laws affecting the Power System, including AB 32, SB 1368, SB 1, SB 2 (1X), SB 350, SB 32, US EPA Rule 316(b), and US Clean Power Plan continue to evolve particularly with certification requirements of existing renewable projects and their applicability towards meeting in-state or out-of-state qualifications. 2017's SLTRP attempts to incorporate the latest interpretation of these major regulations and state laws as we understand them today.

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<sup>5</sup> One Water LA 2040, Volume 2;

[https://www.lacitysan.org/cs/groups/sg\\_owla/documents/document/y250/mdi2/~edisp/cnt026205.pdf](https://www.lacitysan.org/cs/groups/sg_owla/documents/document/y250/mdi2/~edisp/cnt026205.pdf)

<sup>6</sup> LADWP, 2017 Power Strategic Long-Term Resource Plan, December 2017.

### 2.3.2. NATURAL GAS

The *2020 California Gas Report*<sup>7</sup> presents a comprehensive outlook for natural gas requirements and supplies for California through the year 2035. This report is prepared in even-numbered years, followed by a supplemental report in odd-numbered years, in compliance with California Public Utilities Commission (CPUC or Commission) Decision (D.) 95-01-039. The projections in the CGR are for long-term planning and do not necessarily reflect the day-to-day operational plans of the utilities.

Utility-driven, statewide natural gas demand is projected to decline at an average rate of 1.0 percent each year through 2035. The decline comes from reduced gas demand in the major market segment areas of residential, electric generation (EG), commercial, and industrial. Statewide residential gas demand is projected to decrease at an average rate of 1.7 percent each year. EG gas demand is projected to decrease at an average annual rate of 1.5 percent each year. The Commercial segment gas demand, which includes both core and noncore commercial demand, is projected to decrease at an average annual rate of 1.5 percent each year. The Industrial gas demand segment is expected to decline at an average rate of 0.2 percent per year.

Though the Natural Gas Vehicle (NGV) market shows moderate growth, it is not sufficient to offset the projected decrease in other market segments over the forecast horizon. There are several drivers of these declines. Aggressive energy efficiency programs are dampening gas demand in these sectors. In addition, the statewide efforts to minimize greenhouse gas (GHG) emissions are reducing EG demand due to increase in demand side and supply side generation resources that produce few or no carbon emissions. Nevertheless, gas-fired generation and energy storage will continue to be primary technologies to support long-term increases in electricity usage and integrate increasing quantities of intermittent renewable electric generation into the electric grid.

In 2015, the state enacted legislation intended to improve air quality, provide aggressive reductions in energy dependency and boost the employment of renewable power. The first legislation, the 2015 Clean Energy and Pollution Reduction Act, also known as Senate Bill (SB) 350, requires the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources be increased to 50 percent by December 31, 2030. SB 350 establishes annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas final end uses by January 1, 2030. Second, the Energy Efficiency Act (AB 802) provides aggressive state directives to increase the energy efficiency of existing buildings, requires that access to building performance data for nonresidential buildings be provided by energy utilities and encourages pay-for performance incentive-based programs. This paradigm shift will allow California building owners a better and more effective way to access whole-building information and at the same time will help to address climate change, and deliver cost-effective savings for ratepayers. Last, the Energy Efficiency Act (AB 793) is intended to promote and provide incentives to residential or small and medium-sized

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<sup>7</sup> California Gas and Electric Utilities, 2020 California Gas Report, 2020.

business utility customers that acquire energy management technology for use in their home or place of business. AB 793 requires energy utilities to develop a plan to educate residential customers and small and medium business customers about the incentive program.<sup>8</sup>

Passed in 2018, Senate Bill (SB) 100 increases and accelerates the Renewables Portfolio Standard (RPS) targets. The increase comes in 2030 with renewable power generation equal to 60 percent of retail electric sales. Previously, the target was 50 percent. The acceleration requires the RPS at 50 percent by 2026. An additional requirement mandated in 2018 establishes a statewide goal to achieve carbon neutrality by 2045 across all sectors of the California economy.<sup>9</sup>

Last, California Global Warming Solutions Act of 2006 (SB 32) requires the state board to ensure that statewide greenhouse gas emissions are reduced to at least 40% below the 1990 level by 2030.<sup>10</sup>

### **3. ENVIRONMENTAL SETTING**

Site 2 is approximately 36,120 square feet and consists of Assessor's Parcel Numbers (APNs) 5139020025, 5139020007 and 5139020006. Site 2 is bounded by 11th Street to the north, Olive Street to the east, a T parking structure to the south, and the Margo Street alley to the west.

#### **3.1. WATER**

LADWP is responsible for providing water supply to the City while complying with County, State, and Federal regulations.

##### **3.1.1. REGIONAL**

Primary sources of water for the LADWP service area are the Los Angeles Aqueducts (LAA), State Water Project (supplied by MWD) and local groundwater. The Los Angeles Aqueduct has been the primary source of the City's water supply. In recent years, however, the amount of water supplies from the Los Angeles Aqueduct has been limited due to environmental concerns, and the City's water supply relied heavily (average of 57% in recent years) on the purchased water from MWD delivered from the Colorado River or from the Sacramento-San Joaquin Delta. Local ground water has been a reliable water source, providing an average of 12% of the total water supply, but there have been concerns in recent years due to declining groundwater level and contamination issues. Lastly, the City's recycled water supply is limited to specific projects within the City at this time.<sup>11</sup>

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<sup>8</sup> C.A. Legislative Assembly, SB 32, 2015-2016.

<sup>9</sup> California Gas and Electric Utilities, 2020 California Gas Report, 2020.

<sup>10</sup> C.A. Legislative Assembly, SB 32, 2015-2016.

<sup>11</sup> LADWP, 2015 Urban Water Management Plan, October 2016.



### **3.1.2. LOCAL**

LADWP maintains water infrastructure to the Project Site. Based on available record data provided by LADWP, there is a 12-inch water main in Olive Street and a 10-inch main in 11<sup>th</sup> Street. The project will consist of connections to 11<sup>th</sup> Street and Olive Street to serve the proposed building.

As the existing condition is a parking lot without any structures, there is currently no significant demand or generation for wet utilities, and there are no existing fire department connections or sprinklers. It is expected that new connections will be installed to meet all Fire Department and Department of Building and Safety regulations to serve the proposed building. Multiple fire hydrants exist in the greater vicinity of the Project Site.

## **3.2. WASTEWATER**

### **3.2.1. REGIONAL**

The Bureau of Sanitation (BOS) operates and maintains the wastewater treatment, reclamation and collection facilities serving most of the City of Los Angeles incorporated areas as well as several other cities and unincorporated areas in the Los Angeles basin and San Fernando Valley. The collection infrastructure consists of over 6,700 miles of local, trunk, mainline and major interceptor sewers, five major outfall sewers, and 46 pumping plants. The wastewater generated by the Project ultimately flows to the Hyperion Treatment Plant (HTP) System. The existing design capacity of the Hyperion Service Area is approximately 550 million gallons per day (mgd) and the existing average daily flow for the system is approximately 260 mgd.<sup>12</sup>

### **3.2.2. LOCAL**

Sanitary sewer is provided by the City of Los Angeles Bureau of Sanitation (BOS). The sanitary sewer connections to the proposed building will come from existing 14-inch Vitrified Clay Pipe (VCP) sewer line in Olive Street. Based on Los Angeles Bureau of Engineering's online Navigate LA database, this sewer main has a capacity of 4.26376 cfs (2.76 MGD).<sup>13</sup>

The City sewer network ultimately conveys wastewater to the Hyperion Sewage Treatment Plant.

As the existing condition is a parking lot without any structures, there is currently no significant demand or generation for wet utilities.

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<sup>12</sup> City of Los Angeles Department of Public Works, Bureau of Sanitation, Sewer System Management Plan Hyperion Sanitary Sewer System, January 2019.

<sup>13</sup> <http://navigatela.lacity.org/navigatela/> Accessed September 1, 2021

### 3.3. ENERGY

#### 3.3.1. ELECTRICITY

LADWP is responsible for providing power supply to the City while complying with County, State, and Federal regulations.

##### 3.3.1.1. REGIONAL

LADWP's Power system is the nation's largest municipal electric utility, and serves a 465-square-mile area in Los Angeles and much of the Owens Valley. The system supplies more than 26 million megawatt-hours (MWh) of electricity a year for the City of Los Angeles' 1.5 million residential and business customers as well as over 5,000 customers in the Owens Valley. LADWP has over 6,502 megawatts (MW) of generation capacity from a diverse mix of energy sources including Renewable energy, Natural Gas, Nuclear, Large Hydro, coal and other sources. The distribution network includes 6,752 miles of overhead distribution lines and 3,626 miles of underground distribution cables.<sup>14</sup>

##### 3.3.1.2. LOCAL

Based on available substructure maps from the City of Los Angeles Bureau of Engineering's online NavigateLA, it appears that the Project Site receives electric power service from LADWP via underground conduits in 11<sup>th</sup> Street and Olive Street.

Electricity demand estimates have been prepared based on the existing site conditions and are summarized in Table 1 below.

Table 1 – Estimated Existing Electricity Demand		
Connection To:	Facility	Electricity Demand <sup>(a)</sup> (kWhr/yr) <sup>(b)</sup>
Existing Project Site	Parking Lot	12,639
<b>Total Existing Electricity Demand for Project Site</b>		<b>12,639</b>
<sup>(a)</sup> The average estimated load based on estimates from CalEEMod.		
<sup>(b)</sup> 1 kW (kilowatt = 1,000 Watts)		

#### 3.3.2. NATURAL GAS

Southern California Gas Company (SoCal Gas) as is responsible for providing natural gas supply to the City and is regulated by the California Public Utilities Commission and other state and federal agencies.

<sup>14</sup> LADWP, 2017 Power Strategic Long-Term Resource Plan, December 2017.

### 3.3.2.1. REGIONAL

SoCalGas is the principal distributor of natural gas in Southern California, providing retail and wholesale customers with transportation, exchange, storage services and also procurement services to most retail core customers. SoCalGas is a gas-only utility and, in addition to serving the residential, commercial, and industrial markets, provides gas for enhanced oil recovery (EOR) and EG customers in Southern California. SDG&E, SWG, the City of Long Beach Energy Resources Department, and the City of Vernon are SoCalGas' four wholesale utility customers. SoCalGas also provides gas transportation services across its service territory to a border crossing point at the California-Mexico border at Mexicali to ECOGAS Mexico S. de R.L. de C.V which is a wholesale international customer located in Mexico.<sup>15</sup>

### 3.3.2.2. LOCAL

Based on substructure maps provided by the City's Navigate LA database, it appears that an existing gas service connection exists on Olive Street along the project frontage. Southern California Gas Company (SCG) services exist in Olive Street and 11<sup>th</sup> Street.

As the existing condition is a surface parking lot without any structures, it is understood that no meaningful gas demand exists for the Project site.

## 4. SIGNIFICANCE THRESHOLDS

Appendix G of the State of California's California Environmental Quality Act (CEQA) Guidelines (CEQA Guidelines) provides a set of sample questions that address impacts with regard to water supply. These questions are as follows:

Would the project:

- Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunication facilities or expansion of existing facilities, the construction or relocation of which would cause significant environmental effects?
- Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years?

In the context of the above questions from the Appendix G of the CEQA Guidelines, the City of Los Angeles CEQA Thresholds Guide (*L.A. CEQA Thresholds Guide*) states that the determination of significance with regard to impacts on water shall be made on a case-by-case basis, considering the following factors:

- The total estimated water demand for the project;

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<sup>15</sup> California Gas and Electric Utilities, 2020 California Gas Report, 2020.

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

Based on these factors, the Project would have a significant impact if the City’s water supplies would not adequately serve the Project or water distribution capacity would be inadequate to serve the proposed use after appropriate infrastructure improvements have been installed.

#### 4.1. WASTEWATER

Appendix G of the CEQA Guidelines provides a set of sample questions that address impacts regarding wastewater. These questions are as follows:

Would the project:

- Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?
- Result in a determination by the wastewater treatment provider, which serves or may serve the project, that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments?

In the context of the above questions from the CEQA Guidelines, the *L.A. CEQA Thresholds Guide* states that a project would normally have a significant wastewater impact if:

- The project would cause a measureable increase in wastewater flows at a point where, and a time when, a sewer’s capacity is already constrained or that would cause a sewer’s capacity to become constrained; or
- The project’s additional wastewater flows would substantially or incrementally exceed the future scheduled capacity of any one treatment plant by generating flows greater than those anticipated in the Wastewater Facilities Plan or General Plan and its elements.

These thresholds are applicable to the Project and as such are used to determine if the Project would have significant wastewater impacts.

## 4.2. ENERGY

Appendix F of the CEQA Guidelines states that the potentially significant energy implications of a project should be considered in an EIR. Environmental impacts, as noted in Appendix F, may include:

- The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project's life cycle including construction, operation, maintenance and/or removal. if appropriate, the energy intensiveness of materials may be discussed;
- The effects of the project on local and regional energy supplies and on requirements for additional capacity;
- The effects of the project on peak and base period demands for electricity and other forms of energy;
- The degree to which the project complies with existing energy standards;
- The effects of the project on energy resources;
- The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

Appendix G of the CEQA Guidelines has the following questions:

- Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction?
- Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

In the context of the above thresholds, the *L.A. CEQA Thresholds Guide* states that a determination of significance shall be made on a case-by case basis, considering the following factors:

- The extent to which the project would require new (off-site) energy supply facilities and distribution infrastructure; or capacity enhancing alterations to existing facilities;
- Whether and when the needed infrastructure was anticipated by adopted plans; and
- The degree to which the project design and/or operations incorporate energy conservation measures, particularly those that go beyond City requirements.

Based on these factors, the Project would have a significant impact on energy resources if the project would result in an increase in demand for electricity or natural gas that

exceeds available supply or distribution infrastructure capabilities, or the design of the project fails to incorporate energy conservation measures that go beyond existing requirements.

## 5. METHODOLOGY

### 5.1. WATER

The methodology for determining the significance of a project as it relates to a project's impact on water supply and distribution infrastructure is based on the *L.A. CEQA Thresholds Guide*. This methodology involves a review of the project's environmental setting, project impacts, cumulative impacts, and mitigation measures (if required). The following has been considered as part of the determination for this Project:

#### *Environmental Setting*

- Description of major water infrastructure serving the Project site, including the type of facilities, location and sizes, and any planned improvements.
- Description of the water conditions for the Project area and known improvement plans.

#### *Project Impacts*

- Evaluate the Project's water demand, taking into account design or operational features that would reduce or offset water demand.
- Determine what improvements would be needed, if any, to adequately serve the Project.
- Describe the degree to which presently scheduled off-site improvements offset impacts.

This report analyzes the potential impacts of the Project on the existing public water infrastructure by comparing the estimated Project demand with the calculated available capacity of the existing facilities.

The existing and proposed water demand is based upon available site and Project information and utilizes 120 percent of the BOS sewerage generation factors.

LADWP performed a hydraulic analysis of their water system to determine if adequate fire flow is available to the fire hydrants surrounding the Project Site. LADWP's approach consists of analyzing their water system model near the Project Site. Based on the results, LADWP determines whether they can meet the project fire hydrant flow needs based on existing infrastructure. See Exhibit 1 for the results of the Information of Fire Flow Availability Request (IFFAR).

In addition, LADWP performed a flow test to determine if available water conveyance exists for future development. LADWP's approach consists of data ranging from available static pressure (meaning how much pressure is available at the source before applying the project's demand), to the available pressure at the maximum demand needed for the project. Based on the results, LADWP determines whether they can meet the project needs based on existing infrastructure. See Exhibit 2 for the results of the Service Advisory Requests (SAR) for 11<sup>th</sup> Street and Olive Street.

## 5.2. WASTEWATER

The methodology for determining the significance of a project as it relates to a project's impact on wastewater collection and treatment infrastructure is based on the *L.A. CEQA Thresholds Guide*. This methodology involves a review of the project's environmental setting, project impacts, cumulative impacts, and mitigation measures (if required). The following has been considered as part of the determination for this Project:

### *Environmental Setting*

- Location of the Project and appropriate points of connection to the wastewater collection system on the pertinent Wye Map;
- Description of the existing wastewater system which would serve the Project, including its capacity and current flows.
- Summary of adopted wastewater-related plans and policies that are relevant to the Project area.

### *Project Impacts*

- Evaluate the Project wastewater needs (anticipated daily average wastewater flow), taking into account design or operational features that would reduce or offset service impacts;
- Compare the Project's wastewater needs to the appropriate sewer's capacity and/or the wastewater flows anticipated in the Wastewater Facilities Plan or General Plan.

This report analyzes the potential impacts of the Project on the existing public sewer infrastructure by comparing the estimated Project wastewater generation with the calculated available capacity of the existing facilities.

Pursuant to LAMC Section 64.15 BOS Wastewater Engineering Division made a preliminary analysis of the local and regional sewer conditions to determine if available wastewater conveyance and treatment capacity exists for future development of the Project Site. BOS's approach consisted of the study of a worst-case scenario envisioning peak demands from the relevant facilities occurring simultaneously on the wastewater system. A combination of flow gauging data and computed results from the City's hydrodynamic model were used to project current and future impacts due to additional

sewer discharge. The data used in this report are based on the findings of the BOS preliminary analysis. Refer to Exhibit 3 for the Sewer Capacity Availability Report (SCAR) results showing feasibility in accommodating the Project.

### **5.3. ENERGY**

The methodology for determining the significance of a project as it relates to a project's impact on energy supply and distribution infrastructure is based on the *L.A. CEQA Thresholds Guide*. This methodology involves a review of the project's environmental setting, project impacts, cumulative impacts, and mitigation measures as required. The following has been considered as part of the determination for this Project:

#### *Environmental Setting*

- Description of the electricity and natural gas supply and distribution infrastructure serving the project site. Include plans for new transmission facilities or expansion of existing facilities; and
- Summary of adopted energy conservation plans and policies relevant to the project

#### *Project Impacts*

- Evaluation of the new energy supply and distribution systems which the project would require.
- Describe the energy conservation features that would be incorporated into project design and/or operation that go beyond City requirements, or that would reduce the energy demand typically expected for the type of project proposed.
- Consult with the DWP or The Gas Company, if necessary to gauge the anticipated supply and demand conditions at project buildout.

This report analyzes the potential impacts of the Project on existing energy infrastructure by comparing the estimated Project energy demand with the available capacity. Will-serve letters from LADWP and SoCal Gas (Exhibits 4 and 5) demonstrate the availability of sufficient energy resources to supply the Project's demand.

## **6. PROJECT IMPACTS**

### **6.1. CONSTRUCTION**

#### **6.1.1. WATER**

Water demand for construction of the Project would be required for dust control, cleaning of equipment, excavation/export, removal and re-compaction, etc. Based on a review of construction projects of similar size and duration, a conservative estimate of construction water use ranges from 1,000 to 2,000 gallons per day (gpd). Although temporary



construction water use would be greater than the existing water consumption at the Project Site, it is anticipated that the existing water infrastructure would meet the limited and temporary water demand associated with construction of the Project. Impacts on the water infrastructure due to construction activity would therefore be less than significant.

The Project will also require construction of new, on-site water distribution lines to serve new buildings and facilities of the proposed Project. Construction impacts associated with the installation of water distribution lines would primarily involve trenching in order to place the water distribution lines below surface and would be limited to on-site water distribution, and minor off-site work associated with connections to the public main. Prior to ground disturbance, Project contractors would coordinate with LADWP to identify the locations and depth of all lines. Further, LADWP would be notified in advance of proposed ground disturbance activities to avoid water lines and disruption of water service and are typically responsible for the installation of new meters and main connections. Therefore, Project impacts on water associated with construction activities would be less than significant.

### **6.1.2. WASTEWATER**

Construction activities for the Project would not result in wastewater generation as construction workers would typically utilize portable restrooms, which would not contribute to wastewater flows to the City's wastewater system. Thus, wastewater generation from Project construction activities is not anticipated to cause a measurable increase in wastewater flows. Therefore, Project impacts associated with construction-period wastewater generation would be less than significant.

The Project will require construction of new on-site infrastructure to serve the new buildings. Construction impacts associated with wastewater infrastructure would primarily be confined to trenching for connections to public infrastructure. Installation of wastewater infrastructure will be limited to on-site wastewater distribution, and minor off-site work associated with connections to the public main. No upgrades to the public main are anticipated. A Construction Management Plan would be implemented to reduce any temporary pedestrian and traffic impacts. The contractor would implement the Construction Management Plan, which would ensure safe pedestrian access and vehicle travel and emergency vehicle access throughout the construction phase. Overall, when considering impacts resulting from the installation of any required wastewater infrastructure, all impacts are of a relatively short-term duration (i.e., months) and would cease to occur once the installation is complete. Therefore, Project impacts on wastewater associated with construction activities would be less than significant.

### **6.1.3. ENERGY**

Electrical power would be consumed to construct the new buildings and facilities of the proposed Project. Typical uses include temporary power for lighting, equipment, construction trailers, etc. Overall, demolition and construction activities would require minimal electricity consumption and would not be expected to have any adverse impact

on available electricity supplies and infrastructure. Therefore, impacts on electricity supply associated with short-term construction activities would be less than significant.

No natural gas usage is expected to occur during construction. Therefore, impacts on natural gas supply associated with short-term construction activities would be less than significant.

Construction impacts associated with the Project's electrical and gas infrastructure upgrades would primarily be confined to trenching. Infrastructure improvements will comply with all applicable LADWP, SoCalGas, and City of LA requirements, which are expected to and would in fact mitigate impact to existing energy systems and adjacent properties. As stated above, to reduce any temporary pedestrian access and traffic impacts during any necessary off-site energy infrastructure improvements, a construction management plan would be implemented to ensure safe pedestrian and vehicular travel. Therefore, Project impacts on energy infrastructure associated with construction activities would be less than significant.

## **6.2. OPERATION**

### **6.2.1. WATER**

#### **6.2.1.1. INFRASTRUCTURE CAPACITY**

When analyzing the Project for infrastructure capacity, the projected demands for both fire suppression and domestic water are considered. Although domestic water demand is the Project's main contributor to water consumption, fire flow demands have a much greater instantaneous impact on infrastructure, and therefore are the primary means for analyzing infrastructure capacity. Nevertheless, conservative analysis for both fire suppression and domestic water flows has been completed by LADWP for the Project. See Exhibit 1 and Exhibit 2 for the results of the IFFAR and SAR, respectively, which together demonstrate that adequate water infrastructure capacity exists.

#### **6.2.1.2. FIRE WATER DEMAND**

Based on fire flow standards set forth in Section 57.507.3 of the LAMC, the Project falls within the industrial and commercial category, which has a required fire flow of 6,000 to 9,000 gallons per minute (gpm) from four to six adjacent hydrants flowing simultaneously with a residual pressure of 20 pounds per square inch (psi). This translates to a required flow of 1,500 gpm for each hydrant. An IFFAR was submitted to LADWP regarding available fire hydrant flow to demonstrate compliance. The results indicate all six hydrants flowing at 1,500 gpm with a residual pressure of at least 51 psi at any hydrant. The results show that the Project Site currently has adequate fire flow available to demonstrate compliance with Section 57.507.3 of the LAMC.

Furthermore, LAMC Section 57.513, Supplemental Fire Protection, states that:

Where the Chief determines that any or all of the supplemental fire protection equipment or systems described in this section may be substituted in lieu of the requirements of this chapter with respect to any facility, structure, group of structures or premises, the person owning or having control thereof shall either conform to the requirements of this chapter or shall install such supplemental equipment or systems. Where the Chief determines that any or all of such equipment or systems is necessary in addition to the requirements of this chapter as to any facility, structure, group of structures or premises, the owner thereof shall install such required equipment or systems.

The Project will incorporate a fire sprinkler suppression system to reduce or eliminate the public hydrant demands, which will be subject to Fire Department review and approval during the design and permitting of the Project. Based on Section 94.2020.0 of the LAMC that adopts by reference NFPA 14-2013 including Section 7.10.1.1.5, the maximum allowable fire sprinkler demand for a fully or partially sprinklered building would be 1,250 gpm. As noted, an SAR was submitted to LADWP to determine if the existing public water infrastructure could meet the demands of the Project. Based upon the SAR results, the existing infrastructure is sufficient to meet the demands of the project. The Project's fire flow impacts to water infrastructure would be less than significant.

#### **6.2.1.3. DOMESTIC WATER DEMAND**

Water consumption estimates have been prepared based on 120 percent of the City of LA Bureau of Sanitation sewerage generation factors for commercial categories and are summarized in Figure 1 below:

TABLE I Downtown Los Angeles South Park Properties - Site 2 Calculated Total Additional Water Demand						
Existing Use to be Removed <sup>1</sup>	Quantity	Unit	Water Use Factor <sup>2</sup> (gpd/unit)			Existing Water Use to be Removed (gpd) (af/y)
Surface Parking Lot <sup>3</sup>	36,120	sf	0			0 0
<b>Existing to be Removed Total</b>						<b>0 0.00</b>
Proposed Use <sup>1</sup>	Quantity	Unit	Water Use Factor <sup>2</sup> (gpd/unit)	Base Demand (gpd)	Required Ordinances Water Savings <sup>4</sup> (gpd)	Proposed Water Demand (gpd) (af/y)
Residential: Studios	89	du	75.00	6,675		
Residential: 1 bd	266	du	110.00	29,260		
Residential: 1 bd Apartment with den	2	du	110.00	220		
Residential: 2 bd Apartment	176	du	150.00	26,400		
Residential: 3 bd	3	du	190.00	570		
Base Demand Adjustment (Residential Units) <sup>5</sup>				6,987		
<b>Residential Units Total</b>	<b>536</b>	<b>du</b>		<b>70,112</b>	<b>12,632</b>	<b>57,480 64.39</b>
Synthetic Turf Areas (lvl 5 outdoor dog run, lvl 6 pool and fitness area)	1,600	sf		0.02		
Dog Lounge (lvl 5) <sup>6</sup>	1,749	sf	0.18	319		
Fitness (lvl 5, 6)	3,518	sf	0.22	762		
Office (lvl 5 "co-working")	2,860	sf	0.06	172		
Lounge (lvl 6, 21,41,51) <sup>7</sup>	277	seats	12.86	3,561		
Pool and Spa (lvl 6)	1,632	sf		156		
Office (lvl 1)	1,470	sf	0.12	176		
Restaurant-seating area (lvl 1) <sup>8</sup>	139	seats	30.00	4,178		
Restaurant- kitchen/storage/etc (lvl 1) <sup>8</sup>	2,089	sf	0.300	627		
<b>Residential Amenities/Commercial Total</b>				<b>9,950</b>	<b>1,458</b>	<b>8,492 9.51</b>
<b>Landscaping<sup>9</sup></b>	<b>8,612</b>	<b>sf</b>		<b>817</b>	<b>380</b>	<b>437 0.49</b>
<b>Covered Parking<sup>10</sup></b>	<b>258,647</b>	<b>sf</b>	<b>0.02</b>	<b>170</b>	<b>0</b>	<b>170 0.19</b>
<b>Cooling Tower Total</b>	<b>1,000</b>	<b>ton</b>	<b>35.64</b>	<b>35,640</b>	<b>34,789</b>	<b>851 0.95</b>
<b>Proposed Subtotal</b>				<b>116,689</b>	<b>49,259</b>	<b>67,430 75.53</b>
				Less Existing to be Removed Total		0 0.00
				Less Additional Conservation <sup>11</sup>		357 0.40
				<b>Net Additional Water Demand</b>		<b>67,073 gpd 75.1 af/y</b>

**Figure 1: Calculated Total Additional Water Demand**

Taken from Water Supply Assessment prepared by LADWP, dated May 5, 2021

As mentioned, the approved SAR, which is inclusive of anticipated domestic water flow demands, shows that the existing infrastructure is sufficient to meet the water demand of the Project. Additionally, the WSA states "... [P]rojected water supplies available during normal, single-dry, and multiple-dry water years as included in the 25-year projection of 2015 UWMP are sufficient to meet the projected water demand associated with the Project, in addition to the existing and planned future demand on LADWP." Therefore, the Project's impacts on water supply would be less than significant.

#### 6.2.1.4. SEWER GENERATION

In accordance with the *L.A. CEQA Thresholds Guide*, the base estimated sewer flows were based on the sewer generation factors for the Project’s uses. Based on the type of use and generation factors, the Project will generate approximately 68,295 gallons per day (gpd) of wastewater. Wastewater generation estimates have been prepared based on the City of LA Bureau of Sanitation sewerage generation factors for residential and commercial categories and are summarized in Table 2 below:

Table 2 – DTLA Site 2 Estimated Proposed Sewage Generation				
Building Use	Sewage Generation (GPD) <sup>(a)</sup>	Units	Quantity	Total Generation (GPD)
APT - BACHELOR	75	DU	89	6,675
APT – 1 BEDROOM	110	DU	268	29,480
APT – 2 BEDROOM	150	DU	176	26,400
APT – 3 BEDROOM	190	DU	3	570
RESTAURANT – FULL SERVICE INDOOR-SEAT <sup>(b)</sup>	30	KGSF	139	4,170
SWIMMING POOL <sup>(c)</sup>	-	GPD	41,121	41,121
SPA/JACUZZI <sup>(c)</sup>	-	GPD	4,346	4,346
<b>Total Proposed Sewage Generation for Project Site</b>				<b>112,762</b>
<p><sup>(a)</sup> The average daily flow based on 100% of City of Los Angeles sewerage generation factors.  <sup>(b)</sup> 30 SF / seat is assumed  <sup>(c)</sup> Volumes represent total anticipated volume of pool/spa. It is understood that, by including the full volumes, this analysis represents a “worst-case scenario” as emptying the pool/spa daily is not anticipated.</p>				

A SCAR was submitted to see whether the existing public infrastructure can accommodate the Project. The Bureau of Sanitation has analyzed the Project demands in conjunction with existing conditions and forecasted growth. Refer to Exhibit 3 for the response letter from the Bureau of Sanitation – Wastewater Engineering Services Division.

As previously stated, the existing capacity of the sewer line along Olive Street has a capacity of 4.26376 cfs (2.7557 MGD). The Project’s sewage generation is approximately 112,762 gpd, which represents 4.06% of the existing pipe’s capacity. Due to this fact, and the approved SCAR provided by the Bureau of Engineering-Wastewater Engineering Services Division, operational impacts on wastewater infrastructure would be less than significant.

As further discussed below, the existing design capacity of the Hyperion Service Area is approximately 550 million gallons per day (consisting of 450 mgd at the Hyperion Treatment Plant, 80 mgd at the Donald C. Tillman Water Reclamation Plant,

Reclamation Plant, and 20 mgd at the Los Angeles–Glendale Water Reclamation Plant).<sup>16</sup> The Project’s proposed wastewater generation is approximately 0.112 mgd. This is far less than one percent of the Hyperion Treatment Plant’s capacity where the Project’s wastewater would be treated. Consequently, impacts on wastewater treatment capacity are less than significant.

## 6.2.2. ENERGY

### 6.2.2.1. ELECTRICITY

The Project will increase the demand for electricity resources. Based on analysis performed using CalEEMod software, the estimated projected electrical loads are provided in Table 3 below.

Table 3 - Estimated Proposed Electrical Demand			
Connection To:	Facility	Quantity	Electricity Demand <sup>(a)</sup> (kWhr/yr) <sup>(b)</sup>
<b>Proposed Project Site</b>	Residential <sup>(c)</sup>	536 DU	2,122,600
	Restaurant <sup>(d)</sup>	4,178 SF	184,417
	Enclosed Parking with Elevator	263,937 SF	1,546,670
<b>Total Proposed Electricity Demand for Project Site</b>			3,853,687
<b>Existing Total Electricity Demand for Project Site</b>			12,639
<b>Net Increase in Electricity Demand for Project Site Due to Project</b>			3,841,048
<p><sup>(a)</sup> The average projected load based on estimates from CalEEMod.</p> <p><sup>(b)</sup> 1 kW (kilowatt) = 1,000 Watts.</p> <p><sup>(c)</sup> All residential units classified as “Apartments High Rise”</p> <p><sup>(d)</sup> Restaurant space classified as “Fast Food Restaurant w/o Drive Thru”</p>			

A Will Serve letter was sent to LADWP to determine if there is sufficient capacity to serve the Project. Based on the response from LADWP (see Exhibit 4), impacts related to electrical services would be less than significant.

<sup>16</sup> City of Los Angeles Department of Public Works, Bureau of Sanitation, Water Reclamation Plants, [https://www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-cw/s-lsh-wwd-cw-p?\\_adf.ctrl-state=oe981wkld\\_4&\\_afLoop=28344654751341747#!](https://www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-cw/s-lsh-wwd-cw-p?_adf.ctrl-state=oe981wkld_4&_afLoop=28344654751341747#!), accessed August 13, 2019.

### 6.2.2.2. NATURAL GAS.

The Project will increase the demand for natural gas resources. Based on analysis performed using CalEEMod software, the estimated projected natural gas loads are provided in Table 4 below.

Table 4 - Estimated Proposed Natural Gas Demand			
Connection To:	Facility	Quantity	Natural Gas Demand <sup>(a)</sup> (cf/yr)
<b>Proposed Project Site</b>	Residential <sup>(b)</sup>	536 DU	4,815,088
	Retail <sup>(c)</sup>	6,153 SF	939,683
	Enclosed Parking with Elevator	594 Spaces	0
<b>Total Proposed Natural Gas Demand for Project Site</b>			5,754,771
<b>Existing Total Natural Gas Demand for Project Site</b>			0
<b>Net Increase in Natural Gas Demand for Project Site Due to Project</b>			5,754,771
<sup>(a)</sup> The average projected load based on estimates from CalEEMod. 1kBTU = 1.026 CF <sup>(b)</sup> All residential units classified as “Apartments High Rise” <sup>(c)</sup> Restaurant space classified as “Fast Food Restaurant w/o Drive Thru”			

A Will Serve letter was sent to the gas company to determine if there is sufficient capacity to serve the Project. Based on the response from SoCalGas (see Exhibit 5), available capacity to serve the project exists. As such, impacts related to gas would be less than significant.

## 6.3. CUMULATIVE IMPACTS

Sixty-three projects have been identified as “related projects” as based on the traffic analysis.

### 6.3.1 WATER

The geographic context for the cumulative impact analysis on water supply is the LADWP service area (i.e., the City). LADWP, as a public water service provider, is required to prepare and periodically update an Urban Water Management Plan to plan and provide for water supplies to serve existing and projected demands. The 2015 UWMP prepared by LADWP accounts for existing development within the City, as well as projected growth through the year 2040.

Additionally, under the provisions of Senate Bill 610, LADWP is required to prepare a comprehensive water supply assessment for every new development "project" (as defined by Section 10912 of the Water Code) within its service area that reaches certain thresholds. The types of projects that are subject to the requirements of Senate Bill 610 tend to be larger projects that may or may not have been included within the growth projections of the 2015 UWMP. The water supply assessment for projects would evaluate the quality and reliability of existing and projected water supplies, as well as alternative sources of water supply and measures to secure alternative sources if needed.

Furthermore, through LADWP's 2015 UWMP process and the City's Securing L.A.'s Water Supply, the City will meet all new demand for water due to projected population growth to the year of 2040, through a combination of water conservation and water recycling. These plans outline the creation of sustainable sources of water for the City of Los Angeles to reduce dependence on imported supplies. LADWP is planning to achieve these goals by expanding its water conservation program. To increase recycled water use, LADWP is expanding the recycled water distribution system to provide water for irrigation, industrial use, and groundwater recharge.

The total increase in demand for the Project and related projects is approximately 5.7 MGD. LADWP's UWMP has anticipated an approximate water demand of 576 MGD by the year 2025, which suggests that the Project combined with related projects would account for approximately 1% of the total daily demand. During the entitlement process for these projects, it is assumed that potential mitigation measures will be evaluated on a by-project basis (through the WSA process or otherwise) which will reduce the anticipated water demand for these projects. In addition, the Water Supply Assessment performed by LADWP has evaluated the Project alongside future anticipated growth and potential dry water years (both in "single-dry" and "multiple-dry" year scenarios) and has found that the Project can be accommodated based on their analysis.

Based on the above, it is anticipated that LADWP would be able to supply the water demands of the Project as well as future growth. Therefore, cumulative impacts on water supply would be less than significant.

### **6.3.2 WASTEWATER**

The Proposed Project will result in the additional generation of sewer flow. However, as discussed above the Bureau of Sanitation will conduct analyses of existing and planned capacity and will determine that adequate capacity exists to serve the Project. Related projects connecting to the same sewer system are required to obtain a sewer connection permit and submit a Sewer Capacity Availability Request to the Bureau of Sanitation as part of the related project's development review. Impact determination will be provided following the completion of the SCAR analysis. If system upgrades are required as a result of a given project's additional flow, arrangements would be made between the related project and the Bureau of Sanitation to construct the necessary improvements.

Wastewater generated by the Proposed Project would be conveyed via the existing wastewater conveyance systems for treatment at the Hyperion Treatment Plant system.

As previously stated, based on information from the Bureau of Sanitation, the existing



design capacity of the Hyperion Service Area is approximately 550 million gallons per day (mgd) and the existing average daily flow for the system is approximately 260 mgd.<sup>17</sup> The estimated wastewater generation of the Proposed Project and related projects (4,905,747 gpd) is less than the available capacity in the system and roughly 98% of the allotted annual wastewater flow increase for the Hyperion Treatment Plant. It is understood, however, that these Projects do not represent a single year of development and will be reviewed on an individual basis for potential impacts. It is expected that the related projects would also be required to adhere to the Bureau of Sanitation's annual wastewater flow increase allotment.

Based on these forecasts the Project's increase in wastewater generation would be adequately accommodated within the Hyperion Service Area. In addition, the City Bureau of Sanitation's analysis confirms that the Hyperion Treatment Plant has sufficient capacity and regulatory allotment for the Proposed Project. Thus, operation of the Project would have a less than significant impact on wastewater treatment facilities.

### **6.3.3 ENERGY**

The geographic context for the cumulative analysis of electricity is LADWP's service area and the geographic context for the cumulative analysis of natural gas is SoCal Gas' service area. The geographic context for transportation energy use is the City of Los Angeles. Growth within these geographies is anticipated to increase the demand for electricity, natural gas, and transportation energy, as well as the need for energy infrastructure, such as new or expanded energy facilities.

Buildout of the Project, the related projects, and additional growth forecasted to occur in the City would increase electricity consumption during project construction and operation and, thus, cumulatively increase the need for energy supplies and infrastructure capacity, such as new or expanded energy facilities. LADWP forecasts that its total energy sales in the 2025-2026 fiscal year (the assumed project buildout year) will be 23,537 gigawatt-hours (GWh) of electricity.<sup>18</sup> Based on the Project and Related Projects estimated net new electrical consumption of 246.7 GWh/year, the project would account for approximately 1% of LADWP's projected sales for the Project's build-out year. Although future development would result in the irreversible use of renewable and non-renewable electricity resources during project construction and operation which could limit future availability, the use of such resources would be on a relatively small scale and would be consistent with growth expectations for LADWP's service area. Furthermore, like the Project, during construction and operation, other future development projects would be expected to incorporate energy conservation features, comply with applicable regulations including CALGreen and State energy standards under Title 24, and incorporate mitigation measures, as necessary. Accordingly, the Project's contribution to cumulative

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<sup>17</sup> City of Los Angeles Department of Public Works, Bureau of Sanitation, Sewer System Management Plan Hyperion Sanitary Sewer System, January 2019.

<sup>18</sup> LADWP, 2017 Power Integrated Resource Plan, Appendix A, Table A-1.

impacts related to electricity consumption would not be cumulatively considerable and, thus, would be less than significant.

Electricity infrastructure is typically expanded in response to increasing demand, and system expansion and improvements by LADWP are ongoing. As described in LADWP's 2017 Power Integrated Resource Plan, LADWP would continue to expand delivery capacity as needed to meet demand increases within its service area at the lowest cost and risk consistent with LADWP's environmental priorities and reliability standards. LADWP has indicated that the Power Integrated Resource Plan incorporates the estimated electricity requirement for the Project. The Power Integrated Resource Plan takes into account future energy demand, advances in renewable energy resources and technology, energy efficiency, conservation, and forecast changes in regulatory requirements. Development projects within the LADWP service area would also be anticipated to incorporate site-specific infrastructure improvements, as necessary. Each of the related projects would be reviewed by LADWP to identify necessary power facilities and service connections to meet the needs of their respective projects. Project applicants would be required to provide for the needs of their individual projects, thereby contributing to the electrical infrastructure in the Project area. As such, the Project's contribution to cumulative impacts with respect to electricity infrastructure would not be cumulatively considerable and, thus, would be less than significant.

Buildout of the Project and related projects in SoCal Gas' service area is expected to increase natural gas consumption during project construction and operation and, thus, cumulatively increase the need for natural gas supplies and infrastructure capacity. Based on the 2020 California Gas Report, the California Energy Commission estimates natural gas capacity within SoCal Gas' planning area will be approximately 3,435 million cubic feet/day in 2025, of which approximately 1,093 million cubic feet/day is currently unallocated.<sup>19</sup> The Project and Related Projects (approx. 1.4 million cubic feet/day) would account for significantly less than 0.1 percent of the 2024 forecasted availability in SoCalGas's planning area. SoCalGas' forecasts consider projected population growth and development based on local and regional plans. Although future development projects would result in the irreversible use of natural gas resources which could limit future availability, the use of such resources would be on a relatively small scale and would be consistent with regional and local growth expectations for SoCalGas' service area. Furthermore, like the Project, during project construction and operation other future development projects would be expected to incorporate energy conservation features, comply with applicable regulations including CALGreen and State energy standards under Title 24, and incorporate mitigation measures, as necessary. Accordingly, the Project's contribution to cumulative impacts related to natural gas consumption would not be cumulatively considerable and, thus, would be less than significant.

Natural gas infrastructure is typically expanded in response to increasing demand, and system expansion and improvements by SoCalGas occur as needed. It is expected that SoCalGas would continue to expand delivery capacity if necessary to meet demand

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<sup>19</sup> California Gas and Electric Utilities, 2020 California Gas Report, p. 145.

increases within its service area. Development projects within its service area would also be anticipated to incorporate site-specific infrastructure improvements, as appropriate. As such, cumulative impacts with respect to natural gas infrastructure would not be cumulatively considerable and, thus, would be less than significant.

## **7. LEVEL OF SIGNIFICANCE**

Based on the analysis contained in this report no significant impacts have been identified to water, wastewater, or energy infrastructure for this Project.

# APPENDIX 1

## Related Projects Utility Demand Calculations

Table A1 – Related Projects Estimated Proposed Water Demand				
Building Use	Water Demand (GPD) <sup>(a)</sup>	Units	Quantity	Total Consumption (GPD)
Bar: Cocktail, Public Table Area	864	KGsf	10,749	9,287
Commercial Use	60	KGsf	115,900	6,954
Conference Room of Office Bldg.	144	KGsf	10,801	1,555
Health Club/Spa	780	KGsf	10,684	8,334
Hotel: Use Guest Rooms Only	144	Room	5,902	849,888
Medical Office/Clinic	300	KGsf	10,000	3,000
Museum: All Area	36	KGsf	17,600	634
Office Bldg. w/Cooling Tower	204	KGsf	2,535,402	517,222
Residential: Apt - 2 BDR <sup>(b)</sup>	180	DU	14,460	2,602,800
Residential: Condo - 2 BDR <sup>(b)</sup>	180	DU	5,871	1,056,780
Restaurant: Full Service Indoor Seat <sup>(c)</sup>	36	Seat	6,816	245,376
Retail Area (greater than 100,000 SF)	60	KGsf	582,545	34,953
Retail Area (less than 100,000 SF)	30	KGsf	621,448	18,643
School: Trade or Vocational	13.2	Student	6,300	83,160
Theatre: Cinema	3.6	Seat	744	2,678
Convention Center Expansion <sup>(d)</sup>	60	KGsf	2,050,000	123,000
<b>Total Proposed Water Consumption for Related Projects</b>				<b>5,564,264</b>
<b>Total Proposed Water Consumption for Site 3 Project<sup>(e)</sup></b>				<b>81,953</b>
<b>Total Proposed Water Consumption for Site 2 Project</b>				<b>67,073</b>
<b>TOTAL</b>				<b>5,713,290</b>
<p>(a) The average daily flow based on 120% of City of Los Angeles sewerage generation factors.</p> <p>(b) All dwelling units for related projects assumed to be 2 BDR</p> <p>(c) 30 SF / seat is assumed</p> <p>(d) Commercial Use used for analysis of Convention Center Expansion(s)</p> <p>(e) 1100 S. Olive (“Site 3”) programming not otherwise included in table</p>				

Table A2 – Related Projects Estimated Proposed Sewage Generation				
Building Use	Sewage Generation (GPD) <sup>(a)</sup>	Units	Quantity	Total Generation (GPD)
Bar: Cocktail, Public Table Area	720	KGsf	10,749	7,739
Commercial Use	50	KGsf	115,900	5,795
Conference Room of Office Bldg.	120	KGsf	10,801	1,296
Health Club/Spa	650	KGsf	10,684	6,945
Hotel: Use Guest Rooms Only	120	Room	5,902	708,240
Medical Office/Clinic	250	KGsf	10,000	2,500
Museum: All Area	30	KGsf	17,600	528
Office Bldg. w/Cooling Tower	170	KGsf	2,535,402	431,018
Residential: Apt - 2 BDR <sup>(b)</sup>	150	DU	14,460	2,169,000
Residential: Condo - 2 BDR <sup>(b)</sup>	150	DU	5,871	880,650
Restaurant: Full Service Indoor Seat <sup>(c)</sup>	30	Seat	6,816	204,480
Retail Area (greater than 100,000 SF)	50	KGsf	582,545	29,127
Retail Area (less than 100,000 SF)	25	KGsf	621,448	15,536
School: Trade or Vocational	11	Student	6,300	69,300
Theatre: Cinema	3	Seat	744	2,232
Convention Center Expansion <sup>(d)</sup>	50	KGsf	2,050,000	102,500
<b>Total Proposed Sewage Generation for Related Projects</b>				<b>4,636,887</b>
<b>Total Proposed Sewage Generation for Site 3 Project<sup>(e)</sup></b>				<b>156,098</b>
<b>Total Proposed Sewage Generation for Site 2 Project</b>				<b>112,762</b>
<b>TOTAL</b>				<b>4,905,747</b>
<sup>(f)</sup> The average daily flow based on 100% of City of Los Angeles sewerage generation factors. <sup>(g)</sup> All dwelling units for related projects assumed to be 2 BDR <sup>(h)</sup> 30 SF / seat is assumed <sup>(i)</sup> Commercial Use used for analysis of Convention Center Expansion(s) <sup>(j)</sup> 1100 S. Olive (“Site 3”) programming not otherwise included in table				

Table A3 – Related Projects Estimated Electrical Demand (per CalEEMod analysis)			
Building Use	Units	Quantity	Electricity Demand (kWhr/yr)
Bar: Cocktail, Public Table Area <sup>(a)</sup>	KGSF	10,749	474,461
Commercial Use <sup>(b)</sup>	KGSF	115,900	34,580,700
Conference Room of Office Bldg. <sup>(b)</sup>	KGSF	10,801	
Office Bldg. w/Cooling Tower <sup>(b)</sup>	KGSF	2,535,402	
Health Club/Spa	KGSF	10,684	118,592
Hotel: Use Guest Rooms Only	Room	5,902	64,958,400
Medical Office/Clinic	KGSF	10,000	129,900
Museum: All Area <sup>(c)</sup>	KGSF	17,600	195,360
Residential: Apt - 2 BDR <sup>(d)</sup>	DU	14,460	57,262,800
Residential: Condo - 2 BDR <sup>(e)</sup>	DU	5,871	24,774,100
Restaurant: Full Service Indoor Seat <sup>(f)</sup>	Seat	6,816	9,025,750
Retail Area (greater than 100,000 SF) <sup>(g)</sup>	KGSF	582,545	16,253,900
Retail Area (less than 100,000 SF) <sup>(g)</sup>	KGSF	621,448	
School: Trade or Vocational <sup>(h)</sup>	Student	6,300	2,755,590
Theatre: Cinema	Seat	744	185,814
Convention Center Expansion <sup>(i)</sup>	KGSF	2,050,000	26,629,500
<b>Total Proposed Electricity Demand for Related Projects</b>			<b>237,344,867</b>
<b>Total Proposed Sewage Generation for Site 3 Project*</b>			<b>5,575,119</b>
<b>Total Proposed Sewage Generation for Site 2 Project</b>			<b>3,841,048</b>
<b>TOTAL</b>			<b>246,761,034</b>
CalEEMod notes:			
(a) <i>High Turnover (Sit Down Restaurant)</i> category used for analysis			
(b) <i>General Office Building</i> category used for analysis			
(c) <i>Library</i> category used for analysis			
(d) <i>Apartments High Rise</i> category used for analysis			
(e) <i>Condo/Townhouse High Rise</i> category used for analysis			
(f) <i>Fast Food Restaurant w/o Drive Thru</i> category used for analysis			
(g) <i>Convenience Market (24-hour)</i> category used for analysis			
(h) <i>Junior College (2-year)</i> category used for analysis			
(i) <i>Government (Civic Center)</i> category used for analysis			
* 1100 S. Olive (“Site 3”) programming not otherwise included in table			

Table A4 – Related Projects Estimated Natural Gas Demand (per CalEEMod analysis)			
Building Use	Units	Quantity	Natural Gas Demand (cf/yr)**
Bar: Cocktail, Public Table Area <sup>(a)</sup>	KGSF	10,749	2,417,583
Commercial Use <sup>(b)</sup>	KGSF	115,900	27,010,234
Conference Room of Office Bldg. <sup>(b)</sup>	KGSF	10,801	
Office Bldg. w/Cooling Tower <sup>(b)</sup>	KGSF	2,535,402	
Health Club/Spa	KGSF	10,684	188,480
Hotel: Use Guest Rooms Only	Room	5,902	200,294,347
Medical Office/Clinic	KGSF	10,000	141,462
Museum: All Area <sup>(c)</sup>	KGSF	17,600	310,487
Residential: Apt - 2 BDR <sup>(d)</sup>	DU	14,460	129,899,610
Residential: Condo - 2 BDR <sup>(e)</sup>	DU	5,871	52,741,423
Restaurant: Full Service Indoor Seat <sup>(f)</sup>	Seat	6,816	45,990,058
Retail Area (greater than 100,000 SF) <sup>(g)</sup>	KGSF	582,545	1,924,513
Retail Area (less than 100,000 SF) <sup>(g)</sup>	KGSF	621,448	
School: Trade or Vocational <sup>(h)</sup>	Student	6,300	7,258,528
Theatre: Cinema	Seat	744	295,316
Convention Center Expansion <sup>(i)</sup>	KGSF	2,050,000	20,799,708
<b>Total Proposed Electricity Demand for Related Projects</b>			489,271,749
<b>Total Proposed Sewage Generation for Site 3 Project*</b>			7,997,526
<b>Total Proposed Sewage Generation for Site 2 Project</b>			5,754,771
<b>TOTAL</b>			<b>503,024,046</b>
CalEEMod notes:			
(a) <i>High Turnover (Sit Down Restaurant)</i> category used for analysis			
(b) <i>General Office Building</i> category used for analysis			
(c) <i>Library</i> category used for analysis			
(d) <i>Apartments High Rise</i> category used for analysis			
(e) <i>Condo/Townhouse High Rise</i> category used for analysis			
(f) <i>Fast Food Restaurant w/o Drive Thru</i> category used for analysis			
(g) <i>Convenience Market (24-hour)</i> category used for analysis			
(h) <i>Junior College (2-year)</i> category used for analysis			
(i) <i>Government (Civic Center)</i> category used for analysis			
* 1100 S. Olive (“Site 3”) programming not otherwise included in table			
** 1 cf = 1.026 kBTU			

# **EXHIBIT 1**

## **LADWP “Information of Fire Flow Availability Request” (IFFAR) Results**





# City of Los Angeles

## Los Angeles Department of Water and Power - Water System

### INFORMATION OF FIRE FLOW AVAILABILITY


LAFD Fire Flow Requirement: 6000 to 9000 GPM from four to six fire hydrants flowing simultaneously      Water Service Map No.: 126-207 - Central  
 LAFD Signature: \_\_\_\_\_  
 Date Signed: \_\_\_\_\_

Applicant: Dan Haefeli  
 Company Name: KPFF Consulting Engineers  
 Address: 700 South Flower St., Los Angeles, CA 90017  
 Telephone: 213-418-0201  
 Email Address: daniel.haefeli@kpff.com

	F-8951	F-8961	F-8934
Location:	11th Street	Olive Street	11th Street
Distance from Nearest Pipe Location (feet):	12	5	11
Hydrant Size:	4D	4D	4D
Water Main Size (in):	10"	12"	12"
Static Pressure (psi):	61	72	74
Residual Pressure (psi):	51	66	64
Flow at 20 psi (gpm):	1500 GPM	1500 GPM	1500 GPM

**NOTE: Data obtained from hydraulic analysis using peak hour.**

Remarks: \_\_\_\_\_ ECMR No. W20210813015  
*Project Site Addresses: 1100 South Olive Street, 1117 South Olive Street, Los Angeles, CA*  
*Please run all 6 hydrants simultaneously. See application #2 for additional hydrant numbers.*

Water Purveyor: Los Angeles Department of Water & Power      Date: 8/16/21  
 Signature:       Title: Civil Engineering Associate I

**Requests must be made by submitting this completed application, along with a \$230.00 check payable to: "Los Angeles Department of Water and Power", and mailed to:**

**Los Angeles Department of Water and Power**  
**Distribution Engineering Section - Water**  
**Attn: Business Arrangements**  
**P.O. Box 51111 - Room 1425**  
**Los Angeles, CA 90051-5700**

RECEIVED/WDE  
 AUG 05 2021

\* If you have any questions, please contact us at (213) 367-2130 or visit our web site at <http://www.ladwp.com>.



# City of Los Angeles

## Los Angeles Department of Water and Power - Water System

### INFORMATION OF FIRE FLOW AVAILABILITY

LAFD Fire Flow Requirement: 6000 to 9000 GPM from four to six fire hydrants flowing simultaneously      Water Service Map No.: 126-207 - Central  
 LAFD Signature: \_\_\_\_\_  
 Date Signed: \_\_\_\_\_

Applicant: Dan Haefeli  
 Company Name: KPFF Consulting Engineers  
 Address: 700 South Flower St., Los Angeles, CA 90017  
 Telephone: 213-418-0201  
 Email Address: daniel.haefeli@kpff.com

	F-8920	F-81915	F-8969
Location:	Olive Street	Grand Avenue	Olive Street
Distance from Nearest Pipe Location (feet):	53	4	6
Hydrant Size:	4D	4D	4D
Water Main Size (in):	10"	12"	12"
Static Pressure (psi):	72	61	62
Residual Pressure (psi):	66	52	51
Flow at 20 psi (gpm):	1500 GPM	1500 GPM	1500 GPM

**NOTE: Data obtained from hydraulic analysis using peak hour.**

Remarks: \_\_\_\_\_ ECMR No. W20210813016  
*Project Site Addresses: 1100 South Olive Street, 1117 South Olive Street, Los Angeles, CA*  
*Please run all 6 hydrants simultaneously. See application #1 for additional hydrant numbers.*

Water Purveyor: Los Angeles Department of Water & Power      Date: 8/16/21

Signature:       Title: Civil Engineering Associate I

**Requests must be made by submitting this completed application, along with a \$215.00 check payable to: "Los Angeles Department of Water and Power", and mailed to:**

**Los Angeles Department of Water and Power**  
**Distribution Engineering Section - Water**  
**Attn: Business Arrangements**  
**P.O. Box 51111 - Room 1425**  
**Los Angeles, CA 90051-5700**

RECEIVED/WDE  
 AUG 05 2021

\* If you have any questions, please contact us at (213) 367-2130 or visit our web site at <http://www.ladwp.com>.

# **EXHIBIT 2**

## **LADWP “Service Advisory Report” (SAR) Results and Water Will Serve Letter**



# City of Los Angeles

## Los Angeles Department of Water and Power - Water System



SAR NUMBER 93536

### Fire Service Pressure Flow Report

SERVICE NUMBER 627042

For: 1117 S OLIVE ST Approved Date: 8-17-2021

Proposed Service 6 INCH off of the  
10 inch main in 11TH ST on the SOUTH side approximately  
180 feet WEST of WEST of OLIVE ST The System maximum pressure is  
61 psi based on street curb elevation of 246 feet above sea level at this location.

The distance from the DWP street main to the property line is 19 feet

**System maximum pressure should be used only for determining class of piping and fittings.**

#### Residual Flow/Pressure Table for water system street main at this location

Flow (gpm)	Press. (psi)	Flow (gpm)	Press. (psi)	Flow (gpm)	Press. (psi)
0	51				
965	50				
1400	49				

#### Meter Assembly Capacities

Domestic Meters	
1 inch =	56 gpm
1-1/2 inch =	96 gpm
2 inch =	160 gpm
3 inch =	220 gpm
4 inch =	400 gpm
6 inch =	700 gpm
8 inch =	1500 gpm
10 inch =	2500 gpm

Fire Service	
2 inch =	250 gpm
4 inch =	600 gpm
6 inch =	1400 gpm
8 inch =	2500 gpm
10 inch =	5000 gpm

FM Services	
8 inch =	2500 gpm
10 inch =	5000 gpm

**These values are subject to change due to changes in system facilities or demands.**

**Notes:** SAR approved for a 6-inch fire service at this location.

**This information will be sent to the Department of Building and Safety for plan checking.**  
 This SAR is valid for one year from 08-17-21. Once the SAR expires, the applicant needs to re-apply and pay applicable processing fee.

For additional information contact the Water Distribution Services Section **CENTRAL (213) 367-1216**

<b>DAVID THI</b> Prepared by	<b>DAVID THI</b> Approved by	<b>126-207</b> Water Service Map
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# City of Los Angeles

## Los Angeles Department of Water and Power - Water System



SAR NUMBER 93535

### Fire Service Pressure Flow Report

SERVICE NUMBER 627041

For: 1117 S OLIVE ST Approved Date: **8-17-2021**

**Proposed Service** 6 INCH off of the

12 inch main in OLIVE ST on the WEST side approximately

220 feet SOUTH of SOUTH of 11TH ST The System maximum pressure is

61 psi based on street curb elevation of 246 feet above sea level at this location.

The distance from the DWP street main to the property line is 69 feet

**System maximum pressure should be used only for determining class of piping and fittings.**

**Residual Flow/Pressure Table for water system street main at this location**

Flow (gpm)	Press. (psi)	Flow (gpm)	Press. (psi)	Flow (gpm)	Press. (psi)
0	50				
775	49				
1125	48				
1400	47				

### Meter Assembly Capacities

Domestic Meters	
1 inch =	56 gpm
1-1/2 inch =	96 gpm
2 inch =	160 gpm
3 inch =	220 gpm
4 inch =	400 gpm
6 inch =	700 gpm
8 inch =	1500 gpm
10 inch =	2500 gpm

Fire Service	
2 inch =	250 gpm
4 inch =	600 gpm
6 inch =	1400 gpm
8 inch =	2500 gpm
10 inch =	5000 gpm

FM Services	
8 inch =	2500 gpm
10 inch =	5000 gpm

These values are subject to change due to changes in system facilities or demands.

**Notes:** SAR approved for a 6-inch fire service with a 8-inch domestic combo at this location only.

**This information will be sent to the Department of Building and Safety for plan checking.**

This SAR is valid for one year from 08-17-21. Once the SAR expires, the applicant needs to re-apply and pay applicable processing fee.

For additional information contact the Water Distribution Services Section **CENTRAL (213) 367-1216**

\_\_\_\_\_  
**DAVID THI**  
Prepared by

\_\_\_\_\_  
**DAVID THI**  
Approved by

\_\_\_\_\_  
**126-207**  
Water Service Map



Los Angeles  Department of Water & Power

ERIC GARCETTI  
Mayor

Commission  
MEL LEVINE, *President*  
WILLIAM W. FUNDERBURK JR., *Vice President*  
JILL BANKS BARAD  
CHRISTINA E. NOONAN  
AURA VASQUEZ  
BARBARA E. MOSCHOS, *Secretary*

DAVID H. WRIGHT  
General Manager

February 28, 2018

Map No. 126-207

Mr. Daniel Haefeli  
KPFF  
700 South Flower Street, Suite 2100  
Los Angeles, California 90017

Dear Mr. Haefeli:

Subject: Water Availability - Will Serve  
1117 – 1119 South Olive Street  
APN: 5139-020-007/006, Subdivision of Block 78 Ord's Survey, Lot FR 8/7

This is in reply to your request regarding water availability for the above-mentioned location. This property can be supplied with water from the municipal system subject to the Water System rules of the Los Angeles Department of Water and Power (LADWP). It is also subject to all conditions set by LADWP.

Should you require additional information, please contact Ms. Cristina Reyes at (213) 367-1318.

Correspondence may be addressed to:

LADWP - Water Business Arrangements  
Attention: Ms. Cristina Reyes  
P.O. Box 51111, Room 1425  
Los Angeles, California 90051-5700

Sincerely,



Hugo A. Torres  
Manager-Business Arrangements  
Water Distribution Engineering

CR:rp  
c: Ms. Cristina Reyes

Putting Our Customers First 

Stamp: L.A. MAR 05 2018  
Stamp: JOB # \_\_\_\_\_  
Stamp: FILE # \_\_\_\_\_

# **EXHIBIT 3**

## **City of Los Angeles “Sewer Capacity Availability Request” Response**

## Sewer Capacity Availability Request (SCAR)

To: Bureau of Sanitation

The following request is submitted to you on behalf of the applicant requesting to connect to the public sewer system. Please verify that the capacity exists at the requested location for the proposed developments shown below. The results are good for 180 days from the date the sewer capacity approval from the Bureau of Sanitation. Lateral connection of development shall adhere to Bureau of Engineering Sewer Design Manual Section F 480. **If not listed in the tables below, sewer ejector use is prohibited.**

Job Address:	<b>1105 South Olive Street</b>	Sanitation Scar ID:	<b>68-5689-0821</b>
Date Submitted	<b>08/09/2021</b>	Request Will Serve Letter?	<b>Yes</b>
BOE District:	<b>Central District</b>		
Applicant:	<b>Daniel Haefeli</b>		
Address:	<b>700 South Flower, Suite 2100</b>	City :	<b>Los Angeles</b>
State:	<b>CA</b>	Zip:	<b>90017</b>
Phone:	<b>(213) 418-0201</b>	Fax:	
Email:	<b>DANIEL.HAEFELI@KPFF.COM</b>	BPA No.	
S-Map:	<b>126A207</b>	Wye Map:	<b>126A205-D</b>

### SIMM Map - Maintenance Hole Locations

No.	Street Name	U/S MH	D/S MH	Diam. (in)	Approved Flow %	Notes
1	OLIVE STREET	51610084	51610097	14	100.00	

### Proposed Facility Description

No.	Proposed Use Description	Sewage Generation (GPD)	Unit	Qty	GPD
1	RESIDENTIAL: APT - BACHELOR	75	DU	89	6,675
2	RESIDENTIAL: APT - 1 BDRM. *6	110	DU	268	29,480
3	RESIDENTIAL: APT - 2 BDRMS *6	150	DU	176	26,400
4	RESIDENTIAL: APT - 3 BDRMS *6	190	DU	3	570
5	RESTAURANT: FULL SERVICE INDOOR SEAT	30	SEAT	139	4,170
6	SWIMMING POOL (COMMERCIAL WITH BACKWASH FILTERS)		GPD	41,121	41,121
7	SPA/JACUZZI (COMMERCIAL WITH BACKWASH FILTERS) *7		GPD	4,346	4,346

**Proposed Total Flow (gpd): 112,762**

Remarks **1] Approved maximum available capacity of 112,762 GPD (78.31 gpm). 2] IWMD permit required.**

Note: Results are good for 180 days from the date of approval by the Bureau of Sanitation

Date Processed: **09/01/2021** Expires On: **02/28/2022**



Processed by: **Albert Lew**  
Bureau of Sanitation  
Phone: 323-342-6207  
Sanitation Status: **Approved**  
Reviewed by: **Ricardo Avendano**  
on **08/31/2021**

Submitted by: **Steve Melgar**  
Bureau of Engineering  
**Central District**  
Phone: 213-482-7030

---

Fees Collected	<b>Yes</b>	SCAR FEE (W:37 / QC:706) <b>\$2,282.50</b>
Date Collected	<b>08/24/2021</b>	SCAR Status: <b>Completed</b>

### **SEWER CAPACITY AVAILABILITY REVIEW FEE (SCARF) - Frequently Asked Questions**

SCAR stands for Sewer Capacity Availability Review that is performed by the Department of Public Works, Bureau of Sanitation. This review evaluates the existing sewer system to determine if there is adequate capacity to safely convey sewage from proposed development projects, proposed construction projects, proposed groundwater dewatering projects and proposed increases of sewage from existing facilities. The SCAR Fee (SCARF) recovers the cost, incurred by the City, in performing the review for any SCAR request that is expected to generate 10,000 gallons per day (gpd) of sewage.

The SCARF is based on the effort required to perform data collection and engineering analysis in completing a SCAR. A brief summary of that effort includes, but is not limited to, the following:

1. Research and trace sewer flow levels upstream and downstream of the point of connection.
2. Conduct field surveys to observe and record flow levels. Coordinate with maintenance staff to inspect sewer maintenance holes and conduct smoke and dye testing if necessary.
3. Review recent gauging data and in some cases closed circuit TV inspection (CCTV) videos.
4. Perform gauging and CCTV inspection if recent data is not available.
5. Research the project location area for other recently approved SCARs to evaluate the cumulated impact of all known SCARs on the sewer system.
6. Calculate the impact of the proposed additional sewage discharge on the existing sewer system as it will be impacted from the approved SCARs from Item 6 above. This includes tracing the cumulative impacts of all known SCARs, along with the subject SCAR, downstream to insure sufficient capacity exist throughout the system.
7. Correspond with the applicant for additional information and project and clarification as necessary.
8. Work with the applicant to find alternative sewer connection points and solutions if sufficient capacity does not exist at the desired point of connection.

### **Questions and Answers:**

**1. When is the SCARF applied, or charged?**

*It applies to all applicants seeking a Sewer Capacity Availability Review (SCAR). SCARs are generally required for Sewer Facility Certificate applications exceeding 10,000 gpd, or request from a property owner seeking to increase their discharge thru their existing connection by 10,000 gpd or more, or any groundwater related project that discharges 10,000 gpd or more, or any proposed or future development for a project that could result in a discharge of 10,000 gpd.*

**2. Why is the SCARF being charged now when it has not been in the past?**

*The City has seen a dramatic increase in the number of SCARs over 10,000 gpd in the last few years and has needed to increase its resources, i.e., staff and gauging efforts, to respond to them. The funds collected thru SCARF will help the City pay for these additional resources and will be paid by developers and property owners that receive the benefit from the SCAR effort.*

**3. Where does the SCARF get paid?**

*The Department of Public Works, Bureau of Engineering (BOE) collects the fee at its public counters. Once the fee is paid then BOE prepares a SCAR request and forwards it to the BOS where it is reviewed and then returned to BOE. BOE then informs the applicant of the result. In some cases, BOS works directly with the applicant during the review of the SCAR to seek additional information and work out alternative solutions*

# **EXHIBIT 4**

## **LADWP Approved Power Will-Serve Letter**

ERIC GARCETTI  
Mayor

Commission  
MEL LEVINE, *President*  
WILLIAM W. FUNDERBURK JR., *Vice President*  
JILL BANKS BARAD  
CHRISTINA E. NOONAN  
AURA VASQUEZ  
BARBARA E. MOSCHOS, *Secretary*

DAVID H. WRIGHT  
General Manager

June 27, 2018

Mr. Dan Haefeli  
kpff  
700 S. Flower Street, Suite 2100  
Los Angeles, CA 90017

Subject: 1117-1119 S. Olive Street

Dear Mr. Haefeli,

This is in response to your submittal regarding electric service for the proposed project located at the above address.

Electric Service is available and will be provided in accordance with the Los Angeles Department of Water and Power's Rules Governing Water and Electric Service. The availability of electricity is dependent upon adequate generating capacity and adequate fuel supplies. The estimated power requirement for this proposed project is part of the total load growth forecast for the City of Los Angeles and has been taken into account in the planned growth of the City's power system.

If you have any questions regarding this matter, please contact me at (213) 367-4290.

Sincerely,



RALPH JARAMILLO  
Engineer of Customer Station Design

RJ:sl

C/enc:  
ENGR: Mr. Ralph Jaramillo  
FileNet

# **EXHIBIT 5**

## **SoCal Gas Approved Will-Serve Letter**



March 8, 2018

KPFF  
700 SOUTH FLOWER STREET SUITE 2100  
LOS ANGELES CA 90017

RE: Will Serve Letter Request for: 1117-1119 SOUTH OLIVE STREET LOS ANGELES CA 90015

To whom it may concern:

Thank you for inquiring about the availability of natural gas service for your project. We are pleased to inform you that Southern California Gas Company (SoCalGas) has facilities in the area where the above named project is being proposed. The service would be in accordance with SoCalGas' policies and extension rules on file with the California Public Utilities Commission (Commission) at the time contractual arrangements are made.

This letter should not be considered a contractual commitment to serve the proposed project, and is only provided for informational purposes only. The availability of natural gas service is based upon natural gas supply conditions and is subject to changes in law or regulation. As a public utility, SoCalGas is under the jurisdiction of the Commission and certain federal regulatory agencies, and gas service will be provided in accordance with the rules and regulations in effect at the time service is provided. Natural gas service is also subject to environmental regulations, which could affect the construction of a main or service line extension (for example, if hazardous wastes were encountered in the process of installing the line). Applicable regulations will be determined once a contract with SoCalGas is executed.

If you need assistance choosing the appropriate gas equipment for your project, or would like to discuss the most effective applications of energy efficiency techniques, please contact our area Service Center at 800-427-2200.

Thank you again for choosing clean, reliable, and safe natural gas, your best energy value.

Sincerely,

Jason P. Jones  
Pipeline Planning Assistant  
SoCalGas-Compton HQ



---

**APPENDIX K.2**

**Site 3 Utilities Report**



**DTLA SOUTH PARK PROPERTIES SITE 3 PROJECT  
(1100 SOUTH OLIVE STREET LOS ANGELES CA 90015)**

**UTILITY INFRASTRUCTURE TECHNICAL REPORT: WATER, WASTEWATER, AND ENERGY  
SEPTEMBER 2021**

**PREPARED BY:**

KPFF Consulting Engineers  
700 S. Flower Street, Suite 2100  
Los Angeles, CA 90017  
(213) 418-0201



## Table of Contents

Appendices.....	iii
<b>1. INTRODUCTION.....</b>	<b>4</b>
<b>1.1. PROJECT DESCRIPTION.....</b>	<b>4</b>
<b>1.2. SCOPE OF WORK .....</b>	<b>4</b>
<b>2. REGULATORY FRAMEWORK.....</b>	<b>4</b>
<b>2.1. WATER.....</b>	<b>4</b>
<b>2.2. WASTEWATER.....</b>	<b>5</b>
<b>2.3. ENERGY .....</b>	<b>8</b>
<b>3. ENVIRONMENTAL SETTING.....</b>	<b>10</b>
<b>3.1. WATER.....</b>	<b>10</b>
<b>3.2. WASTEWATER.....</b>	<b>11</b>
<b>3.3. ENERGY .....</b>	<b>12</b>
<b>4. SIGNIFICANCE THRESHOLDS.....</b>	<b>13</b>
<b>4.1. WASTEWATER.....</b>	<b>14</b>
<b>4.2. ENERGY .....</b>	<b>15</b>
<b>5. METHODOLOGY .....</b>	<b>16</b>
<b>5.1. WATER.....</b>	<b>16</b>
<b>5.2. WASTEWATER.....</b>	<b>17</b>
<b>5.3. ENERGY .....</b>	<b>18</b>
<b>6. PROJECT IMPACTS .....</b>	<b>18</b>
<b>6.1. CONSTRUCTION .....</b>	<b>18</b>
<b>6.1.1. WATER .....</b>	<b>18</b>
<b>6.1.2. WASTEWATER .....</b>	<b>19</b>
<b>6.1.3. ENERGY .....</b>	<b>19</b>
<b>6.2. OPERATION .....</b>	<b>20</b>
<b>6.2.1. WATER .....</b>	<b>20</b>
<b>6.2.2. ENERGY .....</b>	<b>24</b>
<b>6.3. CUMULATIVE IMPACTS .....</b>	<b>25</b>
<b>6.4. CUMULATIVE IMPACTS .....</b>	<b>25</b>
<b>6.3.1 WATER .....</b>	<b>26</b>
<b>6.3.2 WASTEWATER .....</b>	<b>26</b>
<b>6.3.3 ENERGY .....</b>	<b>27</b>

## **Appendices**

Exhibit 1 – LADWP “Information of Fire Flow Availability Request” (IFFAR) Results

Exhibit 2 – LADWP “Service Advisory Report” (SAR) Results and Water Will Serve Letter

Exhibit 3 – City of Los Angeles “Sewer Capacity Availability Report” Results

Exhibit 4 – LADWP Approved Power Will-Serve Letter

Exhibit 5 – SoCal Gas Approved Will-Serve Letter

## **1. INTRODUCTION**

### **1.1. PROJECT DESCRIPTION**

The proposed Site 3 building would include 60 stories, in addition to six subterranean levels, and be approximately 678 feet in height for a total of 608,977 sf of floor area. Site 3 would include 713 residential units; 7,066 sf of ground floor commercial uses, multiple amenity decks on various floors that include a swimming pool, community recreation, lounge, a spa, and fitness areas; a sky lounge with outdoor deck that includes a dog run area and dog lounge; 764 automobile parking spaces; 31 short-term bicycle racks and 259 long-term bicycle lockers; and pedestrian improvements along 11th Street and S. Olive Street.

### **1.2. SCOPE OF WORK**

As a part of the Sustainable Communities Environmental Assessment for the Project, the purpose of this report is to analyze the potential impact of the Project to the existing water, wastewater, and energy infrastructure system.

## **2. REGULATORY FRAMEWORK**

### **2.1. WATER**

The City of Los Angeles Department of Water and Power (LADWP) is responsible for providing water supply to the City while complying with Local, State, and Federal regulations.

Below are the State and Regional water supply regulations:

- California Code of Regulations (CCR), Title 20, Chapter 4, Article 4, Section 1605 establishes water efficiency standards for all new plumbing fixtures and Section 1608 prohibits the sale of fixtures that do not comply with the regulations.
- 2013 California Green Building Standards Code, CCR, Title 24, Part 11, adopted on January 1, 2014 (CALGreen), requires a water use reduction of 20% above the baseline cited in the CALGreen code book. The code applies to family homes, state buildings, health facilities, and commercial buildings.
- California Urban Water Management Planning Act of 1984 requires water suppliers to adopt an Urban Water Management Plan (UWMP).
- Metropolitan Water District (MWD) official reports and policies as outlined in its Regional UWMP, Water Surplus and Drought Management Plan, Water Supply Allocation Plan, and Integrated Resources Plan.

- LADWP’s 2015 UWMP outlines the City’s long-term water resources management strategy. The 2015 UWMP was approved by the LADWP Board of Water and Power Commissioners on June 7, 2016.
- Senate Bill 610 and Senate Bill 221, approved on October 9, 2001, require land use agencies to perform a detailed analysis of available water supply when approving large developments. Historically, public water suppliers (PWS) simply provided a “will serve” letter to developers. SB 610, Public Resources Code (PRC) and Section 10910-10915 of the State Water Code requires lead agencies to request a Water Supply Assessment (WSA) from the local water purveyor prior to project approval. If the projected water demand associated with a proposed development is included in the most recent UWMP, the development is considered to have sufficient water supply per California Water Code Section 10910, and a WSA is not required. All projects that meet any of the following criteria require a WSA:
  - 1) A proposed residential development of more than 500 dwelling units.
  - 2) A proposed shopping center or business establishment of more than 500,000 square feet of floor space or employing more than 1,000 persons
  - 3) A proposed commercial office building of more than 250,000 square feet of floor space or employing more than 1,000 persons
  - 4) A proposed hotel or motel of more than 500 rooms
  - 5) A proposed industrial, manufacturing, or processing plant or industrial park of more than 40 acres of land, more than 650,000 square feet of floor area, or employing more than 1,000 persons
  - 6) A mixed-use project that falls in one or more of the above-identified categories
  - 7) A project not falling in one of the above-identified categories but that would demand water equal or greater than the amount required by a 500-dwelling unit project.

As this Project is a mixed-use development that meets item 1 above, LADWP has performed a WSA for this Project.

## **2.2. WASTEWATER**

The City of Los Angeles has one of the largest sewer systems in the world including more than 6,600 miles of sewers serving a population of more than four million. The Los Angeles sewer system is comprised of three systems: Hyperion Sanitary Sewer System, Terminal Island Water Reclamation Plant Sanitary Sewer System, and Los Angeles Regional Sanitary Sewer System. To comply with Waste Discharge Requirements

(WDRs), a Sewer System Management Plan (SSMP) was prepared for each of these systems.

The Project Site lies within the Hyperion Service Area served by the Hyperion Sanitary Sewer System. In January 2019, a Sewer System Management Plan (SSMP) was prepared for the Hyperion Sanitary Sewer System pursuant to the State Water Control Board's (SWRCB) May 2, 2006 Statewide General Waste Discharge Requirements (WDRs)<sup>1</sup>.

Sewer permit allocation for projects that discharge into the Hyperion Treatment Plant is regulated by Ordinance No. 166,060 adopted by the City in 1990. The Ordinance established an additional annual allotment of 5.0 million gallons per day, of which 34.5 percent (1.725 million gallons per day) is allocated for priority projects, 8 percent (0.4 million gallons per day) for public benefit projects, and 57.5 percent (2.875 million gallons per day) for non-priority projects (of which 65 percent is for residential project and 35 percent for non-residential projects).

The City of Los Angeles Municipal Code (LAMC) includes regulations that allow the City to assure available sewer capacity for new projects and fees for improvements to the infrastructure system. LAMC Section 64.15 requires that the City perform a Sewer Capacity Availability Request (SCAR) when any person seeks a sewer permit to connect a property to the City's sewer collection system, proposes additional discharge through their existing public sewer connection, or proposes a future sewer connection or future development that is anticipated to generate 10,000 gallons or more of sewage per day. A SCAR is an analysis of the existing sewer collection system to determine if there is adequate capacity existing in the sewer collection system to safely convey the newly generated sewage to the appropriate sewage treatment plant.

LAMC Section 64.11.2 requires the payment of fees for new connections to the sewer system to assure the sufficiency of sewer infrastructure. New connections to the sewer system are assessed a Sewerage Facilities Charge. The rate structure for the Sewerage Facilities Charge is based upon wastewater flow strength, as well as volume. The determination of wastewater strength for each applicable project is based on City guidelines for the average wastewater concentrations of two parameters (biological oxygen demand and suspended solids) for each type of land use. Fees paid to the Sewerage Facilities Charge fees are deposited in the City's Sewer Construction and Maintenance Fund for sewer and sewage-related purposes, including but not limited to industrial waste control and water reclamation purposes.

In addition, the City establishes design criteria for sewer systems to assure that new infrastructure provides sewer capacity and operating characteristics to meet City Standards (Bureau of Engineering Special Order No. SO06-0691). Per the Special Order, laterals sewers, which are sewers 18 inches or less in diameter, must be designated for a

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<sup>1</sup> City of Los Angeles Department of Public Works, LA Sanitation, Sewer System Management Plan, Hyperion Sanitary Sewer System, January 2019.

planning period of 100 years. The Special Order also requires that sewers be designated so that the peak dry weather flow depth during their planning period shall not exceed one-half the pipe diameter.<sup>2</sup>

In 2006 the City approved the Integrated Resources Plan, which incorporates a Wastewater Facilities Plan.<sup>3</sup> The Integrated Resources Program was developed to meet future wastewater needs of more than 4.3 million residents expected to live within the City by 2020. In order to meet future demands posed by increased wastewater generation, the City has chosen to expand its current overall treatment capacity, while maximizing the potential to reuse recycled water through irrigation, and other approved uses.

In addition, the Bureau of Sanitation and LADWP have collaborated to develop The *One Water LA 2040 Plan* (Plan). The Plan takes a holistic and collaborative approach to consider all of the City's water resources from surface water, groundwater, potable water, wastewater, recycled water, dry-weather runoff, and stormwater as "One Water." The Plan also identifies multi-departmental and multi-agency integration opportunities to manage water in a more efficient, cost effective, and sustainable manner. The Plan represents the City's continued and improved commitment to proactively manage all its water resources and implement innovative solutions, driven by the Sustainable City pLAN. The Plan will help guide strategic decisions for integrated water projects, programs, and policies within the City.<sup>4</sup>

As part of the Plan, an updated Wastewater Facilities Plan (WWFP) was developed. The purpose of the WWFP is to guide LASAN with its decision making related to the implementation of system improvements to its wastewater collection and treatment facilities. The WWFP provides the underlying documentation to make informed decisions when considering investments to repair, replace, or enhance existing facilities and construct new water conveyance or treatment facilities through year 2040. This WWFP is an update of the Wastewater Facilities Plan that was included in the 2006 Water Integrated Resources Plan (Water IRP). This WWFP incorporates expansions, upgrades, and enhancements made since 2006 and builds upon Los Angeles Department of Water and Power's (LADWP) 2015 Urban Water Management Plan (UWMP). It is anticipated that the WWFP will be updated in approximately ten years to incorporate system modifications as well as changes in flow conditions, regulatory framework, and overall vision for wastewater system operations and water reuse.

The WWFP provides recommendations for each plant on how to best utilize the water reuse opportunities and provide environmental stewardship. Among the water reuse opportunities explored are non-potable reuse (NPR) and potable reuse, groundwater augmentation, raw water augmentation, and treated water augmentation. The WWFP

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<sup>2</sup> City of Los Angeles, L.A. CEQA Thresholds Guide, Your Resource for Planning CEQA Analysis in Los Angeles, M-Public Utilities, 2006. <http://www.environmentla.org/programs/thresholds/M-Public%20Utilities.pdf>

<sup>3</sup> City of Los Angeles, Department of Public Works, LA Sewers Website, Integrated Resources Plan Facilities Plan, Summary Report, December 2006. <https://www.lacitysan.org/san/sandocview?docname=CNT025148>

<sup>4</sup> One Water LA 2040 Executive Summary, <http://www.onewaterla.org>

used a trigger-based CIP process for the future integration opportunities, which is similar to the approach that was used for the IRP.<sup>5</sup>

## 2.3. ENERGY

### 2.3.1. ELECTRICITY

The *2017 Power Strategic Long-Term Resource Plan (SLTRP)*<sup>6</sup> document serves as a comprehensive 20-year roadmap that guides the Los Angeles Department of Water and Power's (LADWP) Power System in its efforts to supply reliable electricity in an environmentally responsible and cost-effective manner. The 2017 SLTRP re-examines and expands its analysis on the 2016 Power Integrated Resource Plan recommended case with updates in line with latest regulatory framework, and updates to case scenario assumptions that include a 65 percent renewable portfolio standard by 2050.

The 2017 SLTRP provides detailed analysis and results of several new PIRP resource cases which investigated the economic and environmental impact of increased local solar and various levels of transportation electrification. In analyzing the PIRP cases and recommending a strategy to best meet the future electric needs of Los Angeles, the SLTRP uses system modeling tools to analyze and determine the long-term economic, environmental, and operational impact of alternative resource portfolios by simulating the integration of new resource alternatives within their existing mix of assets and providing the analytic results to inform the selection of a recommended case.

The SLTRP also includes a general assessment of the revenue requirements and rate impacts that support the recommended resource plan through 2037. While this assessment will not be as detailed and extensive as more recent-year fiscal analyses, it clearly outlines the general requirements for future analyses. As a long-term planning process, the SLTRP examines a 20-year horizon in order to secure adequate supplies of electricity. In that respect, it is LADWP's desire that the SLTRP contribute towards future rate actions, by presenting and discussing the programs and projects required to fulfill our City Charter mandate of delivering reliable electric power to the City of Los Angeles.

Regulatory interpretations of primary regulations and state laws affecting the Power System, including AB 32, SB 1368, SB 1, SB 2 (1X), SB 350, SB 32, US EPA Rule 316(b), and US Clean Power Plan continue to evolve particularly with certification requirements of existing renewable projects and their applicability towards meeting in-state or out-of-state qualifications. 2017's SLTRP attempts to incorporate the latest interpretation of these major regulations and state laws as we understand them today.

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<sup>5</sup> One Water LA 2040, Volume 2;

[https://www.lacitysan.org/cs/groups/sg\\_owla/documents/document/y250/mdi2/~edisp/cnt026205.pdf](https://www.lacitysan.org/cs/groups/sg_owla/documents/document/y250/mdi2/~edisp/cnt026205.pdf)

<sup>6</sup> LADWP, 2017 Power Strategic Long-Term Resource Plan, December 2017.

### 2.3.2. NATURAL GAS

The *2020 California Gas Report*<sup>7</sup> presents a comprehensive outlook for natural gas requirements and supplies for California through the year 2035. This report is prepared in even-numbered years, followed by a supplemental report in odd-numbered years, in compliance with California Public Utilities Commission (CPUC or Commission) Decision (D.) 95-01-039. The projections in the CGR are for long-term planning and do not necessarily reflect the day-to-day operational plans of the utilities.

Utility-driven, statewide natural gas demand is projected to decline at an average rate of 1.0 percent each year through 2035. The decline comes from reduced gas demand in the major market segment areas of residential, electric generation (EG), commercial, and industrial. Statewide residential gas demand is projected to decrease at an average rate of 1.7 percent each year. EG gas demand is projected to decrease at an average annual rate of 1.5 percent each year. The Commercial segment gas demand, which includes both core and noncore commercial demand, is projected to decrease at an average annual rate of 1.5 percent each year. The Industrial gas demand segment is expected to decline at an average rate of 0.2 percent per year.

Though the Natural Gas Vehicle (NGV) market shows moderate growth, it is not sufficient to offset the projected decrease in other market segments over the forecast horizon. There are several drivers of these declines. Aggressive energy efficiency programs are dampening gas demand in these sectors. In addition, the statewide efforts to minimize greenhouse gas (GHG) emissions are reducing EG demand due to increase in demand side and supply side generation resources that produce few or no carbon emissions. Nevertheless, gas-fired generation and energy storage will continue to be primary technologies to support long-term increases in electricity usage and integrate increasing quantities of intermittent renewable electric generation into the electric grid.

In 2015, the state enacted legislation intended to improve air quality, provide aggressive reductions in energy dependency and boost the employment of renewable power. The first legislation, the 2015 Clean Energy and Pollution Reduction Act, also known as Senate Bill (SB) 350, requires the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources be increased to 50 percent by December 31, 2030. SB 350 establishes annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas final end uses by January 1, 2030. Second, the Energy Efficiency Act (AB 802) provides aggressive state directives to increase the energy efficiency of existing buildings, requires that access to building performance data for nonresidential buildings be provided by energy utilities and encourages pay-for performance incentive-based programs. This paradigm shift will allow California building owners a better and more effective way to access whole-building information and at the same time will help to address climate change, and deliver cost-effective savings for ratepayers. Last, the Energy Efficiency Act (AB 793) is intended to promote and provide incentives to residential or small and medium-sized

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<sup>7</sup> California Gas and Electric Utilities, 2020 California Gas Report, 2020.



business utility customers that acquire energy management technology for use in their home or place of business. AB 793 requires energy utilities to develop a plan to educate residential customers and small and medium business customers about the incentive program.<sup>8</sup>

Passed in 2018, Senate Bill (SB) 100 increases and accelerates the Renewables Portfolio Standard (RPS) targets. The increase comes in 2030 with renewable power generation equal to 60 percent of retail electric sales. Previously, the target was 50 percent. The acceleration requires the RPS at 50 percent by 2026. An additional requirement mandated in 2018 establishes a statewide goal to achieve carbon neutrality by 2045 across all sectors of the California economy.<sup>9</sup>

Last, California Global Warming Solutions Act of 2006 (SB 32) requires the state board to ensure that statewide greenhouse gas emissions are reduced to at least 40% below the 1990 level by 2030.<sup>10</sup>

### **3. ENVIRONMENTAL SETTING**

Site 3 is approximately 46,807 square feet and consists of APN 5139019040, 5139019015 and 139019011. Site 3 of the proposed Project is bound by 11th Street to the north, an alleyway to the east, an office tower to the south and Olive Street to the west. The entirety of the site is a paved asphalt parking lot.

#### **3.1. WATER**

LADWP is responsible for providing water supply to the City while complying with County, State, and Federal regulations.

##### **3.1.1. REGIONAL**

Primary sources of water for the LADWP service area are the Los Angeles Aqueducts (LAA), State Water Project (supplied by MWD) and local groundwater. The Los Angeles Aqueduct has been the primary source of the City's water supply. In recent years, however, the amount of water supplies from the Los Angeles Aqueduct has been limited due to environmental concerns, and the City's water supply relied heavily (average of 57% in recent years) on the purchased water from MWD delivered from the Colorado River or from the Sacramento-San Joaquin Delta. Local ground water has been a reliable water source, providing an average of 12% of the total water supply, but there have been concerns in recent years due to declining groundwater level and contamination issues. Lastly, the City's recycled water supply is limited to specific projects within the City at this time.<sup>11</sup>

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<sup>8</sup> C.A. Legislative Assembly, SB 32, 2015-2016.

<sup>9</sup> California Gas and Electric Utilities, 2020 California Gas Report, 2020.

<sup>10</sup> C.A. Legislative Assembly, SB 32, 2015-2016.

<sup>11</sup> LADWP, 2015 Urban Water Management Plan, October 2016.

### **3.1.2. LOCAL**

LADWP maintains water infrastructure to the Project Site. Based on available record data provided by LADWP, there is a 12-inch water main in Olive Street and a 10-inch main in 11<sup>th</sup> Street. The project will consist of connections to 11<sup>th</sup> Street and Olive Street to serve the proposed building.

As the existing condition is a parking lot without any structures, there is currently no significant demand or generation for wet utilities, and there are no existing fire department connections or sprinklers. It is expected that new connections will be installed to meet all Fire Department and Department of Building and Safety regulations to serve the proposed building. Multiple fire hydrants are in the greater vicinity of the Project Site.

## **3.2. WASTEWATER**

### **3.2.1. REGIONAL**

The Bureau of Sanitation (BOS) operates and maintains the wastewater treatment, reclamation and collection facilities serving most of the City of Los Angeles incorporated areas as well as several other cities and unincorporated areas in the Los Angeles basin and San Fernando Valley. The collection infrastructure consists of over 6,700 miles of local, trunk, mainline and major interceptor sewers, five major outfall sewers, and 46 pumping plants. The wastewater generated by the Project ultimately flows to the Hyperion Treatment Plant (HTP) System. The existing design capacity of the Hyperion Service Area is approximately 550 million gallons per day (mgd) and the existing average daily flow for the system is approximately 260 mgd.<sup>12</sup>

### **3.2.2. LOCAL**

Sanitary sewer is provided by the City of Los Angeles Bureau of Sanitation (BOS). The sanitary sewer connections to the proposed building will come from existing 14-inch Vitrified Clay Pipe (VCP) sewer line in Olive Street and an existing 8-inch VCP sewer line in 11<sup>th</sup> Street. Based on LA Bureau of Engineering's online Navigate LA database, the sewer line along Olive Street has a capacity of 4.26376 cfs (2.7557 MGD), and the sewer line in 11<sup>th</sup> Street has a capacity of 1.25955 cfs (1.98488 MGD).<sup>13</sup>

The City sewer network ultimately conveys wastewater to the Hyperion Sewage Treatment Plant.

As the existing condition is a parking lot without any structures, there is currently no significant demand or generation for wet utilities.

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<sup>12</sup> City of Los Angeles Department of Public Works, Bureau of Sanitation, Sewer System Management Plan Hyperion Sanitary Sewer System, January 2019.

<sup>13</sup> <http://navigatela.lacity.org/navigatela/> Accessed September 1, 2021

### 3.3. ENERGY

#### 3.3.1. ELECTRICITY

LADWP is responsible for providing power supply to the City while complying with County, State, and Federal regulations.

##### 3.3.1.1. REGIONAL

LADWP's Power system is the nation's largest municipal electric utility, and serves a 465-square-mile area in Los Angeles and much of the Owens Valley. The system supplies more than 26 million megawatt-hours (MWh) of electricity a year for the City of Los Angeles' 1.5 million residential and business customers as well as over 5,000 customers in the Owens Valley. LADWP has over 6,502 megawatts (MW) of generation capacity from a diverse mix of energy sources including Renewable energy, Natural Gas, Nuclear, Large Hydro, coal and other sources. The distribution network includes 6,752 miles of overhead distribution lines and 3,626 miles of underground distribution cables.<sup>14</sup>

##### 3.3.1.2. LOCAL

Based on available substructure maps from the City of LA Bureau of Engineering's online Navigate LA substructure maps, it appears that the Project Site receives electric power service from LADWP via underground conduits in 11<sup>th</sup> Street and Olive Street.

Electricity demand estimates have been prepared based on the existing building program and are summarized in Table 1 below.

Table 1 – Estimated Existing Electricity Demand		
Connection To:	Facility	Electricity Demand <sup>(a)</sup> (kWhr/yr) <sup>(b)</sup>
Existing Project Site	Parking Lot	16,382
<b>Total Existing Electricity Demand for Project Site</b>		<b>16,382</b>
<sup>(a)</sup> The average estimated load based on estimates from CalEEMod.		
<sup>(b)</sup> 1 kW (kilowatt = 1,000 Watts)		

#### 3.3.2. NATURAL GAS

Southern California Gas Company (SoCal Gas) as is responsible for providing natural gas supply to the City and is regulated by the California Public Utilities Commission and other state and federal agencies.

<sup>14</sup> LADWP, 2017 Power Strategic Long-Term Resource Plan, December 2017.

### 3.3.2.1. REGIONAL

SoCalGas is the principal distributor of natural gas in Southern California, providing retail and wholesale customers with transportation, exchange, storage services and also procurement services to most retail core customers. SoCalGas is a gas-only utility and, in addition to serving the residential, commercial, and industrial markets, provides gas for enhanced oil recovery (EOR) and EG customers in Southern California. SDG&E, SWG, the City of Long Beach Energy Resources Department, and the City of Vernon are SoCalGas' four wholesale utility customers. SoCalGas also provides gas transportation services across its service territory to a border crossing point at the California-Mexico border at Mexicali to ECOGAS Mexico S. de R.L. de C.V which is a wholesale international customer located in Mexico.<sup>15</sup>

### 3.3.2.2. LOCAL

Based on substructure maps provided by the City's Navigate LA database, it appears that the Project Site does not currently receive natural gas service. Southern California Gas Company (SCG) services exist in Olive Street and 11<sup>th</sup> Street.

## 4. SIGNIFICANCE THRESHOLDS

Appendix G of the State of California's California Environmental Quality Act (CEQA) Guidelines (CEQA Guidelines) provides a set of sample questions that address impacts with regard to water supply. These questions are as follows:

Would the project:

- Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunication facilities or expansion of existing facilities, the construction or relocation of which would cause significant environmental effects?
- Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years?

In the context of the above questions from the Appendix G of the CEQA Guidelines, the City of Los Angeles CEQA Thresholds Guide (*L.A. CEQA Thresholds Guide*) states that the determination of significance with regard to impacts on water shall be made on a case-by-case basis, considering the following factors:

- The total estimated water demand for the project;
- Whether sufficient capacity exists in the water infrastructure that would serve the project, taking into account the anticipated conditions at project buildout;

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<sup>15</sup> California Gas and Electric Utilities, 2020 California Gas Report, 2020.

- The amount by which the project would cause the projected growth in population, housing or employment for the Community Plan area to be exceeded in the year of the project completion; and
- The degree to which scheduled water infrastructure improvements or project design features would reduce or offset service impacts.

Based on these factors, the Project would have a significant impact if the City's water supplies would not adequately serve the Project or water distribution capacity would be inadequate to serve the proposed use after appropriate infrastructure improvements have been installed.

#### 4.1. WASTEWATER

Appendix G of the CEQA Guidelines provides a set of sample questions that address impacts regarding wastewater. These questions are as follows:

Would the project:

- Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?
- Result in a determination by the wastewater treatment provider, which serves or may serve the project, that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

In the context of the above questions from the CEQA Guidelines, the *L.A. CEQA Thresholds Guide* states that a project would normally have a significant wastewater impact if:

- The project would cause a measureable increase in wastewater flows at a point where, and a time when, a sewer's capacity is already constrained or that would cause a sewer's capacity to become constrained; or
- The project's additional wastewater flows would substantially or incrementally exceed the future scheduled capacity of any one treatment plant by generating flows greater than those anticipated in the Wastewater Facilities Plan or General Plan and its elements.

These thresholds are applicable to the Project and as such are used to determine if the Project would have significant wastewater impacts.

## 4.2. ENERGY

Appendix F of the CEQA Guidelines states that the potentially significant energy implications of a project should be considered in an EIR. Environmental impacts, as noted in Appendix F, may include:

- The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project's life cycle including construction, operation, maintenance and/or removal. if appropriate, the energy intensiveness of materials may be discussed;
- The effects of the project on local and regional energy supplies and on requirements for additional capacity;
- The effects of the project on peak and base period demands for electricity and other forms of energy;
- The degree to which the project complies with existing energy standards;
- The effects of the project on energy resources;
- The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

Appendix G of the CEQA Guidelines has the following questions:

- Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction?
- Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

In the context of the above thresholds, the *L.A. CEQA Thresholds Guide* states that a determination of significance shall be made on a case-by case basis, considering the following factors:

- The extent to which the project would require new (off-site) energy supply facilities and distribution infrastructure; or capacity enhancing alterations to existing facilities;
- Whether and when the needed infrastructure was anticipated by adopted plans; and
- The degree to which the project design and/or operations incorporate energy conservation measures, particularly those that go beyond City requirements.

Based on these factors, the Project would have a significant impact on energy resources if the project would result in an increase in demand for electricity or natural gas that

exceeds available supply or distribution infrastructure capabilities, or the design of the project fails to incorporate energy conservation measures that go beyond existing requirements.

## 5. METHODOLOGY

### 5.1. WATER

The methodology for determining the significance of a project as it relates to a project's impact on water supply and distribution infrastructure is based on the *L.A. CEQA Thresholds Guide*. This methodology involves a review of the project's environmental setting, project impacts, cumulative impacts, and mitigation measures (if required). The following has been considered as part of the determination for this Project:

#### *Environmental Setting*

- Description of major water infrastructure serving the Project site, including the type of facilities, location and sizes, and any planned improvements.
- Description of the water conditions for the Project area and known improvement plans.

#### *Project Impacts*

- Evaluate the Project's water demand, taking into account design or operational features that would reduce or offset water demand.
- Determine what improvements would be needed, if any, to adequately serve the Project.
- Describe the degree to which presently scheduled off-site improvements offset impacts.

This report analyzes the potential impacts of the Project on the existing public water infrastructure by comparing the estimated Project demand with the calculated available capacity of the existing facilities. The existing and proposed water demand is based upon the WSA conducted by LADWP.

LADWP performed a hydraulic analysis of their water system to determine if adequate fire flow is available to the fire hydrants surrounding the Project Site. LADWP's approach consists of analyzing their water system model near the Project Site. Based on the results, LADWP determines whether they can meet the project fire hydrant flow needs based on existing infrastructure. See Exhibit 1 for the results of the Information of Fire Flow Availability Request (IFFAR).

In addition, LADWP performed a flow test to determine if available water conveyance exists for future development. LADWP's approach consists of data ranging from available static pressure (meaning how much pressure is available at the source before

applying the project's demand), to the available pressure at the maximum demand needed for the project. Based on the results, LADWP determines whether they can meet the project needs based on existing infrastructure. See Exhibit 2 for the results of the Service Advisory Requests (SAR) for 11<sup>th</sup> Street and Olive Street.

## 5.2. WASTEWATER

The methodology for determining the significance of a project as it relates to a project's impact on wastewater collection and treatment infrastructure is based on the *L.A. CEQA Thresholds Guide*. This methodology involves a review of the project's environmental setting, project impacts, cumulative impacts, and mitigation measures (if required). The following has been considered as part of the determination for this Project:

### *Environmental Setting*

- Location of the Project and appropriate points of connection to the wastewater collection system on the pertinent Wye Map;
- Description of the existing wastewater system which would serve the Project, including its capacity and current flows.
- Summary of adopted wastewater-related plans and policies that are relevant to the Project area.

### *Project Impacts*

- Evaluate the Project wastewater needs (anticipated daily average wastewater flow), taking into account design or operational features that would reduce or offset service impacts;
- Compare the Project's wastewater needs to the appropriate sewer's capacity and/or the wastewater flows anticipated in the Wastewater Facilities Plan or General Plan.

This report analyzes the potential impacts of the Project on the existing public sewer infrastructure by comparing the estimated Project wastewater generation with the calculated available capacity of the existing facilities.

Pursuant to LAMC Section 64.15 BOS Wastewater Engineering Division made a preliminary analysis of the local and regional sewer conditions to determine if available wastewater conveyance and treatment capacity exists for future development of the Project Site. BOS's approach consisted of the study of a worst-case scenario envisioning peak demands from the relevant facilities occurring simultaneously on the wastewater system. A combination of flow gauging data and computed results from the City's hydrodynamic model were used to project current and future impacts due to additional sewer discharge. The data used in this report are based on the findings of the BOS preliminary analysis. Refer to Exhibit 3 for the Sewer Capacity Availability Report (SCAR) results showing feasibility in accommodating the Project.



### 5.3. ENERGY

The methodology for determining the significance of a project as it relates to a project's impact on energy supply and distribution infrastructure is based on the *L.A. CEQA Thresholds Guide*. This methodology involves a review of the project's environmental setting, project impacts, cumulative impacts, and mitigation measures as required. The following has been considered as part of the determination for this Project:

#### *Environmental Setting*

- Description of the electricity and natural gas supply and distribution infrastructure serving the project site. Include plans for new transmission facilities or expansion of existing facilities; and
- Summary of adopted energy conservation plans and policies relevant to the project

#### *Project Impacts*

- Evaluation of the new energy supply and distribution systems which the project would require.
- Describe the energy conservation features that would be incorporated into project design and/or operation that go beyond City requirements, or that would reduce the energy demand typically expected for the type of project proposed.
- Consult with the DWP or The Gas Company, if necessary to gauge the anticipated supply and demand conditions at project buildout.

This report analyzes the potential impacts of the Project on existing energy infrastructure by comparing the estimated Project energy demand with the available capacity. Will-serve letters from LADWP and SoCal Gas (Exhibits 4 and 5) demonstrate the availability of sufficient energy resources to supply the Project's demand.

## 6. PROJECT IMPACTS

### 6.1. CONSTRUCTION

#### 6.1.1. WATER

Water demand for construction of the Project would be required for dust control, cleaning of equipment, excavation/export, removal and re-compaction, etc. Based on a review of construction projects of similar size and duration, a conservative estimate of construction water use ranges from 1,000 to 2,000 gallons per day (gpd). Although temporary construction water use would be greater than the existing water consumption at the Project Site, it is anticipated that the existing water infrastructure would meet the limited and temporary water demand associated with construction of the Project. Impacts on the water infrastructure due to construction activity would therefore be less than significant.

The Project will also require construction of new, on-site water distribution lines to serve new buildings and facilities of the proposed Project. Construction impacts associated with the installation of water distribution lines would primarily involve trenching in order to place the water distribution lines below surface and would be limited to on-site water distribution, and minor off-site work associated with connections to the public main. Prior to ground disturbance, Project contractors would coordinate with LADWP to identify the locations and depth of all lines. Further, LADWP would be notified in advance of proposed ground disturbance activities to avoid water lines and disruption of water service. Therefore, Project impacts on water associated with construction activities would be less than significant.

### **6.1.2. WASTEWATER**

Construction activities for the Project would not result in wastewater generation as construction workers would typically utilize portable restrooms, which would not contribute to wastewater flows to the City's wastewater system. Thus, wastewater generation from Project construction activities is not anticipated to cause a measurable increase in wastewater flows. Therefore, Project impacts associated with construction-period wastewater generation would be less than significant.

The Project will require construction of new on-site infrastructure to serve the new buildings. Construction impacts associated with wastewater infrastructure would primarily be confined to trenching for connections to public infrastructure. Installation of wastewater infrastructure will be limited to on-site wastewater distribution, and minor off-site work associated with connections to the public main. No upgrades to the public main are anticipated. A Construction Management Plan would be implemented to reduce any temporary pedestrian and traffic impacts. The contractor would implement the Construction Management Plan, which would ensure safe pedestrian access and vehicle travel and emergency vehicle access throughout the construction phase. Overall, when considering impacts resulting from the installation of any required wastewater infrastructure, all impacts are of a relatively short-term duration (i.e., months) and would cease to occur once the installation is complete. Therefore, Project impacts on wastewater associated with construction activities would be less than significant.

### **6.1.3. ENERGY**

Electrical power would be consumed to construct the new buildings and facilities of the proposed Project. Typical uses include temporary power for lighting, equipment, construction trailers, etc. Overall, demolition and construction activities would require minimal electricity consumption and would not be expected to have any adverse impact on available electricity supplies and infrastructure. Therefore, impacts on electricity supply associated with short-term construction activities would be less than significant.

No natural gas usage is expected to occur during construction. Therefore, impacts on natural gas supply associated with short-term construction activities would be less than significant.

Construction impacts associated with the Project's electrical and gas infrastructure upgrades would primarily be confined to trenching. Infrastructure improvements will comply with all applicable LADWP, SoCalGas, and City of LA requirements, which are expected to and would in fact mitigate impact to existing energy systems and adjacent properties. As stated above, to reduce any temporary pedestrian access and traffic impacts during any necessary off-site energy infrastructure improvements, a construction management plan would be implemented to ensure safe pedestrian and vehicular travel. Therefore, Project impacts on energy infrastructure associated with construction activities would be less than significant.

## **6.2. OPERATION**

### **6.2.1. WATER**

#### **6.2.1.1. INFRASTRUCTURE CAPACITY**

When analyzing the Project for infrastructure capacity, the projected demands for both fire suppression and domestic water are considered. Although domestic water demand is the Project's main contributor to water consumption, fire flow demands have a much greater instantaneous impact on infrastructure, and therefore are the primary means for analyzing infrastructure capacity. Nevertheless, conservative analysis for both fire suppression and domestic water flows has been completed by LADWP for the Project. See Exhibit 1 and Exhibit 2 for the results of the IFFAR and SAR, respectively, which together demonstrate that adequate water infrastructure capacity exists.

#### **6.2.1.2. FIRE WATER DEMAND**

Based on fire flow standards set forth in Section 57.507.3 of the LAMC, the Project falls within the industrial and commercial category, which has a required fire flow of 6,000 to 9,000 gallons per minute (gpm) from four to six adjacent hydrants flowing simultaneously with a residual pressure of 20 pounds per square inch (psi). This translates to a required flow of 1,500 gpm for each hydrant. An IFFAR was submitted to LADWP regarding available fire hydrant flow to demonstrate compliance. The results indicate six hydrants each flowing at 1,500 gpm with a residual pressure of at least 51 psi at any hydrant. The results show that the Project Site currently has adequate fire flow available to demonstrate compliance with Section 57.507.3 of the LAMC.

Furthermore, LAMC Section 57.513, Supplemental Fire Protection, states that:

Where the Chief determines that any or all of the supplemental fire protection equipment or systems described in this section may be substituted in lieu of the requirements of this chapter with respect to any facility, structure, group of structures or premises, the person owning or having control thereof shall either conform to the requirements of this chapter or shall install such supplemental equipment or systems. Where the Chief determines that any or all of such equipment or systems is necessary in addition to the requirements of this chapter as to any facility,

structure, group of structures or premises, the owner thereof shall install such required equipment or systems.

The Project will incorporate a fire sprinkler suppression system to reduce or eliminate the public hydrant demands, which will be subject to Fire Department review and approval during the design and permitting of the Project. Based on Section 94.2020.0 of the LAMC that adopts by reference NFPA 14-2013 including Section 7.10.1.1.5, the maximum allowable fire sprinkler demand for a fully or partially sprinklered building would be 1,250 gpm. As noted, an SAR was submitted to LADWP to determine if the existing public water infrastructure could meet the demands of the Project. Based upon the SAR results, the existing infrastructure is sufficient to meet the demands of the project. The Project's fire flow impacts to water infrastructure would be less than significant.

#### **6.2.1.3. DOMESTIC WATER DEMAND**

Water consumption estimates have been prepared based on 120 percent of the City of LA Bureau of Sanitation sewerage generation factors for commercial categories and are summarized in Figure 1 below:

TABLE I Downtown Los Angeles South Park Properties - Site 3 Calculated Total Additional Water Demand							
Existing Use to be Removed <sup>1</sup>	Quantity	Unit	Water Use Factor <sup>2</sup> (gpd/unit)			Existing Water Use to be Removed	
Surface Parking Lot	46,807	sf	0			0	
<b>Existing to be Removed Total</b>						<b>0</b>	<b>0.00</b>
Proposed Use <sup>1</sup>	Quantity	Unit	Water Use Factor <sup>2</sup> (gpd/unit)	Base Demand (gpd)	Required Ordinances Water Savings <sup>3</sup> (gpd)	Proposed Water Demand	
						(gpd)	(af/y)
Residential: Studios	188	du	75.00	14,100			
Residential: 1 bd	366	du	110.00	40,260			
Residential: 2 bd	156	du	150.00	23,400			
Residential: 3 bd	3	du	190.00	570			
Base Demand Adjustment (Residential Units) <sup>4</sup>				8,424			
<b>Residential Units Total</b>	<b>713</b>	<b>du</b>		<b>86,754</b>	<b>15,321</b>	<b>71,433</b>	<b>80.02</b>
Dog Sps (lvl 4 mezz) <sup>5</sup>	406	sf	0.18	74			
Dog Lounge (lvl 4 mezz) <sup>5</sup>	491	sf	0.18	89			
Synthetic Turf Areas (lvl 4 Dog Park, lvl 5 pool and flex deck, lvl 5R Roof deck)	3,201	sf		0.05			
Pool/Spa on Landscape Amenity Deck (lvl 5) <sup>6</sup>	2,529	sf		241			
Club Room and Lounge (lvl 5) <sup>7</sup>	51	seats	12.86	656			
Fitness and Spin Studio (lvl 5)	5,076	sf	0.22	1,100			
Sky Lounge (lvl 5) <sup>7</sup>	39	seats	12.86	501			
Business/Cc-Lab/Office (lvl 6)	4,269	sf	0.06	256			
Office (lvl 1)	2,586	sf	0.12	310			
Restaurant-seating area (lvl 1) <sup>8</sup>	235	seats	30.00	7,056			
Restaurant- kitchen/storage/etc (lvl 1) <sup>8</sup>	3,528	sf	0.300	1,058			
Retail (lvl 1)	4,221	sf	0.025	106			
<b>Residential Amenities/Commercial Total</b>				<b>11,447</b>	<b>1,784</b>	<b>9,663</b>	<b>10.82</b>
Landscaping <sup>9</sup>	13,291	sf		1,262	577	685	0.77
Covered Parking <sup>10</sup>	325,995	sf	0.02	214	0	214	0.24
Cooling Tower Total	1,200	ton	35.64	42,768	42,330	438	0.49
<b>Proposed Subtotal</b>				<b>142,445</b>	<b>60,012</b>	<b>82,433</b>	<b>92.34</b>
Less Existing to be Removed Total						0	0.00
Less Additional Conservation <sup>11</sup>						480	0.54
<b>Net Additional Water Demand</b>						<b>81,953 gpd</b>	<b>92.00 af/y</b>

**Figure 1: Calculated Total Additional Water Demand.**

**Taken from Water Supply Assessment prepared by LADWP, dated May 5, 2021**

As mentioned, the approved SAR, which is inclusive of anticipated domestic water flow demands, shows that the existing infrastructure is sufficient to meet the water demand of the Project. Additionally, the WSA states “... [P]rojected water supplies available during normal, single-dry, and multiple-dry water years as included in the 25-year projection of 2015 UWMP are sufficient to meet the projected water demand associated with the Project, in addition to the existing and planned future demand on LADWP.” Therefore, the Project’s impacts on water supply would be less than significant.

#### 6.2.1.4. SEWER GENERATION

In accordance with the *L.A. CEQA Thresholds Guide*, the base estimated sewer flows were based on the sewer generation factors for the Project’s uses. Based on the type of use and generation factors, the Project will generate approximately 86,486 gallons per day (gpd) of wastewater. Wastewater generation estimates have been prepared based on the City of LA Bureau of Sanitation sewerage generation factors for residential and commercial categories and are summarized in Table 2 below:

Table 2 – DTLA Site 3 Estimated Proposed Sewage Generation				
Building Use	Sewage Generation (GPD) <sup>(a)</sup>	Units	Quantity	Total Generation (GPD)
APT - BACHELOR	75	DU	188	14,100
APT – 1 BEDROOM	110	DU	366	40,260
APT – 2 BEDROOM	150	DU	156	23,400
APT – 3 BEDROOM	190	DU	3	570
RESTAURANT – FULL SERVICE INDOOR SEAT <sup>(b)</sup>	30	SEAT	235	7,050
RETAIL	25	KGSF	4,221	106
SWIMMING POOL <sup>(c)</sup>	66,030	-	1	66,030
SPA/JACUZZI <sup>(c)</sup>	4,582	-	1	4,582
<b>Total Proposed Sewage Generation for Project Site</b>				<b>156,098</b>
<p><sup>(a)</sup> The average daily flow based on 100% of City of Los Angeles sewerage generation factors.</p> <p><sup>(b)</sup> Anticipated restaurant seat count is based on WSA Prepared by LADWP</p> <p><sup>(c)</sup> Volumes represent total anticipated volume of pool/spa. It is understood that, by including the full volumes, this analysis represents a “worst-case scenario” as emptying the pool/spa daily is not anticipated.</p>				

A SCAR was submitted to see whether the existing public infrastructure can accommodate the Project. The Bureau of Sanitation has analyzed the Project demands in conjunction with existing conditions and forecasted growth. Refer to Exhibit 3 for the approved SCAR.

As previously stated, the existing capacity of the sewer line along Olive Street has a capacity of 4.26376 cfs (2.7557 MGD). The Project’s sewage generation is approximately 156,098 gpd, which represents 5.66% of the existing pipe’s capacity. Due to this fact, and the approved SCAR provided by the Bureau of Engineering-Wastewater Engineering Services Division, operational impacts on wastewater infrastructure would be less than significant.

As further discussed below, the existing design capacity of the Hyperion Service Area is approximately 550 million gallons per day (consisting of 450 mgd at the Hyperion Treatment Plant, 80 mgd at the Donald C. Tillman Water Reclamation Plant,

Reclamation Plant, and 20 mgd at the Los Angeles–Glendale Water Reclamation Plant).<sup>16</sup> The Project’s proposed wastewater generation is approximately 0.156 mgd. This is far less than one percent of the Hyperion Treatment Plant’s capacity where the Project’s wastewater would be treated. Consequently, impacts on wastewater treatment capacity are less than significant.

## 6.2.2. ENERGY

### 6.2.2.1. ELECTRICITY

The Project will increase the demand for electricity resources. Based on analysis performed using CalEEMod software, the estimated projected electrical loads are provided in Table 3 below.

Table 3 – DTLA Site 3 Estimated Proposed Electrical Demand			
Connection To:	Facility	Quantity	Electricity Demand <sup>(a)</sup> (kWhr/yr) <sup>(b)</sup>
<b>Proposed Project Site</b>	Residential <sup>(c)</sup>	713 DU	2,823,540
	Retail <sup>(d)</sup>	4,221 SF	56,984
	Restaurant <sup>(e)</sup>	7,056 SF	311,387
	Enclosed Parking with Elevator	409,486 SF	2,399,590
<b>Total Proposed Electricity Demand for Project Site</b>			5,591,501
<b>Existing Total Electricity Demand for Project Site</b>			16,382
<b>Net Increase in Electricity Demand for Project Site Due to Project</b>			5,575,119
<p><sup>(a)</sup> The average projected load based on estimates from CalEEMod.</p> <p><sup>(b)</sup> 1 kW (kilowatt) = 1,000 Watts.</p> <p><sup>(c)</sup> All residential units classified as “Apartments High Rise”</p> <p><sup>(d)</sup> Retail space classified as “Convenience Market (24 hour)”</p> <p><sup>(e)</sup> Restaurant space classified as “Fast Food Restaurant w/o Drive Thru”</p>			

<sup>16</sup> City of Los Angeles Department of Public Works, Bureau of Sanitation, Water Reclamation Plants, [https://www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-cw/s-lsh-wwd-cw-p?\\_adf.ctrl-state=oe81wkld\\_4&\\_afLoop=28344654751341747#!](https://www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-cw/s-lsh-wwd-cw-p?_adf.ctrl-state=oe81wkld_4&_afLoop=28344654751341747#!), accessed August 13, 2019.

A Will Serve letter was sent to LADWP to determine if there is sufficient capacity to serve the Project. Based on the response from LADWP (see Exhibit 4), impacts related to electrical services would be less than significant.

#### 6.2.2.2. NATURAL GAS.

The Project will increase the demand for natural gas resources. Based on analysis performed using CalEEMod software, the estimated projected natural gas loads are provided in Table 4 below.

Table 4 – DTLA Site 3 Estimated Proposed Natural Gas Demand			
Connection To:	Facility	Quantity	Natural Gas Demand <sup>(a)</sup> (cf/yr)
<b>Proposed Project Site</b>	Residential <sup>(b)</sup>	713 DU	6,405,146
	Retail <sup>(c)</sup>	4,221 SF	6,746
	Restaurant <sup>(d)</sup>	7,056 SF	1,585,634
	Enclosed Parking with Elevator	409,486 SF	0
<b>Total Proposed Natural Gas Demand for Project Site</b>			7,997,526
<b>Existing Total Natural Gas Demand for Project Site</b>			0
<b>Net Increase in Natural Gas Demand for Project Site Due to Project</b>			7,997,526
<sup>(a)</sup> The average projected load based on estimates from CalEEMod. 1kBTU = 1.026 CF <sup>(b)</sup> All residential units classified as “Apartments High Rise” <sup>(c)</sup> Retail space classified as “Convenience Market (24 hour)” <sup>(d)</sup> Restaurant space classified as “Fast Food Restaurant w/o Drive Thru”			

A Will Serve letter was sent to the gas company to determine if there is sufficient capacity to serve the Project. Based on the response from SoCalGas (see Exhibit 5), available capacity to serve the project exists. As such, impacts related to gas would be less than significant.

### 6.3. CUMULATIVE IMPACTS

### 6.4. CUMULATIVE IMPACTS

Sixty-three projects have been identified as “related projects” as based on the traffic analysis.



### **6.3.1 WATER**

The geographic context for the cumulative impact analysis on water supply is the LADWP service area (i.e., the City). LADWP, as a public water service provider, is required to prepare and periodically update an Urban Water Management Plan to plan and provide for water supplies to serve existing and projected demands. The 2015 UWMP prepared by LADWP accounts for existing development within the City, as well as projected growth through the year 2040.

Additionally, under the provisions of Senate Bill 610, LADWP is required to prepare a comprehensive water supply assessment for every new development "project" (as defined by Section 10912 of the Water Code) within its service area that reaches certain thresholds. The types of projects that are subject to the requirements of Senate Bill 610 tend to be larger projects that may or may not have been included within the growth projections of the 2015 UWMP. The water supply assessment for projects would evaluate the quality and reliability of existing and projected water supplies, as well as alternative sources of water supply and measures to secure alternative sources if needed.

Furthermore, through LADWP's 2015 UWMP process and the City's Securing L.A.'s Water Supply, the City will meet all new demand for water due to projected population growth to the year of 2040, through a combination of water conservation and water recycling. These plans outline the creation of sustainable sources of water for the City of Los Angeles to reduce dependence on imported supplies. LADWP is planning to achieve these goals by expanding its water conservation program. To increase recycled water use, LADWP is expanding the recycled water distribution system to provide water for irrigation, industrial use, and groundwater recharge.

The total increase in demand for the Project and related projects is approximately 5.7 MGD. LADWP's UWMP has anticipated an approximate water demand of 576 MGD by the year 2025, which suggests that the Project combined with related projects would account for approximately 1% of the total daily demand. During the entitlement process for these projects, it is assumed that potential mitigation measures will be evaluated on a by-project basis (through the WSA process or otherwise) which will reduce the anticipated water demand for these projects. In addition, the Water Supply Assessment performed by LADWP has evaluated the Project alongside future anticipated growth and potential dry water years (both in "single-dry" and "multiple-dry" year scenarios) and has found that the Project can be accommodated based on their analysis.

Based on the above, it is anticipated that LADWP would be able to supply the water demands of the Project as well as future growth. Therefore, cumulative impacts on water supply would be less than significant.

### **6.3.2 WASTEWATER**

The Proposed Project will result in the additional generation of sewer flow. However, as discussed above the Bureau of Sanitation will conduct analyses of existing and planned

capacity and will determine that adequate capacity exists to serve the Project. Related projects connecting to the same sewer system are required to obtain a sewer connection permit and submit a Sewer Capacity Availability Request to the Bureau of Sanitation as part of the related project's development review. Impact determination will be provided following the completion of the SCAR analysis. If system upgrades are required as a result of a given project's additional flow, arrangements would be made between the related project and the Bureau of Sanitation to construct the necessary improvements.

Wastewater generated by the Proposed Project would be conveyed via the existing wastewater conveyance systems for treatment at the Hyperion Treatment Plant system. As previously stated, based on information from the Bureau of Sanitation, the existing design capacity of the Hyperion Service Area is approximately 550 million gallons per day (mgd) and the existing average daily flow for the system is approximately 260 mgd.<sup>17</sup> The estimated wastewater generation of the Proposed Project and related projects (4,905,747 gpd) is less than the available capacity in the system and roughly 98% of the allotted annual wastewater flow increase for the Hyperion Treatment Plant. It is understood, however, that these Projects do not represent a single year of development and will be reviewed on an individual basis for potential impacts. It is expected that the related projects would also be required to adhere to the Bureau of Sanitation's annual wastewater flow increase allotment.

Based on these forecasts the Project's increase in wastewater generation would be adequately accommodated within the Hyperion Service Area. In addition, the City Bureau of Sanitation's analysis confirms that the Hyperion Treatment Plant has sufficient capacity and regulatory allotment for the Proposed Project. Thus, operation of the Project would have a less than significant impact on wastewater treatment facilities.

### **6.3.3 ENERGY**

The geographic context for the cumulative analysis of electricity is LADWP's service area and the geographic context for the cumulative analysis of natural gas is SoCal Gas' service area. The geographic context for transportation energy use is the City of Los Angeles. Growth within these geographies is anticipated to increase the demand for electricity, natural gas, and transportation energy, as well as the need for energy infrastructure, such as new or expanded energy facilities.

Buildout of the Project, the related projects, and additional growth forecasted to occur in the City would increase electricity consumption during project construction and operation and, thus, cumulatively increase the need for energy supplies and infrastructure capacity, such as new or expanded energy facilities. LADWP forecasts that its total energy sales in the 2025-2026 fiscal year (the assumed project buildout year) will be 23,537 gigawatt-hours (GWh) of electricity.<sup>18</sup> Based on the Project and Related Projects estimated net new electrical consumption of 246.7 GWh/year, the project would account for approximately

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<sup>17</sup> City of Los Angeles Department of Public Works, Bureau of Sanitation, Sewer System Management Plan Hyperion Sanitary Sewer System, January 2019.

<sup>18</sup> LADWP, 2017 Power Integrated Resource Plan, Appendix A, Table A-1.

1% of LADWP's projected sales for the Project's build-out year. Although future development would result in the irreversible use of renewable and non-renewable electricity resources during project construction and operation which could limit future availability, the use of such resources would be on a relatively small scale and would be consistent with growth expectations for LADWP's service area. Furthermore, like the Project, during construction and operation, other future development projects would be expected to incorporate energy conservation features, comply with applicable regulations including CALGreen and State energy standards under Title 24, and incorporate mitigation measures, as necessary. Accordingly, the Project's contribution to cumulative impacts related to electricity consumption would not be cumulatively considerable and, thus, would be less than significant.

Electricity infrastructure is typically expanded in response to increasing demand, and system expansion and improvements by LADWP are ongoing. As described in LADWP's 2017 Power Integrated Resource Plan, LADWP would continue to expand delivery capacity as needed to meet demand increases within its service area at the lowest cost and risk consistent with LADWP's environmental priorities and reliability standards. LADWP has indicated that the Power Integrated Resource Plan incorporates the estimated electricity requirement for the Project. The Power Integrated Resource Plan takes into account future energy demand, advances in renewable energy resources and technology, energy efficiency, conservation, and forecast changes in regulatory requirements. Development projects within the LADWP service area would also be anticipated to incorporate site-specific infrastructure improvements, as necessary. Each of the related projects would be reviewed by LADWP to identify necessary power facilities and service connections to meet the needs of their respective projects. Project applicants would be required to provide for the needs of their individual projects, thereby contributing to the electrical infrastructure in the Project area. As such, the Project's contribution to cumulative impacts with respect to electricity infrastructure would not be cumulatively considerable and, thus, would be less than significant.

Buildout of the Project and related projects in SoCal Gas' service area is expected to increase natural gas consumption during project construction and operation and, thus, cumulatively increase the need for natural gas supplies and infrastructure capacity. Based on the 2020 California Gas Report, the California Energy Commission estimates natural gas capacity within SoCal Gas' planning area will be approximately 3,435 million cubic feet/day in 2025, of which approximately 1,093 million cubic feet/day is currently unallocated.<sup>19</sup> The Project and Related Projects (approx. 1.4 million cubic feet/day) would account for significantly less than 0.1 percent of the 2024 forecasted availability in SoCalGas's planning area. SoCalGas' forecasts consider projected population growth and development based on local and regional plans. Although future development projects would result in the irreversible use of natural gas resources which could limit future availability, the use of such resources would be on a relatively small scale and would be consistent with regional and local growth expectations for SoCalGas' service area. Furthermore, like the Project, during project construction and operation other future

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<sup>19</sup> California Gas and Electric Utilities, 2020 California Gas Report, p. 145.

development projects would be expected to incorporate energy conservation features, comply with applicable regulations including CALGreen and State energy standards under Title 24, and incorporate mitigation measures, as necessary. Accordingly, the Project's contribution to cumulative impacts related to natural gas consumption would not be cumulatively considerable and, thus, would be less than significant.

Natural gas infrastructure is typically expanded in response to increasing demand, and system expansion and improvements by SoCalGas occur as needed. It is expected that SoCalGas would continue to expand delivery capacity if necessary to meet demand increases within its service area. Development projects within its service area would also be anticipated to incorporate site-specific infrastructure improvements, as appropriate. As such, cumulative impacts with respect to natural gas infrastructure would not be cumulatively considerable and, thus, would be less than significant.

## **7. LEVEL OF SIGNIFICANCE**

Based on the analysis contained in this report no significant impacts have been identified to water, wastewater, or energy infrastructure for this Project.

# APPENDIX 1

## Related Projects Utility Demand Calculations

Table A1 – Related Projects Estimated Proposed Water Demand				
Building Use	Water Demand (GPD) <sup>(a)</sup>	Units	Quantity	Total Consumption (GPD)
Bar: Cocktail, Public Table Area	864	KGsf	10,749	9,287
Commercial Use	60	KGsf	115,900	6,954
Conference Room of Office Bldg.	144	KGsf	10,801	1,555
Health Club/Spa	780	KGsf	10,684	8,334
Hotel: Use Guest Rooms Only	144	Room	5,902	849,888
Medical Office/Clinic	300	KGsf	10,000	3,000
Museum: All Area	36	KGsf	17,600	634
Office Bldg. w/Cooling Tower	204	KGsf	2,535,402	517,222
Residential: Apt - 2 BDR <sup>(b)</sup>	180	DU	14,460	2,602,800
Residential: Condo - 2 BDR <sup>(b)</sup>	180	DU	5,871	1,056,780
Restaurant: Full Service Indoor Seat <sup>(c)</sup>	36	Seat	6,816	245,376
Retail Area (greater than 100,000 SF)	60	KGsf	582,545	34,953
Retail Area (less than 100,000 SF)	30	KGsf	621,448	18,643
School: Trade or Vocational	13.2	Student	6,300	83,160
Theatre: Cinema	3.6	Seat	744	2,678
Convention Center Expansion <sup>(d)</sup>	60	KGsf	2,050,000	123,000
<b>Total Proposed Water Consumption for Related Projects</b>				<b>5,564,264</b>
<b>Total Proposed Water Consumption for Site 2 Project<sup>(e)</sup></b>				<b>67,073</b>
<b>Total Proposed Water Consumption for Site 3 Project</b>				<b>81,953</b>
<b>TOTAL</b>				<b>5,713,290</b>
<p>(a) The average daily flow based on 120% of City of Los Angeles sewerage generation factors.</p> <p>(b) All dwelling units for related projects assumed to be 2 BDR</p> <p>(c) 30 SF / seat is assumed</p> <p>(d) Commercial Use used for analysis of Convention Center Expansion(s)</p> <p>(e) 1105 S. Olive (“Site 2”) programming not otherwise included in table</p>				

Table A2 – Related Projects Estimated Proposed Sewage Generation				
Building Use	Sewage Generation (GPD) <sup>(a)</sup>	Units	Quantity	Total Generation (GPD)
Bar: Cocktail, Public Table Area	720	KGsf	10,749	7,739
Commercial Use	50	KGsf	115,900	5,795
Conference Room of Office Bldg.	120	KGsf	10,801	1,296
Health Club/Spa	650	KGsf	10,684	6,945
Hotel: Use Guest Rooms Only	120	Room	5,902	708,240
Medical Office/Clinic	250	KGsf	10,000	2,500
Museum: All Area	30	KGsf	17,600	528
Office Bldg. w/Cooling Tower	170	KGsf	2,535,402	431,018
Residential: Apt - 2 BDR <sup>(b)</sup>	150	DU	14,460	2,169,000
Residential: Condo - 2 BDR <sup>(b)</sup>	150	DU	5,871	880,650
Restaurant: Full Service Indoor Seat <sup>(c)</sup>	30	Seat	6,816	204,480
Retail Area (greater than 100,000 SF)	50	KGsf	582,545	29,127
Retail Area (less than 100,000 SF)	25	KGsf	621,448	15,536
School: Trade or Vocational	11	Student	6,300	69,300
Theatre: Cinema	3	Seat	744	2,232
Convention Center Expansion <sup>(d)</sup>	50	KGsf	2,050,000	102,500
<b>Total Proposed Sewage Generation for Related Projects</b>				<b>4,636,887</b>
<b>Total Proposed Sewage Generation for Site 2 Project<sup>(e)</sup></b>				<b>112,762</b>
<b>Total Proposed Sewage Generation for Site 3 Project</b>				<b>156,098</b>
<b>TOTAL</b>				<b>4,905,747</b>
<sup>(f)</sup> The average daily flow based on 100% of City of Los Angeles sewerage generation factors. <sup>(g)</sup> All dwelling units for related projects assumed to be 2 BDR <sup>(h)</sup> 30 SF / seat is assumed <sup>(i)</sup> Commercial Use used for analysis of Convention Center Expansion(s) <sup>(j)</sup> 1105 S. Olive (“Site 2”) programming not otherwise included in table				

Table A3 – Related Projects Estimated Electrical Demand (per CalEEMod analysis)			
Building Use	Units	Quantity	Electricity Demand (kWhr/yr)
Bar: Cocktail, Public Table Area <sup>(a)</sup>	KGSF	10,749	474,461
Commercial Use <sup>(b)</sup>	KGSF	115,900	34,580,700
Conference Room of Office Bldg. <sup>(b)</sup>	KGSF	10,801	
Office Bldg. w/Cooling Tower <sup>(b)</sup>	KGSF	2,535,402	
Health Club/Spa	KGSF	10,684	118,592
Hotel: Use Guest Rooms Only	Room	5,902	64,958,400
Medical Office/Clinic	KGSF	10,000	129,900
Museum: All Area <sup>(c)</sup>	KGSF	17,600	195,360
Residential: Apt - 2 BDR <sup>(d)</sup>	DU	14,460	57,262,800
Residential: Condo - 2 BDR <sup>(e)</sup>	DU	5,871	24,774,100
Restaurant: Full Service Indoor Seat <sup>(f)</sup>	Seat	6,816	9,025,750
Retail Area (greater than 100,000 SF) <sup>(g)</sup>	KGSF	582,545	16,253,900
Retail Area (less than 100,000 SF) <sup>(g)</sup>	KGSF	621,448	
School: Trade or Vocational <sup>(h)</sup>	Student	6,300	2,755,590
Theatre: Cinema	Seat	744	185,814
Convention Center Expansion <sup>(i)</sup>	KGSF	2,050,000	26,629,500
<b>Total Proposed Electricity Demand for Related Projects</b>			<b>237,344,867</b>
<b>Total Proposed Sewage Generation for Site 2 Project*</b>			<b>3,841,048</b>
<b>Total Proposed Sewage Generation for Site 3 Project</b>			<b>5,575,119</b>
<b>TOTAL</b>			<b>246,761,034</b>
CalEEMod notes:			
(a) <i>High Turnover (Sit Down Restaurant)</i> category used for analysis			
(b) <i>General Office Building</i> category used for analysis			
(c) <i>Library</i> category used for analysis			
(d) <i>Apartments High Rise</i> category used for analysis			
(e) <i>Condo/Townhouse High Rise</i> category used for analysis			
(f) <i>Fast Food Restaurant w/o Drive Thru</i> category used for analysis			
(g) <i>Convenience Market (24-hour)</i> category used for analysis			
(h) <i>Junior College (2-year)</i> category used for analysis			
(i) <i>Government (Civic Center)</i> category used for analysis			
* 1105 S. Olive ("Site 2") programming not otherwise included in table			

Table A4 – Related Projects Estimated Natural Gas Demand (per CalEEMod analysis)			
Building Use	Units	Quantity	Natural Gas Demand (cf/yr)**
Bar: Cocktail, Public Table Area <sup>(a)</sup>	KGSF	10,749	2,417,583
Commercial Use <sup>(b)</sup>	KGSF	115,900	27,010,234
Conference Room of Office Bldg. <sup>(b)</sup>	KGSF	10,801	
Office Bldg. w/Cooling Tower <sup>(b)</sup>	KGSF	2,535,402	
Health Club/Spa	KGSF	10,684	188,480
Hotel: Use Guest Rooms Only	Room	5,902	200,294,347
Medical Office/Clinic	KGSF	10,000	141,462
Museum: All Area <sup>(c)</sup>	KGSF	17,600	310,487
Residential: Apt - 2 BDR <sup>(d)</sup>	DU	14,460	129,899,610
Residential: Condo - 2 BDR <sup>(e)</sup>	DU	5,871	52,741,423
Restaurant: Full Service Indoor Seat <sup>(f)</sup>	Seat	6,816	45,990,058
Retail Area (greater than 100,000 SF) <sup>(g)</sup>	KGSF	582,545	1,924,513
Retail Area (less than 100,000 SF) <sup>(g)</sup>	KGSF	621,448	
School: Trade or Vocational <sup>(h)</sup>	Student	6,300	7,258,528
Theatre: Cinema	Seat	744	295,316
Convention Center Expansion <sup>(i)</sup>	KGSF	2,050,000	20,799,708
<b>Total Proposed Electricity Demand for Related Projects</b>			489,271,749
<b>Total Proposed Sewage Generation for Site 2 Project*</b>			5,754,771
<b>Total Proposed Sewage Generation for Site 3 Project</b>			7,997,526
<b>TOTAL</b>			<b>503,024,046</b>
CalEEMod notes:			
(a) <i>High Turnover (Sit Down Restaurant)</i> category used for analysis			
(b) <i>General Office Building</i> category used for analysis			
(c) <i>Library</i> category used for analysis			
(d) <i>Apartments High Rise</i> category used for analysis			
(e) <i>Condo/Townhouse High Rise</i> category used for analysis			
(f) <i>Fast Food Restaurant w/o Drive Thru</i> category used for analysis			
(g) <i>Convenience Market (24-hour)</i> category used for analysis			
(h) <i>Junior College (2-year)</i> category used for analysis			
(i) <i>Government (Civic Center)</i> category used for analysis			
* 1105 S. Olive (“Site 2”) programming not otherwise included in table			
** 1 cf = 1.026 kBTU			



# **EXHIBIT 1**

## **LADWP “Information of Fire Flow Availability Request” (IFFAR) Results**



# City of Los Angeles

## Los Angeles Department of Water and Power - Water System

### INFORMATION OF FIRE FLOW AVAILABILITY

LAFD Fire Flow Requirement: 6000 to 9000 GPM from four to six fire hydrants flowing simultaneously      Water Service Map No.: 126-207 - Central  
 LAFD Signature: \_\_\_\_\_  
 Date Signed: \_\_\_\_\_

Applicant: Dan Haefeli  
 Company Name: KPFF Consulting Engineers  
 Address: 700 South Flower St., Los Angeles, CA 90017  
 Telephone: 213-418-0201  
 Email Address: daniel.haefeli@kpff.com

	F-8951	F-8961	F-8934
Location:	11th Street	Olive Street	11th Street
Distance from Nearest Pipe Location (feet):	12	5	11
Hydrant Size:	4D	4D	4D
Water Main Size (in):	10"	12"	12"
Static Pressure (psi):	61	72	74
Residual Pressure (psi):	51	66	64
Flow at 20 psi (gpm):	1500 GPM	1500 GPM	1500 GPM

**NOTE: Data obtained from hydraulic analysis using peak hour.**

Remarks: \_\_\_\_\_ ECMR No. W20210813015  
*Project Site Addresses: 1100 South Olive Street, 1117 South Olive Street, Los Angeles, CA*  
*Please run all 6 hydrants simultaneously. See application #2 for additional hydrant numbers.*

Water Purveyor: Los Angeles Department of Water & Power      Date: 8/16/21

Signature:       Title: Civil Engineering Associate I

**Requests must be made by submitting this completed application, along with a \$230.00 check payable to: "Los Angeles Department of Water and Power", and mailed to:**

**Los Angeles Department of Water and Power**  
**Distribution Engineering Section - Water**  
**Attn: Business Arrangements**  
**P.O. Box 51111 - Room 1425**  
**Los Angeles, CA 90051-5700**

**RECEIVED/WDE**  
**AUG 05 2021**

\* If you have any questions, please contact us at (213) 367-2130 or visit our web site at <http://www.ladwp.com>.



# City of Los Angeles

## Los Angeles Department of Water and Power - Water System

### INFORMATION OF FIRE FLOW AVAILABILITY

LAFD Fire Flow Requirement: 6000 to 9000 GPM from four to six fire hydrants flowing simultaneously      Water Service Map No.: 126-207 - Central  
 LAFD Signature: \_\_\_\_\_  
 Date Signed: \_\_\_\_\_

Applicant: Dan Haefeli  
 Company Name: KPFF Consulting Engineers  
 Address: 700 South Flower St., Los Angeles, CA 90017  
 Telephone: 213-418-0201  
 Email Address: daniel.haefeli@kpff.com

	F-8920	F-81915	F-8969
Location:	Olive Street	Grand Avenue	Olive Street
Distance from Nearest Pipe Location (feet):	53	4	6
Hydrant Size:	4D	4D	4D
Water Main Size (in):	10"	12"	12"
Static Pressure (psi):	72	61	62
Residual Pressure (psi):	66	52	51
Flow at 20 psi (gpm):	1500 GPM	1500 GPM	1500 GPM

**NOTE: Data obtained from hydraulic analysis using peak hour.**

Remarks: \_\_\_\_\_ ECMR No. W20210813016  
*Project Site Addresses: 1100 South Olive Street, 1117 South Olive Street, Los Angeles, CA*  
*Please run all 6 hydrants simultaneously. See application #1 for additional hydrant numbers.*

Water Purveyor: Los Angeles Department of Water & Power      Date: 8/16/21

Signature:       Title: Civil Engineering Associate I

**Requests must be made by submitting this completed application, along with a \$215.00 check payable to: "Los Angeles Department of Water and Power", and mailed to:**

**Los Angeles Department of Water and Power**  
**Distribution Engineering Section - Water**  
**Attn: Business Arrangements**  
**P.O. Box 51111 - Room 1425**  
**Los Angeles, CA 90051-5700**

RECEIVED/WDE  
 AUG 05 2021

\* If you have any questions, please contact us at (213) 367-2130 or visit our web site at <http://www.ladwp.com>.

# **EXHIBIT 2**

## **LADWP “Service Advisory Report” (SAR) Results and Water Will Serve Letter**



# City of Los Angeles

## Los Angeles Department of Water and Power - Water System



SAR NUMBER 93553

### Fire Service Pressure Flow Report

SERVICE NUMBER 632186

For: 1100 S OLIVE ST Approved Date: 8-12-2021

Proposed Service 6 INCH off of the

12 inch main in 11TH ST on the SOUTH side approximately

135 feet EAST of EAST of OLIVE ST The System maximum pressure is

62 psi based on street curb elevation of 245 feet above sea level at this location.

The distance from the DWP street main to the property line is 19 feet

**System maximum pressure should be used only for determining class of piping and fittings.**

**Residual Flow/Pressure Table for water system street main at this location**

Flow (gpm)	Press. (psi)	Flow (gpm)	Press. (psi)	Flow (gpm)	Press. (psi)
0	52				
965	51				
1400	50				

### Meter Assembly Capacities

Domestic Meters	
1 inch =	56 gpm
1-1/2 inch =	96 gpm
2 inch =	160 gpm
3 inch =	220 gpm
4 inch =	400 gpm
6 inch =	700 gpm
8 inch =	1500 gpm
10 inch =	2500 gpm
Fire Service	
2 inch =	250 gpm
4 inch =	600 gpm
6 inch =	1400 gpm
8 inch =	2500 gpm
10 inch =	5000 gpm
FM Services	
8 inch =	2500 gpm
10 inch =	5000 gpm

These values are subject to change due to changes in system facilities or demands.

Notes: OK to sell 6-inch FS

This information will be sent to the Department of Building and Safety for plan checking.  
 This SAR is valid for one year from 08-12-21. Once the SAR expires, the applicant needs to re-apply and pay applicable processing fee.

For additional information contact the Water Distribution Services Sector **CENTRAL (213) 367-1216**



# City of Los Angeles

## Los Angeles Department of Water and Power - Water System



SAR NUMBER **93552**

### Fire Service Pressure Flow Report

SERVICE NUMBER **632422**

For: 1100 S OLIVE ST Approved Date: **8-11-2021**

Proposed Service 6 INCH off of the

12 inch main in OLIVE ST on the EAST side approximately

170 feet SOUTH of SOUTH of 11TH ST The System maximum pressure is

62 psi based on street curb elevation of 245 feet above sea level at this location.

The distance from the DWP street main to the property line is 21 feet

**System maximum pressure should be used only for determining class of piping and fittings.**

**Residual Flow/Pressure Table for water system street main at this location**

Flow (gpm)	Press. (psi)	Flow (gpm)	Press. (psi)	Flow (gpm)	Press. (psi)
0	50				
775	49				
1125	48				
1400	47				

### Meter Assembly Capacities

Domestic Meters	
1 inch =	56 gpm
1-1/2 inch =	96 gpm
2 inch =	160 gpm
3 inch =	220 gpm
4 inch =	400 gpm
6 inch =	700 gpm
8 inch =	1500 gpm
10 inch =	2500 gpm

Fire Service	
2 inch =	250 gpm
4 inch =	600 gpm
6 inch =	1400 gpm
8 inch =	2500 gpm
10 inch =	5000 gpm

FM Services	
8 inch =	2500 gpm
10 inch =	5000 gpm

These values are subject to change due to changes in system facilities or demands.

Notes: OK to sell 6" FS + 8" DS combo

This information will be sent to the Department of Building and Safety for plan checking.  
 This SAR is valid for one year from 08-11-21. Once the SAR expires, the applicant needs to re-apply and pay applicable processing fee.

For additional information contact the Water Distribution Services Sector **CENTRAL (213) 367-1216**



Los Angeles  Department of Water & Power

ERIC GARCETTI  
Mayor

Commission  
MEL LEVINE, *President*  
WILLIAM W. FUNDERBURK JR., *Vice President*  
JILL BANKS BARAD  
CHRISTINA E. NOONAN  
AURA VASQUEZ  
BARBARA E. MOSCHOS, *Secretary*

DAVID H. WRIGHT  
*General Manager*

February 27, 2018

Map No. 126-207

Mr. Daniel Haefeli  
KPFF  
700 South Flower Street, Suite 2100  
Los Angeles, California 90017

Dear Mr. Haefeli:

Subject: Water Availability - Will Serve  
1110 South Olive Street  
APN: 5139-019-040, Ord's Survey, Lot FR 10

This is in reply to your request regarding water availability for the above-mentioned location. This property can be supplied with water from the municipal system subject to the Water System rules of the Los Angeles Department of Water and Power (LADWP). It is also subject to all conditions set by LADWP.

Should you require additional information, please contact Mr. Cristina Reyes at (213) 367-1318.

Correspondence may be addressed to:

LADWP - Water Business Arrangements  
Attention: Mr. Cristina Reyes  
P.O. Box 51111, Room 1425  
Los Angeles, California 90051-5700

Sincerely,



Hugo A. Torres  
Manager-Business Arrangements  
Water Distribution Engineering

CR:rp  
c: Ms. Cristina Reyes

RECEIVED KPFF - L.A.  
CC: \_\_\_\_\_  
MAR 05 2018  
JOB # \_\_\_\_\_  
FILE # \_\_\_\_\_

Putting Our Customers First 

# EXHIBIT 3

## City of Los Angeles “Sewer Capacity Availability Report” Results



## Sewer Capacity Availability Request (SCAR)

To: Bureau of Sanitation

The following request is submitted to you on behalf of the applicant requesting to connect to the public sewer system. Please verify that the capacity exists at the requested location for the proposed developments shown below. The results are good for 180 days from the date the sewer capacity approval from the Bureau of Sanitation. Lateral connection of development shall adhere to Bureau of Engineering Sewer Design Manual Section F 480. **If not listed in the tables below, sewer ejector use is prohibited.**

Job Address:	<b>1100 S Olive St</b>	Sanitation Scar ID:	<b>68-5690-0821</b>
Date Submitted	<b>08/09/2021</b>	Request Will Serve Letter?	<b>Yes</b>
BOE District:	<b>Central District</b>		
Applicant:	<b>Daniel Haefeli</b>		
Address:	<b>700 S FLOWER STREET, SUITE 2100</b>	City :	<b>LOS ANGELES</b>
State:	<b>CA</b>	Zip:	<b>90017</b>
Phone:	<b>(213) 418-0201</b>	Fax:	
Email:	<b>DANIEL.HAEFELI@KPFF.COM</b>	BPA No.	
S-Map:	<b>126A207</b>	Wye Map:	<b>126A205-D</b>

### SIMM Map - Maintenance Hole Locations

No.	Street Name	U/S MH	D/S MH	Diam. (in)	Approved Flow %	Notes
1	OLIVE ST	51610084	51610097	14	50.00	MAXIMUM DISCHARGE 78,049 GPD.
2	11TH ST	51611117	51610084	8	50.00	MAXIMUM DISCHARGE 78,049 GPD.

### Proposed Facility Description

No.	Proposed Use Description	Sewage Generation (GPD)	Unit	Qty	GPD
1	RESIDENTIAL: APT - BACHELOR	75	DU	188	14,100
2	RESIDENTIAL: APT - 1 BDRM. *6	110	DU	366	40,260
3	RESIDENTIAL: APT - 2 BDRMS *6	150	DU	156	23,400
4	RESIDENTIAL: APT - 3 BDRMS *6	190	DU	3	570
5	RETAIL AREA (LESS THAN 100,000 SF)	25	KGSF	4,221	106
6	RESTAURANT: FULL SERVICE OUTDOOR SEAT	30	SEAT	235	7,050
7	SWIMMING POOL (COMMERCIAL WITH BACKWASH FILTERS)		GPD	66,030	66,030
8	SPA/JACUZZI (COMMERICAL WITH BACKWASH FILTERS) *7		GPD	4,582	4,582

**Proposed Total Flow (gpd): 156,098**

Remarks 1] Approved maximum allowable discharge of 156,098 GPD (108.40 gpm). 2] Maximum discharges as indicated on approved flow percentages. 3] IWMD permit required.

Note: Results are good for 180 days from the date of approval by the Bureau of Sanitation

Date Processed: 09/01/2021

Expires On: 02/28/2022

Scar Request Number: 4147

Processed by: **Albert Lew**  
Bureau of Sanitation  
Phone: 323-342-6207  
Sanitation Status: **Approved**  
Reviewed by: **Ricardo Avendano**  
on **08/31/2021**

Submitted by: **Steve Melgar**  
Bureau of Engineering  
**Central District**  
Phone: 213-482-7030

---

Fees Collected  
Date Collected

**Yes**  
**08/24/2021**

SCAR FEE (W:37 / QC:706) **\$2,282.50**  
SCAR Status: **Completed**

### **SEWER CAPACITY AVAILABILITY REVIEW FEE (SCARF) - Frequently Asked Questions**

SCAR stands for Sewer Capacity Availability Review that is performed by the Department of Public Works, Bureau of Sanitation. This review evaluates the existing sewer system to determine if there is adequate capacity to safely convey sewage from proposed development projects, proposed construction projects, proposed groundwater dewatering projects and proposed increases of sewage from existing facilities. The SCAR Fee (SCARF) recovers the cost, incurred by the City, in performing the review for any SCAR request that is expected to generate 10,000 gallons per day (gpd) of sewage.

The SCARF is based on the effort required to perform data collection and engineering analysis in completing a SCAR. A brief summary of that effort includes, but is not limited to, the following:

1. Research and trace sewer flow levels upstream and downstream of the point of connection.
2. Conduct field surveys to observe and record flow levels. Coordinate with maintenance staff to inspect sewer maintenance holes and conduct smoke and dye testing if necessary.
3. Review recent gauging data and in some cases closed circuit TV inspection (CCTV) videos.
4. Perform gauging and CCTV inspection if recent data is not available.
5. Research the project location area for other recently approved SCARs to evaluate the cumulated impact of all known SCARs on the sewer system.
6. Calculate the impact of the proposed additional sewage discharge on the existing sewer system as it will be impacted from the approved SCARs from Item 6 above. This includes tracing the cumulative impacts of all known SCARs, along with the subject SCAR, downstream to insure sufficient capacity exist throughout the system.
7. Correspond with the applicant for additional information and project and clarification as necessary.
8. Work with the applicant to find alternative sewer connection points and solutions if sufficient capacity does not exist at the desired point of connection.

### **Questions and Answers:**

**1. When is the SCARF applied, or charged?**

*It applies to all applicants seeking a Sewer Capacity Availability Review (SCAR). SCARs are generally required for Sewer Facility Certificate applications exceeding 10,000 gpd, or request from a property owner seeking to increase their discharge thru their existing connection by 10,000 gpd or more, or any groundwater related project that discharges 10,000 gpd or more, or any proposed or future development for a project that could result in a discharge of 10,000 gpd.*

**2. Why is the SCARF being charged now when it has not been in the past?**

*The City has seen a dramatic increase in the number of SCARs over 10,000 gpd in the last few years and has needed to increase its resources, i.e., staff and gauging efforts, to respond to them. The funds collected thru SCARF will help the City pay for these additional resources and will be paid by developers and property owners that receive the benefit from the SCAR effort.*

**3. Where does the SCARF get paid?**

*The Department of Public Works, Bureau of Engineering (BOE) collects the fee at its public counters. Once the fee is paid then BOE prepares a SCAR request and forwards it to the BOS where it is reviewed and then returned to BOE. BOE then informs the applicant of the result. In some cases, BOS works directly with the applicant during the review of the SCAR to seek additional information and work out alternative solutions*

# **EXHIBIT 4**

## **LADWP Approved Power Will-Serve Letter**

ERIC GARCETTI  
Mayor

Commission  
MEL LEVINE, *President*  
WILLIAM W. FUNDERBURK JR., *Vice President*  
JILL BANKS BARAD  
CHRISTINA E. NOONAN  
AURA VASQUEZ  
BARBARA E. MOSCHOS, *Secretary*

DAVID H. WRIGHT  
General Manager

June 27, 2018

Mr. Dan Haefeli  
kpff  
700 S. Flower Street, Suite 2100  
Los Angeles, CA 90017

Subject: 1100 S. Olive Street

Dear Mr. Haefeli,

This is in response to your submittal regarding electric service for the proposed project located at the above address.

Electric Service is available and will be provided in accordance with the Los Angeles Department of Water and Power's Rules Governing Water and Electric Service. The availability of electricity is dependent upon adequate generating capacity and adequate fuel supplies. The estimated power requirement for this proposed project is part of the total load growth forecast for the City of Los Angeles and has been taken into account in the planned growth of the City's power system.

If you have any questions regarding this matter, please contact me at (213) 367-4290.

Sincerely,



RALPH JARAMILLO  
Engineer of Customer Station Design

RJ:sl

C/enc:  
ENGR: Mr. Ralph Jaramillo  
FileNet

# **EXHIBIT 5**

## **SoCal Gas Approved Will-Serve Letter**



March 8, 2018

KPFF  
700 SOUTH FLOWER STREET SUITE 2100  
LOS ANGELES CA 90017

RE: Will Serve Letter Request for: 1100 SOUTH OLIVE STREET LOS ANGELES CA 90015

To whom it may concern:

Thank you for inquiring about the availability of natural gas service for your project. We are pleased to inform you that Southern California Gas Company (SoCalGas) has facilities in the area where the above named project is being proposed. The service would be in accordance with SoCalGas' policies and extension rules on file with the California Public Utilities Commission (Commission) at the time contractual arrangements are made.

This letter should not be considered a contractual commitment to serve the proposed project, and is only provided for informational purposes only. The availability of natural gas service is based upon natural gas supply conditions and is subject to changes in law or regulation. As a public utility, SoCalGas is under the jurisdiction of the Commission and certain federal regulatory agencies, and gas service will be provided in accordance with the rules and regulations in effect at the time service is provided. Natural gas service is also subject to environmental regulations, which could affect the construction of a main or service line extension (for example, if hazardous wastes were encountered in the process of installing the line). Applicable regulations will be determined once a contract with SoCalGas is executed.

If you need assistance choosing the appropriate gas equipment for your project, or would like to discuss the most effective applications of energy efficiency techniques, please contact our area Service Center at 800-427-2200.

Thank you again for choosing clean, reliable, and safe natural gas, your best energy value.

Sincerely,

Jason P. Jones  
Pipeline Planning Assistant  
SoCalGas-Compton HQ



**APPENDIX K.3**

**Site 2 Resolution and Water Supply Assessment**





RESOLUTION NO. \_\_\_\_\_

BOARD LETTER APPROVAL

A blue ink signature of Richard F. Harasick, consisting of stylized initials and a surname.

**RICHARD F. HARASICK**  
Senior Assistant General Manager  
Water System

A blue ink signature of Martin L. Adams, consisting of stylized initials and a surname.

**MARTIN L. ADAMS**  
General Manager and Chief Engineer

**DATE:** May 5, 2021

**SUBJECT:** Water Supply Assessment – Downtown Los Angeles South Park  
Properties Site 2 Project

**SUMMARY**

The Water Supply Assessment (WSA) is for the Downtown Los Angeles South Park Properties Site 2 Project (Project) located within the City of Los Angeles (City). LADWP staff determined the net additional water demand for the Project is 75 acre-feet per year (AFY) and has concluded that this additional water demand can be accommodated by the City's water supply. The Project's base water demand was further reduced by 55 AFY through implementation of the conservation ordinance and code requirements and an additional 1 AFY through the project implementing additional voluntary conservation measures. The WSA will meet the requirements of California Water Code Sections 10910-10915. The governing body of each public water system is required to make a determination on WSAs for major projects.

City Council approval is not required.

**RECOMMENDATION**

It is recommended that the Board of Water and Power Commissioners (Board) adopt the attached Resolution authorizing the WSA for the Project.

**ALTERNATIVES CONSIDERED**

LADWP is required by state law, as set forth in California Water Code Sections 10910-10915, to prepare this WSA for the Project. There are no other alternatives.

## **FINANCIAL INFORMATION**

MREG 1105 Olive, LLC (Applicant) paid \$17,000 to cover LADWP's expenses for preparation of this WSA.

## **BACKGROUND**

WSAs are prepared in conformance with California law and the City ordinances to ensure proposed projects that utilize water resources are consistent with the City's conservation goals and long-term water supply availability, as detailed in LADWP's 2015 Urban Water Management Plan (UWMP). The UWMP is the water supply planning document for the City and is prepared by LADWP.

Each WSA performed by LADWP is carefully evaluated within the context of LADWP's most recent UWMP and current conditions, such as the federal and state restrictions on State Water Project (SWP) and Central Valley Project pumping from the Sacramento-San Joaquin River Delta (Delta). The Metropolitan Water District of Southern California (MWD), from whom the City purchases its SWP and Colorado River water supplies, has also been actively developing plans and making efforts to provide additional water supply reliability for the entire Southern California region. LADWP coordinates closely with MWD to ensure implementation of MWD's water resource development plans.

Part of MWD's planning effort is the update and implementation of its Integrated Water Resources Plan (IRP) and its UWMP, which are designed to address potential reductions in water supply due to the effects of variable hydrologic conditions and regulatory restrictions on exports from the Delta and Colorado River. The 2015 IRP update resulted in the development of the following six main findings and conclusions:

1. Action is needed to minimize unacceptable level of shortage allocation frequency in the future.
2. Maintain Colorado River supplies.
3. Stabilize SWP supplies.
4. Develop/protect local supplies and water conservation.
5. Maximize effectiveness of storage and transfers.
6. Continue with adaptive management approach.

The UWMP contains a water shortage contingency plan for multi-year dry hydrological periods. This water shortage contingency plan was implemented on June 1, 2009, when the Board adopted Shortage Year Rates and the City Council implemented the landscape irrigation and prohibited use restrictions contained in the City's Water

Conservation Ordinance. The UWMP also contained the City's Water Rate Ordinance, adopted June 1995, was last amended by the Board and became effective April 15, 2016. This water rate structure increases the number of tiers from two to four for single-family residential customers. The goal is to incentivize conservation while recovering the higher costs of providing water to high volume users. In keeping with cost of service principles, the incremental pricing for the tiers is based on the cost of water supply and, for the third and fourth tiers, added pumping and storage costs.

### Projected Water Use and Conservation

On November 20, 2020, the Los Angeles Department of City Planning (Planning Department), lead agency for the Project, requested LADWP to perform a WSA. The Project's scope of work includes the development of approximately 0.83 acre within the Central City Community Plan area of the City. The Project's site is generally bounded by 11<sup>th</sup> Street to the north, Olive Street to the east, a commercial parking structure to the south, and an alley (Margo Place) to the west.

The Project will propose a new 51-story mixed use development and remove the existing surface parking lot. It will include 536 residential units with residential amenities. The residential amenities include a swimming pool, fitness space, lounges, and shared office spaces for the resident's use only. The ground floor will include commercial offices and a 4,178 square feet restaurant. Furthermore, the Project will include covered parking, landscaping throughout the building, and a 1,000-ton cooling tower to support the building.

LADWP staff recommended implementation of additional voluntary water conservation measures to maximize the potential water-use efficiency for the Project. The recommended voluntary conservation measures are in addition to those required by the City's current codes and ordinances. Based on LADWP staff recommendations, the Applicant has voluntarily committed to implement additional measures for the entire project. LADWP will request Planning Department to include the implementation of the water conservation commitments as part of their Sustainable Communities Environmental Assessment in accordance with the California Environmental Quality Act approval process for the Project. The Applicant's written commitment of the Project's planned voluntary water conservation measures is attached with the WSA in Appendix B, and summarized as follows:

- Fixtures
  - Showerheads with a flow rate of 1.75 gallons per minute, or less
- Landscape and irrigation
  - Artificial Turf

- California Friendly® plants or native plants
- Drip/ Subsurface Irrigation (Micro-Irrigation)
- Micro-Spray
- Proper Hydro-zoning/Zoned Irrigation (groups plants with similar water requirements together)
- Pool
  - Install a meter on the pool make-up line so water use can be monitored and leaks can be identified and repaired.
  - Leak Detection System for swimming pools and Jacuzzi.
  - Pool splash troughs around the perimeter that drain back into the pool.
  - Pool/Spa recirculating filtration equipment,
  - Water-Saving Pool Filter.
- Utilities
  - Individual metering and billing for water use for every commercial unit.
  - Leak detector at main building water boiler system.

With the addition of these voluntary water conservation measures, which yield additional savings of approximately 1 AFY, the net additional water demand is approximately 75 AFY.

The Applicant has also committed to comply with the City of Los Angeles Low Impact Development Ordinances (City Ordinance Nos. 181899 and 183833) and to implement Best Management Practices (BMPs) that have stormwater recharge or reuse benefits for the entire Project as applicable and feasible. BMPs may include, but are not limited to:

- Pretreatment BMPs – As appropriate, a combination of the following:
  - Catch Basin Insert – a device that can be inserted into an existing catch basin to provide some level of runoff contaminant removal.
  - Downspout Filter – a device that can be inserted into a downspout pipe to provide some level of runoff contaminant removal.
  - Hydrodynamic Separator – a prefabricated in-line chamber which removes debris and pollutants through screening and settlement of influent stormwater.
  - Pre-settling Chamber – a prefabricated in-line chamber which removes debris and pollutants through settlement and controlled discharge.
- Infiltration BMPs – If feasible for the Project
  - Drywell(s) – a vertical system which allows for stormwater infiltration deep beneath proposed foundations/surfaces.
- Capture and Re-use BMPs – If infiltration is considered infeasible

- Cistern – captures stormwater runoff as it comes down through the roof gutter system to offset domestic water demand.

The Planning Department has indicated that the Project conforms with the City's General Plan. The Planning Department has also determined that the Project is consistent with the demographic projections for the City from both the 2012 and 2016 Regional Transportation Plans (RTP) by the Southern California Association of Governments. The City's water demand projection in 2015 UWMP was developed based on the 2012 RTP demographic projection using the 2010 U.S. Census for the City. LADWP used a modified-unit-use approach to develop its service area-wide water demand projections. This methodology does not rely on individual development demands to determine area-wide growth. 2015 UWMP concluded there are adequate water supplies to meet projected water demand through 2040. Therefore, projected water supplies available during normal, single-dry, and multiple-dry water years as included in the 25-year projection of 2015 UWMP are sufficient to meet the projected water demand associated with the Project, in addition to the existing and planned future demand on LADWP.

### **ENVIRONMENTAL DETERMINATION**

Determine item is exempt pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15060(c)(2). In accordance with this section, an activity is not subject to CEQA if it will not result in a direct or reasonably foreseeable indirect physical change in the environment. The Downtown Los Angeles South Park Properties Site 2 Project water supply assessment will not result in any physical change in the environment. Therefore, this activity is not subject to CEQA.

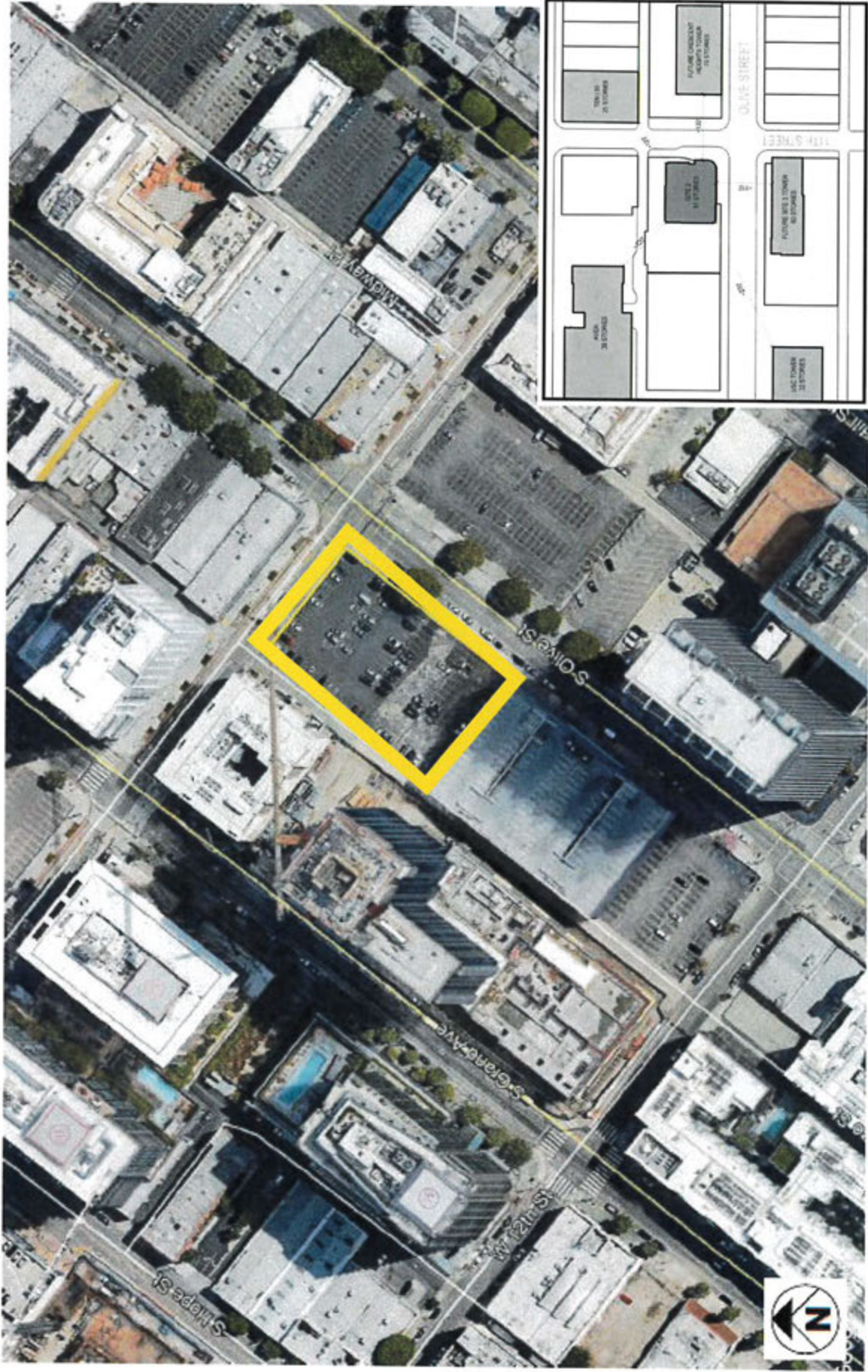
### **CITY ATTORNEY**

The Office of the City Attorney reviewed and approved the Resolution as to form and legality.

### **ATTACHMENTS**

- Map of Proposed Project
- Resolution
- Water Supply Assessment





SOURCE: Google Earth - 2020; Meridian Consultants, LLC - February 2020



Site 2 Location

RESOLUTION NO. \_\_\_\_\_

WHEREAS, Los Angeles Department of Water and Power (LADWP) constitutes a public water system pursuant to California Water Code Section 10912, subdivision (c); and

WHEREAS, the Downtown Los Angeles South Park Properties Site 2 Project (Project) qualifies as a Project under California Water Code Section 10912, subdivision (a)(1); and

WHEREAS, the Project is located in the service area of LADWP's water supply system, and LADWP would serve the area of the Project development; and

WHEREAS, on November 20, 2020, the City of Los Angeles (City) Department of City Planning (Planning Department) requested the LADWP conduct a Water Supply Assessment (WSA) for the Project, and LADWP has prepared a WSA for the Project in compliance with California Water Code (CWC) Sections 10910-10915; and

WHEREAS, the Project would redevelop approximately 0.83 acre within the Central City Community Plan area of the City; and

WHEREAS, the applicant, MREG 1105 Olive, LLC, has agreed to implement additional conservation measures, as described in WSA, that are in addition to those required by law; and

WHEREAS, LADWP staff performed the water demand analysis and determined the net increase in total water demand for the Project is 75 acre-feet per year; and

WHEREAS, the Project is determined by Planning Department to be consistent with the demographic projections for the City from both the 2012 and 2016 Regional Transportation Plans by the Southern California Association of Governments; and

WHEREAS, LADWP anticipates that its projected water supply that is available during normal, single-dry, and multiple-dry water years as included in the 25-year projection contained in its adopted 2015 Urban Water Management Plan can accommodate the projected water demand associated with the Project, in addition to the existing and planned future demands on LADWP; and

WHEREAS, in accordance with CWC Section 10910 (g) (1) the Board of Water and Power Commissioners (Board) has the responsibility for approval and certification of WSAs prepared by LADWP; and the Board has independently reviewed and considered the WSA and documentation making up the administrative record; and

WHEREAS, a publicly noticed Board hearing was held with respect to this item, and the Board considered evidence presented by LADWP's Water Resources Section staff, the staff recommendation to approve the WSA, and other comments from interested parties at the public hearing.

NOW, THEREFORE, BE IT RESOLVED that the Board finds that LADWP can provide sufficient domestic water supplies to the Project area and approves the WSA prepared for the Project, now on file with the Secretary of the Board, and directs that the WSA and a certified copy of Resolution be transmitted to the Planning Department.

BE IT FURTHER RESOLVED that the Board finds that LADWP's total projected water supplies available during normal, single-dry, and multiple-dry water years during a 20-year projection will meet the projected water demands associated with the Project in addition to existing and planned future uses including agricultural and industrial uses.

BE IT FURTHER RESOLVED that the Board has considered the WSA prior to making a decision to approve the WSA, and finds that the WSA is adequate and was prepared in accordance with Water Code Section 10910 (c) (2), and meets the requirements of Water Code Section 10910 (d), (e), (f), and (g).

I HEREBY CERTIFY that the foregoing is a full, true, and correct copy of a Resolution adopted by the Board of Water and Power Commissioners of the City of Los Angeles at its meeting held

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Acting Secretary

APPROVED AS TO FORM AND LEGALITY  
MICHAEL N. FEUER, CITY ATTORNEY

APRIL 29, 2021



BY

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TINA SHIM  
DEPUTY CITY ATTORNEY





## **WATER SUPPLY ASSESSMENT**

### **FOR THE DOWNTOWN LOS ANGELES SOUTH PARK PROPERTIES SITE 2 PROJECT**

Prepared by:  
Water Resources Division

Prepared on  
April 19, 2021

## Table of Contents

Introduction .....	4
Findings.....	5
The Downtown Los Angeles South Park Properties Site 2 Project Description.....	6
The Downtown Los Angeles South Park Properties Site 2 Project Water Demand Estimate .....	7
Water Demand Forecast .....	11
Los Angeles Department of Water and Power – 2015 UWMP .....	12
Near-Term Conservation Strategies.....	13
Long-Term Local Supply Strategies .....	14
1.0 Increase Water Conservation Through Reduction of Outdoor Water Use and New Technology .....	14
2.0 Water Recycling.....	17
3.0 Enhancing Stormwater Capture.....	18
4.0 Accelerating Clean-Up of SFB.....	20
Water Supplies .....	22
1.0 Los Angeles Aqueducts .....	22
2.0 Groundwater .....	24
3.0 Metropolitan Water District of Southern California .....	27
4.0 Secondary Sources and Other Considerations.....	34
Water System Financing Program .....	36
Conclusion .....	37

## References

California Department of Water Resources California's Groundwater Bulletin 118 Update 2003

Upper Los Angeles River Area Watermaster Report for 2017/2018  
Dated December 2019

Los Angeles Department of Water and Power 2015 Urban Water Management Plan

Metropolitan Water District of Southern California Integrated Water Resources Plan 2015 Update

Metropolitan Water District of Southern California 2015 Urban Water Management Water Plan

California Code of Regulations Title 23. Waters, Division 2. Department of Water Resources, Chapter 2.7. Model Water Efficient Landscape Ordinance

City of Los Angeles Department of Public Works Bureau of Sanitation (LASAN) Sewer Generation Rates Table

## Appendix

- A. City of Los Angeles, Department of City Planning letter, Request for Water Supply Assessment, received on November 20, 2020, and Scope Confirmation e-mail received on April 16, 2021
- B. Water Conservation Commitment Letter
- C. Project Location Map
- D. Adjudicated Groundwater Basin Judgments
- E. Water Supply Assessment Provisions – California Water Code Section 10910-10915
- F. MWD of Southern California (Appendix A)
- G. Water Supply Assessment Checklist

## Introduction

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Proposed major projects subject to certain requirements in the California Water Code Sections 10910-10915 require that a city or county identify any public water system that may supply water to the Downtown Los Angeles South Park Properties Site 2 Project (Project) and request the public water system provide a Water Supply Assessment (WSA). The WSA is a determination by the water supplier that the demands associated with the Project were included in its most recently adopted 2015 Urban Water Management Plan (2015 UWMP) showing that there is an adequate 20-year water supply. The UWMP serves as the City of Los Angeles' (City) master plan for reliable water supply and resources management.

The City of Los Angeles Department of City Planning (Planning Department), serving as the lead agency as prescribed by the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.), for the Project, has identified Los Angeles Department of Water and Power (LADWP) as the public water system that will supply water. In response to Planning Department's request for a WSA on November 20, 2020, LADWP has performed the assessment contained herein.

LADWP has supplied the City with a safe and reliable water supply for over a century. Over time, the City's water supplies have evolved from primarily local groundwater to predominantly imported supplies. As of Fiscal Year Ending (FYE) 2020, the City relies on over 85 percent of its water from imported sources. To reduce the City's dependence on purchased imported supplies, LADWP's 2015 UWMP outlines the City's strategy to achieve its goals and policy objectives. In April 2019, LADWP, in conjunction with the City, developed short-term and long-term sustainability targets through LA's Green New Deal (Green New Deal), to form a more reliable and resilient water supply. LADWP is committed to meet all the City's water needs while increasing supply reliability, stabilizing imported water purchases, and increasing locally produced water. For more information on the Green New Deal, it is available for download at [http://plan.lamayor.org/sites/default/files/pLAn\\_2019\\_final.pdf](http://plan.lamayor.org/sites/default/files/pLAn_2019_final.pdf).

The WSA is prepared to meet the applicable requirements of state law as set forth in California State Water Code Sections 10910-10915. Significant references and data for this WSA are from the LADWP's 2015 UWMP, adopted by the Board of Water and Power Commissioners (Board) on June 7, 2016. LADWP's 2015 UWMP is incorporated by reference and is available through LADWP's Web site, [www.ladwp.com/uwmp](http://www.ladwp.com/uwmp).



## Findings

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The Project is estimated to increase the total net water demand within the site by 75 acre-feet (AF) annually based on review of information submitted by Planning Department. The total net water demand included additional water use efficiency measures that MREG 1105 Olive, LLC (Applicant) has committed to include in the Project. Therefore, LADWP finds adequate water supplies will be available to meet the total additional water demand of 75 AF annually for the Project. LADWP anticipates the projected water demand from the Project can be met during normal, single-dry, and multiple-dry water years, in addition to the existing and planned future demands on LADWP.

The basis for approving WSAs for developments is LADWP's most recently adopted UWMP. LADWP's water demand forecast, as contained in LADWP's 2015 UWMP, uses long-term demographic projections for population, housing, and employment. The California Urban Water Management Planning Act requires water suppliers to develop a UWMP every five years to identify short-term and long-term water resources management measures to meet growing water demands during normal, single-dry, and multiple-dry years. If the projected water demand associated with the Project was not accounted for in the most recently adopted LADWP 2015 UWMP, WSA must include a discussion with regard to whether LADWP's total projected water supplies available during normal, single-dry, and multiple-dry water years during a 20-year projection will meet the projected water demand associated with the Project, in addition to LADWP's existing and planned future uses.

The City's water demand projection in LADWP's 2015 UWMP was developed based on the 2012 Regional Transportation Plan (RTP) demographic projection by the Southern California Association of Governments (SCAG) using the 2010 United States (U.S.) Census for the City. LADWP's 2015 UWMP identified water supplies to meet projected water demands through 2040. Therefore, the City's water supply projections in LADWP's 2015 UWMP are sufficient to meet the water demand for projects that are determined by the CEQA lead agency to be consistent with the 2012 RTP by SCAG.

The Planning Department has indicated that the Project conforms with the use and intensity of development permitted by the City's General Plan. The Planning Department has also determined that the Project is consistent with the demographic projections for the City from both the 2012 and 2016 RTPs. Based on the information provided by Planning Department, anticipated water demand for the Project is within LADWP's 2015 UWMP's projected water supplies for normal, single-dry, and multiple-dry years through the year 2040 and is within the LADWP 2015 UWMP's 25-year water demand growth projection. This WSA can be approved based on the fact that the Project's water demand falls within the LADWP 2015 UWMP's projected increase in citywide water demands, while anticipating multi-dry year water supply conditions occurring at the same time. Additionally, LADWP's 2015 UWMP contains a water

shortage contingency plan for multi-year dry hydrological periods and the City's Water Rate Ordinance. This water shortage contingency plan was based on the City's Emergency Water Conservation Plan (Conservation Ordinance), which was implemented on June 1, 2009, when the Board adopted Shortage Year Rates, and the City Council implemented the landscape irrigation and prohibited use restrictions contained in the City's Water Conservation Ordinance. This water shortage contingency plan helps to ensure sufficient use of water during multi-year dry periods. The City's Water Rate Ordinance, originally adopted in June 1995, was last amended by the Board, and became effective April 15, 2016. The revised rate ordinance restructured the rates to help further promote conservation, which is reflected in the 2015 UWMP's 25-year water demand projections. For example, single family rates switched to a four-tier system that sends a strong price signal to deter against wasteful water use. The Board finds that the price signals contained in the Water Rate Ordinance encourage conservation and support further reduction in City-wide demand. Past and current implementation of water rate price signals and higher ordinance phases have resulted in reducing the total customer water usage.

This WSA approval addresses the City's long-term water supply and demand forecasts to accommodate the Project. It is not an approval for water service connection. A separate request shall be made to LADWP requesting an evaluation of water service connection for the Project.

## **The Downtown Los Angeles South Park Properties Site 2 Project Description**

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The following project information was obtained from Planning Department's WSA Request Letter and the scope confirmation e-mail (Appendix A):

Project Name: Downtown Los Angeles South Park Properties Site 2  
Lead Agency: Planning Department  
Community Plan: Central City Community Plan

The Project will develop an approximately 0.83-acre site within the Central City Community Plan area of the City for residential and commercial land use. The Project site is generally bounded by 11<sup>th</sup> Street to the north, Olive Street to the east, a commercial parking structure to the south, and an alley (Margo Place) to the west. The Project site currently contains a surface parking lot and does not contain any vegetation or landscaping.



The Project is proposing a 51-story mixed use development. It will include 536 residential units. There will be residential amenities such as a swimming pool, fitness space, lounges, and shared office spaces for the resident's use only. The ground floor will contain commercial offices and a 4,178 square feet (SF) restaurant. The Project will also include covered parking, a 1,000 ton cooling tower, and landscaping on the ground floor and throughout the building. LADWP staff performed the water demand analysis and determined the net increase in water demand for the Project is 75 AFY.

A subsequent revised WSA may be required if one or more of the following occurs:

1. Changes in the Project result in a substantial increase in water demand for the Project.
2. Changes in the circumstances or conditions substantially affecting the ability of LADWP to provide a sufficient supply of water for the Project.
3. Significant new information becomes available which was not known and could not have been known at the time when WSA was prepared.

If deemed necessary, the Applicant may request a revised WSA through the CEQA lead agency.

## **The Downtown Los Angeles South Park Properties Site 2 Project Water Demand Estimate**

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Projected total net water demand increase for the Project is estimated to be 75 AF annually. This amount takes into account savings due to water conservation ordinances which are approximately 55 AFY, and savings due to additional voluntary conservation measures which are approximately 1 AFY.

In evaluating the Project's water demand, the Sewer Generation Factors (SGF), published by the City of Los Angeles Department of Public Works Bureau of Sanitation (LASAN) in 2012, are applied to the Project scope for calculating indoor water use. SGFs are factors of how much wastewater is generated (gallons per day) per unit (per sf, per dwelling unit, per seat, etc.). LASAN publishes a list of SGFs for approximately 175 different building use types in the City, and updates factors to make necessary adjustments due to water conservation efforts and increased efficiencies in new appliances and plumbing fixtures. Outdoor landscape water demand is estimated per California Code of Regulations Title 23 Division 2 Chapter 2.7 Model Water Efficient Landscape Ordinance. Historical billing records are used to establish existing baseline water demand on the property. LADWP also encouraged the Project to implement additional water conservation measures above and beyond the current water conservation ordinance requirements.

The net increase in water demand, which is the projected additional water demand of the Project, is calculated by subtracting the existing baseline water demand and water saving amount from the total proposed water demand.

Table I shows a breakdown of the existing and proposed new types of uses for the Project, and the corresponding estimated volume of water usage with the implementation of the required and voluntary conservation measures for this project. Types of use were derived from the WSA Request Letter and the scope confirmation e-mail in Appendix A.



Table II shows an estimation of the total volume of additional water conservation based on conservation measures the Applicant has committed for the Project (Appendix B).

TABLE I Downtown Los Angeles South Park Properties - Site 2 Calculated Total Additional Water Demand							
Existing Use to be Removed <sup>1</sup>	Quantity	Unit	Water Use Factor <sup>2</sup> (gpd/unit)			Existing Water Use to be Removed (gpd) (af/y)	
Surface Parking Lot <sup>3</sup>	36,120	sf	0			0	
<b>Existing to be Removed Total</b>						<b>0</b>	<b>0.00</b>
Proposed Use <sup>4</sup>	Quantity	Unit	Water Use Factor <sup>2</sup> (gpd/unit)	Base Demand (gpd)	Required Ordinances Water Savings <sup>4</sup> (gpd)	Proposed Water Demand (gpd) (af/y)	
Residential: Studios	89	du	75.00	6,675			
Residential: 1 bd	266	du	110.00	29,260			
Residential: 1 bd Apartment with den	2	du	110.00	220			
Residential: 2 bd Apartment	176	du	150.00	26,400			
Residential: 3 bd	3	du	190.00	570			
Base Demand Adjustment (Residential Units) <sup>5</sup>				6,987			
<b>Residential Units Total</b>	<b>536</b>	<b>du</b>		<b>70,112</b>	<b>12,632</b>	<b>57,480</b>	<b>64.39</b>
Synthetic Turf Areas (lvl 5 outdoor dog run, lvl 6 pool and fitness area)	1,600	sf		0.02			
Dog Lounge (lvl 5) <sup>6</sup>	1,749	sf	0.18	319			
Fitness (lvl 5, 6)	3,518	sf	0.22	762			
Office (lvl 5 "co-working")	2,860	sf	0.06	172			
Lounge (lvl 6, 21,41,51) <sup>7</sup>	277	seats	12.86	3,561			
Pool and Spa (lvl 6)	1,632	sf		156			
Office (lvl 1)	1,470	sf	0.12	176			
Restaurant-seating area (lvl 1) <sup>8</sup>	139	seats	30.000	4,178			
Restaurant- kitchen/storage/etc (lvl 1) <sup>8</sup>	2,089	sf	0.300	627			
<b>Residential Amenities/Commercial Total</b>				<b>9,950</b>	<b>1,458</b>	<b>8,492</b>	<b>9.51</b>
<b>Landscaping<sup>9</sup></b>	<b>8,612</b>	<b>sf</b>		<b>817</b>	<b>380</b>	<b>437</b>	<b>0.49</b>
<b>Covered Parking<sup>10</sup></b>	<b>258,647</b>	<b>sf</b>	<b>0.02</b>	<b>170</b>	<b>0</b>	<b>170</b>	<b>0.19</b>
<b>Cooling Tower Total</b>	<b>1,000</b>	<b>ton</b>	<b>35.64</b>	<b>35,640</b>	<b>34,789</b>	<b>851</b>	<b>0.95</b>
<b>Proposed Subtotal</b>				<b>116,689</b>	<b>49,259</b>	<b>67,430</b>	<b>75.53</b>
Less Existing to be Removed Total						0	0.00
Less Additional Conservation <sup>11</sup>						357	0.40
<b>Net Additional Water Demand</b>						<b>67,073 gpd</b>	<b>75.1 af/y</b>

<sup>1</sup> Provided by City of Los Angeles Department of City Planning in the Request for Water Supply Assessment letter and Scope Confirmation e-mail. See Appendix A. Proposed Uses that do not have additional water demands are not shown here.

<sup>2</sup> Indoor water uses are based on 2012 City of Los Angeles Department of Public Works, Bureau of Sanitation Sewer Generation Rates table available at <http://www.lacitysan.org/fmd/pdf/sfcfeerates.pdf>.

<sup>3</sup> The existing restaurant was demolished in 2015 per LADBS Demolition Permit #15019-10000-01023 (Area = 15,047 SF); therefore, existing use for the last 5 years is a surface parking lot with no water demand.

<sup>4</sup> The proposed development land uses will conform to City of Los Angeles Ordinance No. 186488, 184248, 2020 Los Angeles Plumbing Code, and 2020 Los Angeles Green Building Code.

<sup>5</sup> Base Demand Adjustment is the estimated savings due to Ordinance No. 180822 accounted for in the current version of Bureau of Sanitation Sewer Generation Rates.

<sup>6</sup> For a conservative estimate, the dog lounge is assumed to have a water demand similar to beauty parlor.

<sup>7</sup> For a conservative estimate, only lounges containing plumbing fixtures will have a water demand.

<sup>8</sup> Restaurant space. Half the total area (4178 SF) is assumed for dining and the other half is kitchen/storage area.

<sup>9</sup> Landscaping water use is estimated per California Code of Regulations Title 23, Division 2, Chapter 2.7, Model Water Efficient Landscape Ordinance.

<sup>10</sup> Auto parking water uses are based on City of Los Angeles Department of Public Works, Bureau of Sanitation Sewer Generation Rates table, and 12 times/year cleaning assumption.

<sup>11</sup> Water conservation due to additional conservation commitments agreed by the Applicant. See Table II.

**Abbreviations:** sf - square feet du - dwelling unit gpd - gallons per day af/y - acre feet per year

<b>TABLE II</b>					
<b>Downtown Los Angeles South Park Properties Site 2</b>					
<b>Estimated Additional Water Conservation</b>					
<b>Conservation Measures<sup>1</sup></b>	<b>Quantity<sup>2</sup></b>	<b>Units</b>	<b>Water Saving Factor<sup>3</sup></b> (gpd/unit)	<b>Water Saved</b>	
				<b>(gpd)</b>	<b>(af/y)</b>
Showerhead - Residential: studio apartment	89	du	0.27	24	0.03
Showerhead - Residential: 1 bd Apartment	266	du	0.27	70	0.08
Showerhead - Residential: 1 bd plus den Apartment	2	du	0.27	1	0.00
Showerhead - Residential: 2 bd Apartment	176	du	0.66	117	0.13
Showerhead - Residential: 3 bd Apartment	3	du	1.06	3	0.00
<b>Residential Unit Conservation Total</b>				<b>215</b>	<b>0.24</b>
Showerhead	6	ea	1.25	8	0.01
<b>Amenities/Commercial Total</b>				<b>8</b>	<b>0.01</b>
<b>Landscaping Total Conservation<sup>4</sup></b>				<b>134</b>	<b>0.15</b>
<b>Total Additional Water Conserved</b>				<b>357</b>	<b>1.00</b>

<sup>1</sup> Water conservation measures agreed to by the Applicant. See Appendix B.

<sup>2</sup> Plumbing fixture quantities were provided by the Applicant.

<sup>3</sup> Based on LADWP estimates.

<sup>4</sup> Landscaping water conservation is estimated per California Code of Regulations Title 23, Division 2, Chapter 2.7, Model Water Efficient Landscape Ordinance.

## Water Demand Forecast

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LADWP's 2015 UWMP projects yearly water demand to reach 675,700 AF by fiscal-year-ending (FYE) 2040 with passive water conservation, or an increase of 31.6 percent from FYE 2015 actual water demand. Water demand projections in five-year increments through FYE 2040 are available in LADWP's 2015 UWMP for each of the major customer classes: single-family, multifamily, commercial/governmental, and industrial. Demographic data from the Southern California Association of Government's 2012 RTP, as well as billing data for each major customer class, weather, conservation, price of water, personal income, family size, economy, and dry period conservation effect were factors used in forecasting future water demand growth.

LADWP's 2015 UWMP used a modified-unit-use approach to develop its service area-wide water demand projections. This methodology does not rely on individual development demands to determine area-wide growth, because such an inventory in LADWP service area in the next 25 years is only a subset of the total development potential. Therefore, the growth or decline in population, housing units, and employment for the entire service area was considered in developing long-term water projections for the City through FYE 2040. The historical water demand for a unit of customer class, such as gallons-per-day per single family, is modified to account for future changes, including water conservation, and applied to the 2012 RTP demographic projections by SCAG. This modified-unit-use-approach has proven to be a reliable forecast historically, when compared with actual consumption, excluding the effects of conservation.

Collaboration between LADWP and Metropolitan Water District of Southern California (MWD) is critical in ensuring that the City's anticipated water demands are incorporated into the development of MWD's long-term Integrated Water Resources Plan (MWD's IRP). MWD's IRP is a continuous regional effort to develop regional water resources involving all of MWD's member agencies, which includes the City. Successful implementation of MWD's IRP has resulted in reliable supplemental water supplies for the City from MWD.



## Los Angeles Department of Water and Power – 2015 UWMP

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The California Urban Water Management Planning Act (first effective on January 1, 1984) requires every urban water supplier prepare and adopt a UWMP every five years. The main goals of UWMPs are to forecast future water demands and water supplies under average and dry year conditions, identify future water supply projects such as recycled water, provide a summary of water conservation Best Management Practices (BMP), and provide a single and multi-dry year management strategy.<sup>1</sup>

LADWP's 2015 UWMP, available for reference through [www.ladwp.com/uwmp](http://www.ladwp.com/uwmp), serves two purposes: (1) achieve full compliance with requirements of California's Urban Water Management Planning Act; and (2) serve as a master plan for water supply and resources management consistent with the City's goals and policy objectives.<sup>2</sup>

A number of new requirements have been added to the Urban Water Management Planning Act and incorporated in LADWP's 2015 UWMP, including: an extension of the submittal deadline from December 31, 2015 to July 1, 2016, a narrative description of water demand measures implemented over the past five years and future measures planned to meet 20 percent demand reduction targets by 2020, implementation of a standard methodology for calculating system water loss, a mandatory electronic filing of UWMPs, a voluntary reporting of passive conservation savings, energy intensity, and climate change, and a requirement to analyze and define water features that are artificially supplied with water. Currently, LADWP has implemented a Water Loss Task Force to develop strategies to reduce water losses and increase efficiencies in the water distribution system. LADWP continues to track the energy intensity of water, update its climate change study, and maintain a daily per capita water use below the 2020 target of 142 gallons per capita per day (gpcd). The 142 gpcd target meets the Senate Bill X7-7 requirement to achieve 20 percent reduction in urban per capita water use by December 31, 2020.

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<sup>1</sup> *City of Los Angeles Department of Water and Power 2015 Urban Water Management Plan*, at ES-2.

<sup>2</sup> *Id.* at ES-2.

## Near-Term Conservation Strategies

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**Enforcing prohibited uses of water.** Prohibited uses of water are intended to eliminate waste and increase awareness of the need to conserve water. In effect at all times, prohibited uses have been in place since the early 1990s. Under enforcement, failure to comply would be subject to penalties, which can range from a written warning for a first violation to monetary fines and water service shutoff for continued non-compliance.

**Prohibited uses of water.** The City's Emergency Water Conservation Plan (Conservation Ordinance), Ordinance Nos. 181288, 183608, and 184250, prohibits uses of water, sets certain water conservation requirements, and contains phases of conservation depending on the severity of water shortages. The Conservation Ordinance, last updated in May 2016, was developed for the City to implement water demand management measures in case of a water supply shortage and to respond to ongoing dry conditions. Some of the prohibited uses in effect at all times (Phase I) include<sup>3</sup>:

- Outdoor irrigation between the hours of 9 a.m. to 4 p.m.
- Outdoor irrigation during and 48 hours after rain events

Currently, LADWP is in Phase II of the Conservation Ordinance. All prohibited uses in Phase I apply to Phase II. In addition, prohibited uses in Phase II include:

- Outdoor irrigation is restricted to three days a week with different watering days assigned to odd-numbered and even-numbered street addresses.

For a full list of Conservation Ordinance Phases and prohibited uses, please refer to LADWP's 2015 UWMP.

On January 17, 2014, with California facing water shortfalls in the driest year in recorded state history, Governor Brown proclaimed a Drought State of Emergency. Responding to the executive order, in 2015, SWRCB imposed mandatory cutbacks ranging from four percent to 36 percent. LADWP was required to reduce its water use by 16 percent compared to the 2013 levels. LADWP met the state mandated reduction goal and saved 16.1 percent between June 2015 and May 2016.

On October 14, 2014, Mayor Garcetti issued Executive Directive No. 5 (ED5) to set accelerated short-term conservation targets for the City to address the dry conditions including per capita water use reduction goal of 20 percent by 2017. On January 1, 2017, the City was able to meet the short-term target of 20 percent reduction through dry period response measures that reduced per capita water use to 104 gallons per day. By April 7, 2017, Governor Brown issued Executive Order B-40-17 formally

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<sup>3</sup> *Id.* at 3-11.



ending the emergency. While this extraordinary achievement will have lasting effects on the City's water use efficiency, LADWP continues to work together with residents and businesses to achieve additional permanent conservation savings and further reduce per capita water use.

**Extending outreach efforts.** Over the last several years, LADWP has expanded conservation outreach and educational efforts. Some activities to promote conservation include: increased communication with ratepayers through Twitter, Facebook, newspapers, radio, television, bus benches/shelters, and movie theaters, among other types of media; outreach to Homeowner Associations and Neighborhood Councils; distribution of hotel towel door hangers and restaurant table tent cards; and ramping up marketing of expanded water conservation incentive and rebate programs.

On April 9, 2015, the "Save the Drop" Water Conservation Outreach Campaign was launched. This campaign is a partnership between LADWP and the Mayor's Office. Outreach materials include public service announcements, radio spots, event handouts, and signage on the sides of LASAN trucks. The campaign has partnered with celebrities for public service announcements airing on television, cinema, and radio.

## **Long-Term Local Supply Strategies**

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On May 31, 2018, Governor Brown signed two long-term water-use efficiency bills: Assembly Bill 1668 and Senate Bill 606. These bills are designed to help the State better prepare for dry periods and climate change. They require that until January 1, 2025, the indoor residential use will reduce to 55 gpcd, 52.5 gpcd from January 1, 2025 to January 1, 2020, and 50 gpcd beginning January 1, 2030. The California State Water Resources Control Board (Water Board) and Department of Water Resources (DWR) may provide a recommendation to change these standards by 2021.

While the State has these set goals, LADWP has and continues to implement various long-term strategies to develop and provide resilient and sustainable local water supplies for the City.

### **1.0 Increase Water Conservation Through Reduction of Outdoor Water Use and New Technology**

#### Goal

Increase water conservation savings to improve water supply reliability while reducing costs, by cutting back on outdoor water use, expanding rebates and incentives, improving water use efficiency at public facilities, and enhancing savings through review of new developments.

## Action Plan

**Conservation Rebates and Incentives.** LADWP is continuing to expand rebates and incentives for homeowners and business owners to encourage them to purchase water-efficient technology. Rebate and incentive programs include the following: Commercial Rebate Program, Residential Rebate Program, Direct Install Partnership Program, and Technical Assistance Program. For a full list of LADWP's rebate programs, please refer to [www.ladwp.com](http://www.ladwp.com).

Some highlights from the list of LADWP's numerous water conservation accomplishments are:

- LADWP's Water Conservation Program has achieved a total cumulative hardware water savings of over 150,000 AFY as of FYE 2020, through installation of water efficient devices subsidized by rebates and incentives.
- Water conservation achievements have helped keep water usage lower than the 1970s average water usage despite a population increase of over one million people.
- Turf Removal – Since FYE 2010, LADWP has rebated over 50 million square feet of turf replacements, saving over 2.3 billion gallons of water per year.

**Enhancing Conservation through New Developments.** LADWP continues to work with the City's Green Building Team to pursue desired changes in local codes and standards to promote water efficiency in new construction projects and major building renovations. The most updated revisions to local codes are 2020 Los Angeles Plumbing Code and 2020 Los Angeles Green Building Code, effective January 1, 2020. On April 8, 2015, the California Energy Commission adopted new efficiency standards for toilets, faucets and other appliances effective January 1, 2016. Also, on July 15, 2015, in response to Governor Brown's Executive Order B-29-15, the California Water Commission approved the revised Model Water Efficient Landscape Ordinance, which reduces the maximum amount of water allowed from the 2009 version of the ordinance. Also, Ordinance No. 184248, *Green Building Codes Revision, Use of Greywater Systems, Water Conservation Measures*, became effective June 6, 2016, and mandates a number of new fixture requirements and methods of construction for plumbing and irrigation systems. California Plumbing Code, Los Angeles City Plumbing Code and amending ordinances apply to all newly constructed buildings, additions and alterations whenever new fixtures are installed in existing buildings. California Building Code, the LA Green Building Code and the amending ordinances also apply to new construction projects, but are limited to additions and alterations that exceed the Building Code's valuation or increase the building's conditioned volume.

In addition, the City adopted Ordinance No. 181899, also known as the "Low Impact Development" Ordinance, and Ordinance No. 183833, entitled "Stormwater and Urban Runoff Pollution Control." The purpose of these Ordinances includes rainwater harvesting and stormwater runoff management, water conservation, and recycled water



reuse and gray water use. Ordinance No. 181899 was effective as of November 14, 2011, and Ordinance No. 183833 was effective October 3, 2015.

**Future Programs<sup>4</sup>.** In December 2014, LADWP started its Home Water Use Report Pilot Study, which provided 73,000 single family residential customers with bi-monthly home water use reports on their water usage, statistics on how they compare to similar households, customized water saving tips and rebate recommendations. In addition to the bimonthly home water reports, the recipients also have access to online historical water use, water use disaggregation estimates, and leak detection modules. LADWP plans to expand the availability of home water use reports to the entire single-family residential sector by mid-2021.

LADWP soft launched the Turf Replacement Design Service in March 2021 to provide customers interested in seeking a turf replacement rebate with free customized landscape design plans for a sustainable, low water use garden. Additionally, LADWP intends to resume Hands on Workshops throughout the service area in Fall 2021. Attendees participate in a landscape transformation at a residential home, learn how to remove turf, sheet mulch, grade for rainwater capture and install water efficient irrigation.

**LADWP Water Conservation Potential Study<sup>5</sup>.** In Fall 2017, LADWP completed the Water Conservation Potential Study (WCPS), which is one of the most comprehensive assessments of the potential for future water conservation ever taken by a municipal water utility. The WCPS conducted detailed single-family and multifamily surveys, completed comprehensive onsite audits of City-owned facilities, and developed a sophisticated water conservation model to project future conservation potential. The WCPS determined that approximately 140,000 AFY in additional water conservation potential is achievable by FYE 2035, and meeting the City's aggressive 2025 and 2035 conservation goals will require tapping into most of the remaining conservation potential in the City.

Going forward, LADWP will use the WCPS findings and conservation model to develop a balanced conservation plan that achieves the City's long-term conservation goals. Meeting the goals will require a combination of increased funding for LADWP's conservation and water use efficiency programs and continued commitment from LADWP customers to make conservation a way of life for the City. The WCPS findings show that a large portion of the remaining conservation potential will come from passive water savings through customers' actions to comply with all City conservation codes and ordinances and finding additional opportunities to improve water efficiency for their residential or commercial properties.

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<sup>4</sup> *Id.* at 3-33.

<sup>5</sup> *Id.* at 3-34.



## 2.0 Water Recycling

LADWP's 2015 UWMP set a target of delivering 75,400 AFY of recycled water by 2040 to off-set imported water.<sup>6</sup> Some of the examples of the steps the City is taking in order to achieve this goal are listed below. There are other projects not listed below that will also contribute to recycled water use in the City's service area.

**Recycled Water Master Planning (RWMP).** In 2012, LADWP completed a three-year RWMP. RWMP documents guide near-term recycled water planning through 2035, as well as long-term recycled water planning for up to 50 years beyond the 2035 horizon. RWMP documents include an evaluation of recycling alternatives that integrate two strategies to increase recycling: Groundwater Replenishment (GWR), and non-potable reuse (NPR). The RWMP set goals for the GWR Project to replenish San Fernando Basin (SFB) with up to 30,000 AFY of recycled water, and for NPR projects to increase NPR recycled water use to 45,400 AFY by 2040.

**GWR Project.** The GWR Project is in the Planning phase. The Environmental Impact Report was certified in December 2016 by the Board of Water and Power Commissioners. The GWR Project is transitioning to a phased approach. The Initial Phase of the project will deliver up to 3,500 AFY of recycled water for indirect potable reuse in the San Fernando Valley by the end of 2021.

**The Machado Lake Pipeline Project (MLPP).** MLPP is a part of a joint agency project between LASAN, Los Angeles Bureau of Engineering, and LADWP to serve the Los Angeles Harbor area customers up to an additional 6 million gallons per day of advanced treated recycled water from an expanded Terminal Island Treatment Plant (TITP). The MLPP will construct 8,800 linear feet of 24-inch ductile iron pipeline that connects two segments of existing pipeline infrastructure, thus creating a looped pipeline service system within the Los Angeles Harbor Area. The project is split into two construction phases. Construction of Phase I was completed in late 2020 and Phase II is estimated to be completed by the end of 2021.

**Second Gap Connection Pipeline Project.** This pipeline project is to supply the Los Angeles County Dominguez Gap Seawater Intrusion Barrier (DGB) with a second supply line of advanced treated recycled water from the LASAN Terminal Island Water Reclamation Plant, and will increase service capacity to the DGB from 6 million gallons per day (mgd) up to 9.5 mgd. The pipeline is approximately 3000 linear feet of 24-inch diameter ductile iron pipe. LADWP and the Water Replenishment District of Southern California (WRD) negotiated an agreement that was executed in fall 2020 to construct this service pipeline as a joint agency project. Construction is anticipated to start in mid-2021 with an estimated completion in 2023.

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<sup>6</sup> *Id.* at 4-27.

**Harbor Recycled Water System Potable Backup Project.** The purpose of this project is to maximize the reuse of water from the Terminal Island Water Reclamation Plant by increasing the reliability of the Harbor Recycled Water System. This project will provide the Harbor Recycled Water System with a potable water backup supply capacity of 14.4 million gallon per day by constructing a 250 foot, 24-inch connection between a 36-inch steel pipe in LADWP's 320-foot potable Service Zone and a 24-inch ductile iron pipe in the Harbor Recycled Water System. LADWP and WRD negotiated an agreement that was executed in fall 2020 to construct this project as a joint agency project. Design is anticipated to start in early 2021 and construction is scheduled to start in early 2022. The estimated in-service date is in late 2024.

For more information on LADWP's existing and planned recycled water pipelines and projects, please see Recycled Water Annual Report available at the following link: [www.ladwp.com/recycledwaterreport](http://www.ladwp.com/recycledwaterreport).

### **3.0 Enhancing Stormwater Capture**

Stormwater runoff from urban areas is an underutilized resource. Within the City, the majority of stormwater runoff is directed to storm drains and ultimately channeled into the ocean. Unused stormwater reaching the ocean carries with it many pollutants that are harmful to marine life. In addition, local groundwater aquifers that should be replenished by stormwater are receiving less recharge than in the past due to increased urbanization. Urbanization has increased the City's hardscape, which has resulted in less infiltration of stormwater and a decline in groundwater elevations.

LADWP's Stormwater Capture Master Plan (SCMP), which was completed in August 2015, comprehensively evaluated stormwater capture potential within the City. The goals of the SCMP are to quantify stormwater capture potential and identify new projects, programs, and policies to significantly increase stormwater capture for water supply within the 20-year planning period. Achieving these goals, will help LADWP achieve its long-term strategy of enhancing local water supply through stormwater capture.

Through intensive implementation of both centralized projects and distributed programs, SCMP provides a strategy to achieve an annual average capture of 132,000 to 178,000 AFY by 2035, which includes the 2015 UWMP baseline capture of 64,000 AFY. These projects include stormwater captured through infiltration type projects and programs that recharge aquifers as well as direct use programs that offset potable water demands, though the bulk of the capture is achieved through infiltration.

LADWP's 2015 UWMP projects that there will be a minimum of 15,000 AFY of increased groundwater pumping in SFB due to water supply augmentation through centralized stormwater infiltration by year 2040. Anticipating that stored groundwater will rebound in response to enhanced groundwater replenishment, LADWP will work with the Upper Los Angeles River Area Watermaster to continue observing actual water



levels and re-evaluate basin safe yield to allow additional increases in groundwater production over time as SFB elevations rebound.<sup>7</sup>

The San Fernando Valley spreading facilities are effective at capturing stormwater flowing down the tributaries; however, they are incapable of capturing significant portions of flow during wet years. Weather patterns in Los Angeles are highly variable, with many periods of dry years and wet years. Some climate studies predict that these patterns may become extreme in the future.

LADWP is currently partnering with other government and non-governmental agencies in various stormwater capture projects that include the following:

#### **Completed Distributed Projects**

LADWP's already implemented distributed projects that have increased the amount of stormwater captured by 557 AFY during an average rainfall year. The following distributed projects were implemented within the last 5 years:

- Ben and Victory Green Stormwater Infrastructure
- Bradley Green Alley Project
- Great Street – Van Nuys Boulevard Project
- Laurel Canyon Green Street
- LAUSD Conserving for Our Kids Program
- Sun Valley Economic Development Administration Public Improvement Project

#### **Future Centralized Projects**

By 2024, the following centralized projects are expected to be implemented that will provide an estimated 16,300 AFY of increased stormwater capture annually during an average rainfall year:

- Bull Creek Pipeline
- Pacoima Spreading Grounds Upgrade
- Tujunga Spreading Grounds Upgrade

#### **Current/Future Distributed Projects**

The following distributed projects are expected to be implemented in the next three years that will provide an estimated 540 AFY of increased stormwater capture annually during an average rainfall year:

- Agnes and Vanowen Stormwater Capture Project
- Burbank Boulevard BMP Capture Project
- Ben and Victory Stormwater Capture Project
- Glenoaks and Filmore Stormwater Capture Project

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<sup>7</sup> *City of Los Angeles Department of Water and Power 2015 Urban Water Management Plan, at 7-29.*

- Glenoaks-Nettleton Stormwater Infiltration Project
- Great Street – Lankershim Boulevard Project
- Victory and Goodland Stormwater Capture Project

LADWP's current effort also includes the Stormwater Capture Parks Program. By 2026, the following projects are expected to be implemented that will provide an estimated 3,090 AFY of increased stormwater capture annually during an average rainfall year:

- Alexandria Park Stormwater Capture Project
- David M. Gonzales Recreation Center Stormwater Capture Project
- Fernangeles Park Stormwater Capture Project
- North Hollywood Park Stormwater Capture Project
- Strathern Park North Stormwater Capture Project
- Valley Plaza Park North Stormwater Capture Project
- Valley Plaza Park South Stormwater Capture Project
- Valley Village Park Stormwater Capture Project
- Whitsett Fields Park North Stormwater Capture Project

Additional information regarding stormwater capture projects can be found in LADWP's Stormwater Capture Master Plan (2015) and Urban Water Management Plan (2015).

#### **4.0 Accelerating Clean-Up of SFB**

The SFB is an aquifer that can provide sufficient drinking water to over 800,000 residents within the City. However, LADWP groundwater production wells in SFB have been impacted by contamination caused by improper handling and disposal of hazardous chemicals from the aircraft manufacturing industry and other, commercial activities dating back to the 1940s. Resolving the contamination problems and restoring the beneficial use of the SFB will help protect public health and the environment, and to recover LADWP's historical groundwater supply and valuable local water resource.

Since the 1980 discovery of volatile organic compound (VOC) contamination of groundwater in SFB, LADWP has been working with government agencies to contain and remediate man-made contaminants in SFB. Chlorinated solvents such as trichloroethylene (TCE), perchloroethylene (PCE) and carbon tetrachloride account for the majority of this groundwater contamination.

From 2009 to 2015<sup>8</sup>, LADWP completed an \$11.5 million, six-year study and development of a comprehensive remediation and cleanup strategy for all groundwater basin contamination in SFB.

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<sup>8</sup> *Id.* at 6-9.



### ***Development of State-of-the-Art Groundwater Basin Remediation Facilities***

- Based on the available groundwater quality information, a groundwater basin remediation program consisting of centralized as well as localized/well-head remediation facilities will be needed for public and environmental benefits as well as to prevent further losses to the beneficial use of groundwater.
- Design and construction of the groundwater basin remediation facilities is estimated to cost approximately \$600 million, and operation and maintenance is estimated to cost an additional \$50 million per year.

### **Groundwater and Treatment System Monitoring**

- In order to fully characterize SFB groundwater quality as required by SWRCB Board's Division of Drinking Water guidelines and policies, LADWP has drilled 26 new monitoring wells in SFB to fill in data gaps and utilized a network of over 70 existing monitoring and production wells.
- Cost to install the monitoring wells is approximately \$22 million.

With completion of SFB groundwater characterization, LADWP is proceeding with the necessary environmental reviews, design, permitting, construction, and start-up of the groundwater basin remediation program to effectively clean and remove contaminants from SFB.

The current groundwater remediation facilities in operation are:

- ***NHOU:*** The NHOU began operations in the 1980s to treat 4.5 cfs of contaminated groundwater; however, changing groundwater conditions limited the ability of the remedy to contain the VOC plume. Implementation of a Second Interim Remedy is currently in progress to contain concentrated areas of the plume, but will not address contamination that has migrated to other well fields.
- ***Liquid-Phase GAC Pilot Treatment Plant at Tujunga Wellfield:*** The Liquid-Phase GAC Pilot Treatment Plant removes VOCs from two of the twelve production wells in the Tujunga Wellfield at 8,000 gpm, and treats the extracted groundwater for potable use. This pilot facility is a joint project with MWD to demonstrate the effectiveness of utilizing certain liquid phase GAC media for removal of VOCs from the groundwater.
- ***Pollock Wells Treatment Plant:*** The plant provides four liquid-phase GAC vessels to remove VOC contamination from two groundwater wellheads. However, LADWP has recently identified 1,4-dioxane and hexavalent chromium as emerging contaminants that may impair the operation of the Pollock Wells Treatment Plant.

These facilities will work with the new remediation facilities to clean up the majority of contaminants impacting LADWP's highest producing wellfields, including TCE, PCE, and 1,4-dioxane. The proposed centralized and localized facilities are:

- North Hollywood West Wellhead Treatment – Operation expected by 2022
- North Hollywood Central Treatment – Operation expected by 2023
- Tujunga Central Treatment – Operation expected by 2023

The overall purpose of the San Fernando Groundwater Basin Remediation Project is to restore and protect the full beneficial use of the San Fernando Groundwater Basin as a source of water consistent with LADWP's long-term water rights and historic groundwater use.

More information about LADWP's SFB Groundwater Remediation program can be found at [www.ladwp.com/remediation](http://www.ladwp.com/remediation)

## Water Supplies

The Los Angeles Aqueducts (LAA), local groundwater, purchased water from MWD, and recycled water are the primary sources of water supplies for the City. Table III shows LADWP water supplies from FYE 2016 to FYE 2020 from these sources.

**TABLE III**  
**LADWP Water Supply**

FYE	Los Angeles Aqueducts	Local Groundwater	MWD	Recycled Water	Transfer, Spread, Spills, and Storage	Total
2016	57,853	79,056	339,975	9,913	-3,509	490,306
2017	224,724	50,439	216,299	8,032	9,350	490,144
2018	307,671	21,760	182,706	9,778	-200	522,116
2019	312,456	32,233	137,775	7,512	1,710	488,266
2020	292,095	34,363	152,647	9,641	1,155	487,591

Note: Units are in AF.

### 1.0 Los Angeles Aqueducts

Snowmelt runoff from the Eastern Sierra Nevada Mountains is collected and conveyed to the City via Los Angeles Aqueducts (LAA). LAA supplies come primarily from snowmelt and secondarily from groundwater pumping and can fluctuate annually due to the varying hydrologic conditions. Since 1992, LAA supplies have been less than the historical average due to environmental obligations in Mono and Inyo Counties.



Within the Owens Valley, the primary framework that governs LADWP environmental operations is the Long Term Water Agreement (LTWA). The LTWA is a stipulated court order between Inyo County and LADWP, issued in 1991, which established an overall goal for managing groundwater resources within Inyo County. The intent is "to avoid certain described decreases and changes in vegetation, and to cause no significant effect on the environment which cannot be acceptably mitigated, while providing a reliable supply of water for export to Los Angeles and for uses in Inyo County." The LTWA does not impact LADWP's surface water rights, but manages LADWP's groundwater pumping, and groundwater use within Inyo County. The LTWA also requires LADWP to implement and maintain a variety of "Enhancement/Mitigation Projects." Prior to implementation of the LTWA, average water uses and losses in Owens Valley totaled 216,000 AFY. After implementation, these uses and losses increased to 287,000 AFY.

In the Mono Basin, LADWP historically diverted water from four tributary streams of Mono Lake. Between 1971 and 1988, LADWP averaged 83,400 AFY from the Mono Basin. Beginning in 1989, with the issuance of a landmark California Supreme Court case, LADWP began to reduce exports to comply with legal requirements. In 1994, the State Water Resources Control Board (SWRCB) entered Decision 1631, which amended City water right licenses 10191 and 10192 to establish fishery protection flows for streams tributary to Mono Lake, and to protect public trust resources at Mono Lake and in the Mono Basin. Decision 1631 also set limits on LADWP water exports from the Mono Basin, which were set to a range of 0 to 16,000 AFY.

The City's water rights in the Eastern Sierra Nevada are comprised of riparian rights, pre-1914 appropriations, and post-1914 appropriation licenses held on various streams in the Mono Basin and Owens Valley. Riparian rights are for stream flow used on land adjacent to the stream. Appropriations by the City based on post-1914 water rights are made pursuant to licenses issued by the SWRCB. The majority of the City's water rights are pre-1914 water rights established prior to enactment of the State Water Commission Act. The most significant basis for export of surface water from the Eastern Sierra Nevada is an appropriation claim in 1905 to divert up to 50,000 miner's inches (1,250 cfs) from the Owens River at a location approximately 15 miles north of the town of Independence into the LAA for transport to Los Angeles. The City files supplemental statements (for riparian and pre-1914 water rights) and licensee reports (for post-1914 water rights) of water diversion and use with the SWRCB for its diversions during each calendar year.

The City's water right licenses in the Mono Basin were amended by the SWRCB in 1994 through the Mono Lake Basin Water Right Decision 1631. As of Runoff Year (RY) 2019/20, the Mono Lake water level was above the Water Right Decision 1631 trigger elevation of 6,380 feet; therefore, the amount of water now available for export from Mono Basin is 16,000 AF.

The primary groundwater right through which Los Angeles has developed groundwater resources in the Owens Valley is based on ownership of a majority of the land (approximately 252,000 acres) and associated water rights in the Owens Valley. Management of the groundwater supply in the Owens Valley is according to the LTWA. Groundwater Pumping is regulated under the LTWA by using vegetation water demand and available soil moisture to determine whether groundwater wells can be pumped. Groundwater is pumped from nine Owens Valley wellfields and began in 1970 after completion of the Second LAA.

Annual LAA deliveries to Los Angeles are dependent on snowfall in the Eastern Sierra Nevada. Years with abundant snowpack result in larger water deliveries from the LAA, and typically reduced purchases of supplemental water from MWD. Conversely, low LAA deliveries in dry years increase the demand for supplemental water from MWD. The impact to LAA water supplies due to varying hydrology in the Mono Basin and Owens Valley is amplified by the requirements to release supply water for environmental enhancement efforts in the Eastern Sierra Nevada.

Average deliveries from LAA system have been approximately 238,960 AF annually from Fiscal Year (FY) 2015/16 to 2019/20. This average delivery includes two of the five dry years that began in FY 2012/2013 and ended in FY 2016/2017. Since imported supplies vary from year to year depending on the hydrology, LADWP plans to increase resiliency to address hydrologic variability and natural disasters by developing sustainable local water supplies.

## **2.0 Groundwater**

LADWP pumps from three adjudicated basins within the City. SFB and Sylmar Basin are subject to the judgment in the City of Los Angeles vs. City of San Fernando, et al. Groundwater pumping by LADWP and other parties is tracked and reported to the court-appointed Upper Los Angeles River Area (ULARA) Watermaster. The Central Basin is also subject to court judgment. Pumping is reported to WRD, the administrative member of the Central Basin Water Rights Panel.

The SFB is the largest of four basins within ULARA. The basin consists of 112,000 acres of land and comprises 91.2 percent of ULARA valley fill area. The City has accumulated 591,460 AF of stored water credits in the San Fernando Basin as of October 1, 2018. A portion of this water is available for the City to withdraw during normal and dry years, or in an emergency, in addition to the City's approximate 87,000 AF annual entitlement. With SFB remediation facilities estimated to be operational by 2023, the groundwater storage credits may be used to optimize pumping beyond the City's annual entitlement.

While the majority of the City's groundwater is extracted from the SFB, the Sylmar Basin also provides local groundwater supply. Sylmar is located in the northern part of ULARA, consists of 5,600 acres, and comprises 4.6 percent of ULARA valley fill area.



The City's current annual entitlement per latest Sylmar Safe Yield is 3,570 AF. As of October 1, 2019, the City has accumulated 9,014 AF of stored water credits in the Sylmar Basin. Sylmar Basin production is anticipated to increase to 4,170 AFY from FYE 2021 to FYE 2036 to utilize groundwater the City has accumulated into storage and then return to the entitlement of 3,570 AFY in FYE 2037.<sup>9</sup>

The ULARA Judgment was adopted through court adjudication on January 26, 1979, dictating the water rights within the basins of ULARA. Enclosed with the assessment are copies of those pages from the judgment showing the entitlements (see Appendix D). Further information about ULARA is detailed in the annual ULARA Watermaster Report. Both the Watermaster Reports and Judgment are available for review at the office of the ULARA Watermaster or on-line at [www.ularawatermaster.com](http://www.ularawatermaster.com).

The City also has adjudicated groundwater extraction rights in the Central Basin. LADWP's annual entitlement is 17,236 AF. As of July 1, 2020, LADWP has accumulated 22,943 AF of stored water in the Central Basin, and pumping can be temporarily increased until stored water credits have been expended.<sup>10</sup> See Appendix D for copies of relevant portions of Central Basin third amended judgment. Judgment is available for review on the WRD Web site at <http://wrwater.org/>.

The City plans to continue to develop production from its groundwater basins in the coming years to offset reductions in imported supplies. Groundwater produced by the City from the San Fernando, Sylmar, and Central Basins for the last available five years are shown on Table IV. See LADWP 2015 UWMP Exhibit 6I for the projected groundwater production through FYE 2040.

**TABLE IV**  
**Local Groundwater Basin Supply**

Fiscal Year (July-June)	San Fernando	Sylmar	Central
2015-2016	75,958	683	8,395
2016-2017	55,116	0	3,005
2017-2018	22,259	0	0.77
2018-2019	36,871	1	5
2019-2020	35,948	2	10

Notes: Units are in AF. Historical data are from the Upper Los Angeles River Area Watermaster Monthly Reports, July 2014 to June 2019.

<sup>9</sup> *Id.* at 11-4.

<sup>10</sup> *Id.* at 6-24.

Per the Agreement for Interim Water System Connection and Water Delivery between the cities of Los Angeles and Burbank, the City has been receiving water from Burbank Water and Power via the LA-Burbank Interim Interconnection starting August 2019. This water is groundwater from SFB treated at the Burbank Operable Unit (BOU), blended with MWD treated surface water. The agreement also allows the City to be able to utilize its SFB entitlements and increase its local water supplies. The agreement will remain in effect until June 30, 2025 or earlier if terminated earlier by either party.

During 2012-2016 dry period, California was challenged with several statewide water shortage issues, including over pumping which results in land subsidence and dry well issues. The State Legislature enacted the Sustainable Groundwater Management Act (SGMA), effective January 1, 2015, in order to equip and empower local agencies with tools to manage local groundwater basins in a sustainable manner. Actions necessary to achieve sustainability will vary with each basin, but SGMA generally requires local agencies to form Groundwater Sustainability Agencies (GSAs) by January 30, 2017, develop and implement Groundwater Sustainability Plans (GSPs), and monitor and report status of groundwater conditions of high- and medium-priority basins. GSPs for critically over drafted high- and medium-priority basins were due to DWR by January 31, 2020. GSPs for the remaining high- and medium-priority basins are due to DWR by January 31, 2022. SGMA will mitigate and prevent the occurrence of adverse effects caused by unreasonable use of groundwater, such as groundwater storage depletion, land subsidence, seawater intrusion, water quality degradation, critical overdraft basin conditions, and surface water depletions.

The City overlies both adjudicated and unadjudicated basins. LADWP is working with its regional partners towards compliance with the SGMA for the unadjudicated basins, such as the Santa Monica Basin (SMB). In September 2017, DWR approved the formation of the SMBGSA as the exclusive GSA in the SMB. The five member agencies include LADWP, the City of Beverly Hills, the City of Santa Monica, the City of Culver City, and the County of Los Angeles. In November 2019, the SMBGSA initiated the development of a GSP for the SMB. The final GSP will be submitted to DWR by January 31, 2022. Another unadjudicated basin within the City boundary is the Hollywood Basin, but it was classified as low priority and not mandated to develop a GSA/GSP. Similarly, areas associated with adjudicated basins, like the northern area of Central Basin, were eventually characterized as lower priority and exempt by DWR's compliance with SGMA.



### 3.0 Metropolitan Water District of Southern California

MWD is the largest water wholesaler for domestic and municipal uses in Southern California. As one of the 26 member agencies, LADWP purchases supplemental water from MWD in addition to the supplies from local groundwater, recycled water and LAA. MWD imports a portion of its water supplies from Northern California through the State Water Project's (SWP) California Aqueduct and from the Colorado River through MWD's own Colorado River Aqueduct (CRA). LADWP will continue to rely on MWD to meet its current and future water needs.

In ongoing efforts to evaluate MWD's import reliability, an assessment was done to address changes in demand and supply conditions, and to provide additional resource reserves to mitigate against uncertainties in demand projections and risks in implementing supply programs. These efforts contributed to MWD's 2015 UWMP. [http://www.mwdh2o.com/PDF About Your Water/2.4.2 Regional Urban Water Management Plan.pdf](http://www.mwdh2o.com/PDF%20About%20Your%20Water/2.4.2%20Regional%20Urban%20Water%20Management%20Plan.pdf). Preparation of the 2020 UWMP by MWD is underway and is scheduled for adoption in May 2021.

All 26 member agencies have preferential rights to purchase water from MWD. Pursuant to Section 135 of MWD Act, "Each member public agency shall have a preferential right to purchase from the district for distribution by such agency, or any public utility therein empowered by such agency for the purpose, for domestic and municipal uses within the agency a portion of the water served by the district which shall, from time to time, bear the same ratio to all of the water supply of the district as the total accumulation of amounts paid by such agency to the district on tax assessments and otherwise, excepting purchase of water, toward the capital cost and operating expense of the district's works shall bear to the total payments received by the district on account of tax assessments and otherwise, excepting purchase of water, toward such capital cost and operating expense." This is known as preferential rights. As of June 30, 2020, LADWP has a preferential right to purchase 18.12 percent of MWD's total water supply.

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

The record dry and hot conditions of 2014 significantly impacted the water resources of both the State of California and MWD. DWR's SWP Table A allocation was limited to only five percent. MWD was able to meet demands in 2014 by relying heavily on storage reserves to make up for the historically low allocation on SWP. MWD's dry-year storage reserves ended 2014 at approximately 1.2 million AF.

On April 14, 2015, to support Governor Brown's Executive Order B-29-15, and to reduce withdrawals from MWD's dry-year storage reserves, MWD implemented WSAP

at a Level 3 Regional Shortage Level, effective July 1, 2015, through June 30, 2016. MWD's dry-year storage reserves ended 2015 at approximately 0.87 million AF.

On May 10, 2016, citing the improved water supply conditions and reduced water use due to conservation, MWD voted to rescind the WSAP Regional Shortage Level 3 and declared a Condition 2 Water Supply Alert for allocation year 2016/17. MWD, however, called for member agencies to continue with conservation efforts to safeguard against future dry years. On May 9, 2017, citing the improved water supply conditions, the actions taken by the Governor and the projected storage reserves, MWD voted to declare a Condition 1 Water Supply Watch.

LADWP plans to reduce purchases of MWD water supplies by increasing conservation and recycled water production, and by enhancing groundwater pumping through stormwater capture and groundwater replenishment. This would allow LADWP to further reduce dependence on purchased imported water from MWD and maintain a resilient and sustainable water supply for the City.

### **State Water Project**

The SWP is owned by the State of California and operated by DWR, delivering water to two-thirds of the population of California and 750,000 acres of farmland. The SWP facilities include 30 dams, 20 reservoirs, 29 pumping and generating plants, and approximately 700 miles of aqueducts and pipelines. The water stored and delivered by the SWP originates from Northern California's watersheds, where most of the State's precipitation occurs. SWP facilities originate in Northern California at Lake Oroville on the Feather River and is pumped from the Bay-Delta region to contractors in areas north and south of the San Francisco Bay and south of the Bay-Delta.

MWD receives SWP water at three locations: Castaic Lake in Los Angeles County at the terminus of SWP West Branch, Devil Canyon Afterbay in San Bernardino County at the terminus of SWP East Branch Extension, and Box Springs Turnout at Lake Perris in Riverside County at the terminus of SWP East Branch.

MWD began receiving water from the SWP in 1972. MWD is the largest of the 29 SWP contractors, holding a contract for 1.912 MAF per year, or 46 percent of the total contracted amount of the 4.173 MAF ultimate delivery capacity of the project. Variable hydrology, environmental issues, and regulatory restrictions in the San Francisco Bay/Sacramento-San Joaquin River Delta (Bay-Delta) have periodically reduced the quantity of water that the SWP delivers to MWD.

Contract allocations for SWP contractors are provided by DWR in "Table A," based on the original projected SWP maximum yield of 4.173 MAF. DWR annually approves the amount of contract allocations SWP contractors will receive. The contract allocation amount received by contractors varies based on contractor demands and projected available water supplies. Variables impacting projected water supplies include



snowpack in the Sierra Nevada, capacity available in reservoirs, operational constraints, and demands of other water users.

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

### **Endangered Species Act Considerations**

DWR has altered the SWP's operations to accommodate certain species that are threatened or endangered, which impact SWP deliveries to MWD. On December 15, 2008, the United States Fish and Wildlife Service (USFWS) released a biological opinion on the impacts of the State Water Project and the federal Central Valley Project on Delta smelt. Based on the biological opinion's findings, the USFWS provided recommended actions to protect the Delta smelt. On June 4, 2009, the National Marine Fisheries Service (NMFS) released a biological opinion for salmonid species. The water supply restrictions imposed by these biological opinions on Delta smelt and salmonid species have a range of impacts on Metropolitan's deliveries from the SWP that are dependent on hydrologic conditions. The impact on total SWP deliveries to State Water Contractors attributable to the Delta smelt and salmonid species biological opinions combined is estimated to be one million AF in an average year, reducing total State Water Project deliveries to State Water Contractors from approximately 3.3 million AF to approximately 2.3 million AF during a year below average hydrology.

On October 22, 2019, USFWS and NMFS released new biological opinions. The Bureau of Reclamation completed its environmental review of the proposed action covered by the new biological opinions on February 19, 2020. The new opinions replace the existing federal permits for the Central Valley Project.

On March 31, 2020, the California Department of Fish and Wildlife (CDFW) issued an Incidental Take Permit (ITP) to DWR for long-term operations of the SWP. In April 2020, MWD, with the MWD Board approval, joined the State Water Contractors in their litigation against DWR and CDFW over the ITP. The impacts to MWD from the ongoing negotiation of Voluntary Agreements on the new biological opinions and incidental take permit, as well as litigation challenging them, remain unknown.

### **New Bay-Delta Conveyance Facility**

In 2006, multiple state and federal resource agencies, water agencies, and other stakeholder groups entered into a planning agreement for the Bay-Delta Conservation Plan (BDCP). The BDCP included alternatives for new water conveyance infrastructure and extensive habitat restoration in the Bay-Delta. In 2015, during the administration of the Governor Brown, the state and federal lead agencies proposed an alternative implementation strategy and new alternatives to the BDCP to provide for the protection of water supplies conveyed through the Bay-Delta and the restoration of the ecosystem of the Bay-Delta, termed "California WaterFix" and "California EcoRestore," respectively.

In July 2017, DWR certified a final EIR and approved the California WaterFix as an improvement to the State Water Project. As originally approved by DWR, the California WaterFix would provide new conveyance facilities for the transportation of State Water Project and Central Valley Project water from the north Delta, through two 30-mile long tunnels running under the Delta, to the existing aqueduct systems in the south Delta.

On April 29, 2019, Governor Newsom issued an executive order directing state agencies to develop a comprehensive statewide strategy to build a climate-resilient water system that included consideration of a single-tunnel conveyance facility instead of the approved two-tunnel WaterFix project. DWR began pursuing a new environmental review and planning process for the single tunnel "Delta Conveyance Project". The formal environmental review process commenced with the issuance by DWR of a Notice of Preparation under CEQA on January 15, 2020. In August 2020, the U.S. Army Corps of Engineers issued a Notice of Intent for the development of a new Environmental Impact Statement.

### **Colorado River**

MWD owns and operates the CRA, which since 1942 has delivered water from the Colorado River to Southern California. The Colorado River currently supplies approximately 17 percent of Southern California's water needs, and on average makes up about 15 percent of LADWP's purchases from MWD. This source of supply has been secured to MWD through long-standing legal entitlements. However, extended dry conditions and increased demands by other users have recently impacted its reliability.

The Colorado River supplies come from watersheds of the Upper Colorado River Basin in the states of Colorado, Utah, and Wyoming. Due to the way that Colorado River supplies are apportioned, snowpack and runoff levels do not impact MWD water supplies in the current year. Instead, snowpack and runoff impact storage levels at Lake Powell and Lake Mead, which would then affect the likelihood of surplus or shortage conditions in the future.

Because MWD has two principal sources of supply that draw from two different watersheds, MWD is able to utilize supplies from the Colorado River to offset potential reductions in SWP supplies and buffer impacts during dry periods. MWD plans to use CRA deliveries, storage reserves, and supplemental water transfers and purchases to meet regional demands.

Under a permanent service contract with the U.S. Secretary of the Interior, MWD is entitled to receive water from the Colorado River and its tributaries. This water is also available to other users in California, as well as users in the states of Arizona, Colorado, Nevada, New Mexico, Utah, and Wyoming. Under a 1944 treaty, Mexico is allotted 1.5 million AF annually, except in extraordinary circumstances. There is long history of competition among users, but current conditions necessitate increased cooperation.



California is apportioned 4.4 million AFY, 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. Since 2003, due to increased consumption, there has been no such unused, apportioned water available to California. Of the California apportionment, MWD holds the fourth priority right to 550,000 AFY under the 1931 priority system governing allotments to California. This is the last priority within California's basic apportionment of 4.4 million AF. Beyond the basic apportionment, MWD holds the fifth priority right to 662,000 AF of water. See Appendix F for more details.

MWD has historically been able to claim most of its legal entitlement of Colorado River water and could divert over 1.2 million AF in any year, but persistent dry conditions since 1999 have contributed to a decrease in these claims. The recent 16-year dry period was so severe that it resulted in major reductions in water deliveries from the Colorado River. In response, the federal government, as well as state, urban, and agricultural water districts that depend on the Colorado River worked together toward a solution.

The Secretary of the Interior adopted the Interim Surplus Guidelines in 2001 to identify surplus Colorado River water available for use in California, Arizona, and Nevada (Lower Basin States) through 2016. In 2007, the Secretary of the Interior issued the Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead through a Record of Decision. The Record of Decision provide water release criteria from Lake Powell and water storage and water release criteria from Lake Mead during shortage and surplus conditions in the Lower Basin, provided a mechanism for the storage and delivery of conserved system and non-system water in Lake Mead and extend the Interim Surplus Guidelines through 2026. The guidelines also created the Intentionally Created Surplus (ICS) program, which allows the Lower Basin States to store conserved water in Lake Mead. ICS water (water that has been conserved through an extraordinary conservation measure, such as land fallowing) is eligible for storage in Lake Mead by MWD.

Since the 2007 Lower Basin shortage guidelines were issued for the coordinated operations of Lake Powell and Lake Mead, the Colorado River has continued to experience dry conditions. In order to reduce the risk of Lake Powell and Lake Mead declining below critical elevations, the federal government, states and urban and agricultural water districts that depend on the Colorado River worked together to adopt and enact the Drought Contingency Plan in 2019. The Drought Contingency Plan is a collection of agreements within and among the seven western states in the Colorado River Basin to boost storage levels in Lake Mead and Lake Powell and prevent the reservoirs from reaching critically low levels.

The Lower Basin Drought Contingency Plan Agreement requires California, Arizona and Nevada to store defined volumes of water in Lake Mead at specified lake levels. California would begin making contributions if Lake Mead's elevation is projected to be

at or below 1,045 feet above sea level on January 1. As of January 1, 2021, Lake Mead's elevation measured approximately 1,084 feet.

### **Reliability Efforts for Southern California**

MWD has been developing plans and making efforts to provide additional water supply reliability for the entire Southern California region. LADWP coordinates closely with MWD to ensure implementation of these water resource development plans. MWD's long-term plans to meet its member agencies' growing reliability needs include SWP improvements as outlined in the EcoRestore plans, conjunctive management efforts on the Colorado River, water transfer programs, outdoor conservation measures, and development of additional local resources such as recycling, brackish water desalination, and seawater desalination. These plans are contained in MWD's 2015 IRP and 2015 UWMP, which can be found at the following links:

- MWD 2015 IRP:  
[http://mwdh2o.com/PDF\\_About\\_Your\\_Water/2015%20IRP%20Update%20Report%20\(web\).pdf](http://mwdh2o.com/PDF_About_Your_Water/2015%20IRP%20Update%20Report%20(web).pdf)
- MWD 2015 UWMP:  
[http://www.mwdh2o.com/PDF\\_About\\_Your\\_Water/2.4.2\\_Regional\\_Urban\\_Water\\_Management\\_Plan.pdf](http://www.mwdh2o.com/PDF_About_Your_Water/2.4.2_Regional_Urban_Water_Management_Plan.pdf)

Additionally, MWD has more than 5.0 million AF of storage capacity available in reservoirs and banking/transfer programs. MWD has approximately 3.2 million AF of water in Water Surplus Drought Management storage and an additional 750,000 AF in emergency storage as of January 1, 2021. Continued efficiency in the region kept demands low in 2020, resulting in available water supplies far exceeding demands. With the implementation of new and modified storage programs to manage the available surplus supplies, MWD has been able to maintain historically high storage levels.

MWD's 2015 IRP was built upon the strong foundation of diversification and adaptation developed in previous IRPs. The 2015 IRP reinforced MWD commitment to meeting the region's water supply needs through an evolving long-term strategy that called for maintaining and stabilizing existing resources along with developing more conservation and new local supplies. Development for the 2020 IRP is currently underway with a tentative adoption in September 2021.

MWD's 2015 UWMP reports on water reliability and identifies projected supplies to meet the long-term demand within MWD's service area. Table V summarizes MWD's reliability in five-year increments extending to 2040 and is based on information contained in MWD's 2015 UWMP. As reported, MWD has supply capabilities that would be sufficient to meet expected demands from 2020 through 2040 under average year, single dry-year and multiple dry-year hydrologic conditions. An in-depth discussion on MWD is attached in Appendix F.



**Table V**  
**MWD System Forecast Supplies and Demands**  
**Average Year (1922 - 2012 Hydrology)**

Forecast year	Supply (Thousands of AF per Year)				
	2020	2025	2030	2035	2040
<i>Current Programs</i>					
In-Region Supplies and Programs	693	774	852	956	992
State Water Project <sup>1</sup>	1,555	1,576	1,606	1,632	1,632
Colorado River Aqueduct					
Colorado River Aqueduct Supply <sup>2</sup>	1,468	1,488	1,484	1,471	1,460
Aqueduct Capacity Limit <sup>3</sup>	1,200	1,200	1,200	1,200	1,200
Colorado Aqueduct Capability	1,200	1,200	1,200	1,200	1,200
<b>Capability of Current Programs</b>	<b>3,448</b>	<b>3,550</b>	<b>3,658</b>	<b>3,788</b>	<b>3,824</b>
<i>Demands</i>					
Total Demands on MWD	1,586	1,636	1,677	1,726	1,765
Imperial Irrigation District - San Diego County Water Authority Transfers and Canal Linings <sup>4</sup>	274	282	282	282	282
<b>Total Demands on MWD</b>	<b>1,860</b>	<b>1,918</b>	<b>1,959</b>	<b>2,008</b>	<b>2,047</b>
<b>Surplus</b>	<b>1,588</b>	<b>1,632</b>	<b>1,699</b>	<b>1,780</b>	<b>1,777</b>
<i>Programs Under Development</i>					
In-Region Supplies and Programs	43	80	118	160	200
State Water Project	20	20	268	268	268
Colorado River Aqueduct					
Colorado River Aqueduct Supply	5	25	25	25	25
Aqueduct Capacity Limit <sup>2</sup>	0	0	0	0	0
Colorado River Aqueduct Capability	0	0	0	0	0
<b>Capability of Programs Under Development</b>	<b>63</b>	<b>100</b>	<b>386</b>	<b>428</b>	<b>468</b>
<b>Maximum MWD Supply Capability</b>	<b>3,511</b>	<b>3,650</b>	<b>4,044</b>	<b>4,216</b>	<b>4,292</b>
<b>Potential Surplus</b>	<b>1,651</b>	<b>1,732</b>	<b>2,085</b>	<b>2,208</b>	<b>2,245</b>

1. Includes water transfers and groundwater banking associated with SWP.

2. Includes 296 TAF of non-MWD supplies conveyed in CRA for Imperial Irrigation District - San Diego County Water Authority Transfers and Canal Linings.

3. CRA has a capacity constraint of 1.20 MAF per year.

4. Does not include 16 TAF subject to satisfaction of conditions specified in agreement among MWD, the US, and the San Luis Rey Settlement.

#### **4.0 Secondary Sources and Other Considerations**

Stormwater capture, water conservation, and recycling will play an increasing role in meeting future water demands. LADWP has implemented stormwater capture, conservation, and recycling programs with efforts under way to further promote and increase the level of these programs. LADWP is committed to supply a higher percentage of the City's water demand through local water supply development.

LADWP works closely with MWD, LASAN, other regional water providers, and various stakeholders to develop and implement programs that reduce overall water use. One example of such collaboration is an integrated resources planning process.

#### **5.0 Summary of Water Demand and Supply Projections for 20 years**

Table VI tabulates the service reliability assessment for average weather year. Existing water conservation has been subtracted already from projected demands, but new water conservation is included as a supply source.

**Table VI  
Service Area Reliability Assessment for Average Weather Year**

Demand and Supply Projections (in acre-feet)	Average Weather Conditions (FY 1961/62 to 2010/11)				
	Fiscal Year Ending on June 30				
	2020	2025	2030	2035	2040
<b>Total Water Demand<sup>1</sup></b>	<b>611,800</b>	<b>644,700</b>	<b>652,900</b>	<b>661,800</b>	<b>675,700</b>
<b>pLAn Water Demand Target</b>	<b>485,600</b>	<b>533,000</b>	<b>540,100</b>	<b>551,100</b>	<b>565,600</b>
<b>Existing / Planned Supplies</b>					
Conservation (Additional Active <sup>2</sup> and Passive <sup>3</sup> after FY14/15)	125,800	110,900	111,600	109,100	108,100
Los Angeles Aqueduct <sup>4</sup>	275,700	293,400	291,000	288,600	286,200
Groundwater <sup>5</sup> (Net)	112,670	110,670	106,670	114,670	114,070
Recycled Water					
- Irrigation and Industrial Use	19,800	29,000	39,000	42,200	45,400
- Groundwater Replenishment	0	30,000	30,000	30,000	30,000
Stormwater Capture					
- Stormwater Reuse (Harvesting)	400	800	1,200	1,600	2,000
- Stormwater Recharge (Increased Pumping)	<u>2,000</u>	<u>4,000</u>	<u>8,000</u>	<u>15,000</u>	<u>15,000</u>
Subtotal	536,370	578,770	587,470	601,170	600,770
<b>MWD Water Purchases</b>					
With Existing/Planned Supplies	75,430	65,930	65,430	60,630	74,930
<b>Total Supplies</b>	<b>611,800</b>	<b>644,700</b>	<b>652,900</b>	<b>661,800</b>	<b>675,700</b>
<b>Potential Supplies</b>					
Water Transfers <sup>6</sup>	<u>40,000</u>	<u>40,000</u>	<u>40,000</u>	<u>40,000</u>	<u>40,000</u>
Subtotal	40,000	40,000	40,000	40,000	40,000
<b>MWD Water Purchases</b>					
With Existing/Planned/Potential Supplies	35,430	25,930	25,430	20,630	34,930
<b>Total Supplies</b>	<b>611,800</b>	<b>644,700</b>	<b>652,900</b>	<b>661,800</b>	<b>675,700</b>

<sup>1</sup> Total Demand with existing passive conservation

<sup>2</sup> Cumulative hardware savings since late 1980s reached 118,034 AFY by 2014-15.

<sup>3</sup> Additional non-hardware conservation required to meet water use reduction goals set in the Sustainable City pLAn.

<sup>4</sup> LADWP anticipates conserving 20,000 AFY of water usage for dust mitigation on Owens Lake after the Master Project is implemented in FY 2023-24. Los Angeles Aqueduct supply is estimated to decrease 0.1652% per year due to climate change impact.

<sup>5</sup> Net GW excludes Stormwater Recharge and Groundwater Replenishment supplies that contribute to increased pumping. The LADWP Groundwater Remediation project in the San Fernando Basin is expected in operation in 2021-22. Storage credit of 5,000 AFY will be used to maximize pumping in 2019-20 and thereafter. Sylmar Basin production will increase to 4,170 AFY from 2015-16 to 2038-39 to avoid the expiration of stored water credits, then go back to its entitlement of 3,570 AFY in 2039-40.

<sup>6</sup> Potential water transfer occurs in dry years with stored water acquired in average and wet years.



Service area reliability assessments for single-dry year and multiple-dry year conditions are shown in LADWP 2015 UWMP Exhibits 11F through 11H. Demands are met by the available supplies under all scenarios

### **Water System Financing Program**

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Capital costs to finance facilities for the delivery of water supply to LADWP's service area are supported through customer-billed water rates. The Board sets rates subject to approval of City Council by ordinance. The Board is obligated by City Charter to establish water rates and collect charges in an amount sufficient to service the water system indebtedness and to meet its expenses for operation and maintenance.

On March 15, 2016, City Council approved the new water rates and rate structure. New water rates, which became effective April 15, 2016, through Ordinance 184130 provide for modest rate increases each year over a five-year period for infrastructure improvements, meeting regulatory water quality requirements, Owens Valley mitigation measures, and expanding the local water supply, which includes recycled water, stormwater capture, conservation, and groundwater remediation. New water rate structure increases the number of tiers from two to four for single-family residential customers. The goal is to incentivize conservation while recovering the higher costs of providing water to high volume users. In keeping with cost of service principles, the incremental pricing for the tiers is based on the cost of water supply.

Another method to finance projects and help achieve LADWP's commitment to developing sustainable local water supplies is through grants and loans. Critical funding from Proposition 1 (Prop 1) – the Water Quality, Supply, and Infrastructure Improvement Act of 2014 was passed on November 4, 2014 to support groundwater cleanup, stormwater capture, recycled water, water conservation, regional water management, and Los Angeles River revitalization projects. Prop 1 is a bond measure that provides \$7.545 billion to fund investments in water projects and programs as part of a statewide, comprehensive water plan for California. As of FYE 2020, LADWP has been awarded \$327.9 million in grants and \$3 million in zero-interest loans.

## Conclusion

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The Project is estimated to increase the total water demand within the site by 75 AF annually. This additional water demand for the Project site has been accounted for in the City's overall total demand projections in the LADWP 2015 UWMP using a service area-wide approach that does not rely on individual development demand. The LADWP 2015 UWMP utilized SCAG's RTP data that provide for more reliable water demand forecasts, considering changes in population, housing units, and employment.

Based on the Planning Department's determination that the Project is consistent with the demographic forecasts for the City from the 2012 SCAG RTP, LADWP finds that the Project water demand is included in the City's LADWP 2015 UWMP. Furthermore, the LADWP 2015 UWMP forecasts adequate water supplies to meet all projected water demands in the City through the year 2040. LADWP therefore concludes that the projected 75 AFY increase in the total water demand for this Project is accounted for in the 2015 UWMP's 25-year water demand projections. LADWP finds it will be able to meet the proposed water demand of the Project as well as existing and planned future water demands of its service area.

## Appendix A

City of Los Angeles Department of City Planning  
Request for Water Supply Assessment,  
and Scope Confirmation e-mail



DEPARTMENT OF  
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COMMISSION OFFICE  
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SHANA M.M. BONSTIN  
DEPUTY DIRECTOR

ARTHI L. VARMA, AICP  
DEPUTY DIRECTOR

LISA M. WEBBER, AICP  
DEPUTY DIRECTOR

VACANT  
DEPUTY DIRECTOR

November 20, 2020

Mr. Richard F. Harasick

Senior Assistant General Manager for Water Systems

Water Resources Development Group

City of Los Angeles Department of Water and Power

111 North Hope Street, Room 1455

Los Angeles, CA 90012

**RE: REQUEST FOR WATER SUPPLY ASSESSMENT FOR THE DTLA SOUTH PARK PROPERTIES SITE 2  
PROJECT LOCATED AT 1105-1123 SOUTH OLIVE STREET, LOS ANGELES, CA 90015**

Dear Mr. Harasick,

California Senate Bill (SB) 610, effective January 1, 2002, states that a water supply assessment (WSA) must be provided to local governments for inclusion in any environmental documentation for certain projects subject to the California Environmental Quality Act (CEQA). Specifically, SB 610 requires that for certain projects, the CEQA lead agency must identify any public water system that may supply water to a proposed project and request the public water system to determine the water demand associated with the project and whether such demand was included as part of the most recently adopted Urban Water Management Plan (UWMP). Per Section 10912 of the California Water Code (CWC), a project which is subject to the requirements of SB 610 includes, but is not limited to: (1) a proposed residential development of more than 500 dwelling units; (2) a proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space; (3) a proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space; (4) a proposed hotel or motel, or both, having more than 500 rooms; (5) a proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area; (6) a mixed-use project that includes one or more of the projects specified in this subdivision; or (7)

a project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling-unit project.

The City of Los Angeles Department of City Planning (the City) is preparing a Sustainable Communities Environmental Assessment (SCEA) in accordance with CEQA for two projects known as the Downtown Los Angeles (DTLA) South Park Properties Site 2 and Site 3 (Projects). These two Projects are separated by Olive Street in downtown Los Angeles. While both developments will be evaluated in one SCEA document for the purposes of CEQA, the Applicants have filed separate applications for each site and the City is considering requested entitlements separately. As such, two separate WSAs are being requested. This request is for the development at Site 2 proposed by MREG 1105 Olive, LLC (Project). The request for Site 3 is being submitted separately.

The proposed Project constitutes a "project" as defined in Section 10912(a) of the CWC and thus, is subject to the provisions for determining water availability as outlined in Sections 10910-10915 of the CWC. As such, the Department of City Planning requests your assistance in preparing a WSA pursuant to the requirements of SB 610 to determine the Los Angeles Department of Water and Power's (LADWP) ability to meet the water demands of the proposed Project. Provided below is a brief description of the Project and an estimate of potential water demand.

#### **Project Location**

As described above, while the Projects consist of two separate sites, this request is for the development located at Site 2. Site 2 occupies the southwest corner of the intersection of 11th Street and South Olive Street in downtown Los Angeles. Current addresses associated with Site 2 are 1105, 1115, 1117, 1119 and 1123 South Olive Street, Los Angeles, CA 90015 (see Attachment A Location Map).

#### **Existing Conditions**

Site 2 is approximately 36,120 square feet and consists of Assessor's Parcel Numbers (APNs) 5139-020-025, 5139-020-007 and 5139-020-006. Site 2 is bounded by 11th Street to the north, Olive Street to the east, a parking structure to the south, and the Margo Street alley to the west. The site is currently occupied by active surface parking facilities and does not contain any vegetation or landscaping. There is 1 street tree on Olive Street and 2 street trees on 11th Street. The site is designated for Regional Center Commercial General Plan Land Uses by the Central City Community Plan and zoned C2-4D-O. The Project does not involve a General Plan Amendment or a Zone Change.

## **Proposed Project**

The proposed Site 2 building would include a 51-story, mixed-use building with a six-level subterranean parking, a ground floor with retail and lobby space and parking spaces, a three-level above-grade parking podium, and a 48-story residential tower (see Attachment B Plot Plan). The building will be approximately 603 feet in height with a total of 491,515 square feet of floor area including 487,333 square feet of residential floor area and 4,178 square feet of retail space along the 11<sup>th</sup> Street frontage. The residential component of the proposed mixed-use building would contain 89 studios, 266 one-bedroom units, 2 one-bedroom units with a den, 176 two-bedroom units, and 3 three-bedroom units for a total of 536 residential units. The building would also feature an outdoor dog run with a 1,308-square-foot synthetic turf and 6,787 square feet of lounge, fitness and co-working space at Level 5; an approximately 22,662-square-foot amenity deck on Level 6 with a swimming pool, community recreation, lounge, fitness areas, and raised planters; two sky lounges with outdoor decks at Levels 21 and 41; and a 3,990-square-foot roof terrace and a 1,021-square-foot lounge at Level 51 (see Attachment C Open Space Diagrams). The Project would provide 581 automobile parking spaces; 23 short-term bicycle racks and 211 long term-bicycle lockers. Pedestrian improvements would be made along the 11th Street and S. Olive Street frontages of the Project. The Project would remove three existing trees in the public right-of-way and plant 115 trees on-site, including 8 trees at the ground level in the public right-of-way, 95 trees at Level 6 and 12 trees at Level 51. The Project proposes to provide approximately 6,452 square feet of landscaping, including 102 square feet at the ground level, 230 square feet at Level 5, 5,336 square feet at Level 6, and 784 square feet at Level 51 (see Attachment D Landscape Plans).

Information about the Project is summarized in the **Table 1, Project Data** below. Estimated fixture count is included in **Table 2, Estimated Fixture Count**. Landscaping information is provided in **Table 3, Landscaping Water Usage Estimate**. A site plan is attached to this letter.

The Project would comply with the requirements in the City's Green Building Code and Title 24, which requires buildings to be designed to include green building measures for energy efficiency, water conservation, recycling, light pollution reduction, electric vehicle charging stations, Energy Star-rated appliances, eco-friendly building materials, non-volatile organic compound paints/adhesives, drought-tolerant planting, high performance building envelopment, etc. to the extent feasible. For cooling purposes, the Site 2 building would include a 1,000-ton capacity cooling tower. The cooling tower would operate 24 hours per day using 100% non-potable water.

For the purposes of analysis, Site 2 is expected to be built by 2024.

**Table 1, Project Data**

General Information	Street Address	1105-1123 S. Olive St.
	APN No's.	5139-020-025, 5139-020-007, & 5139-020-006
	Existing Zoning	C2-4D-O
	Proposed Zoning	C2-4D-O
	General Plan Designation	Regional Center Commercial
	Lot Area	36,120 square feet / 0.83 acres
	Buildable Lot Area (LAMC 14.5.3)	58,839 square feet
	Proposed total floor area	491,515 square feet
	Proposed FAR	9.13:1 (Based on Buildable Lot Area)
	Building Height	603 feet (51 Stories)
Project Details	Residential Units	536 Units
	Studio	89 Units
	One Bedroom	266 Units
	One Bedroom with a Den	2 Units
	Two Bedrooms	176 Units
	Three Bedrooms	3 Units
	Residential Amenities (Covered)	
	Lounges	5,878 square feet
	Co-Working Space	2,860 square feet
	Fitness Rooms	3,518 square feet
	Terraces	2,311 square feet
	Residential Amenities (Uncovered)	
	Entry Area	905 square feet
	Dog Run	1,308 square feet
	Terraces	23,595 square feet
	Residential Balconies	17,900 square feet
	Total Amenity Space	58,275 square feet
	Commercial	4,817 square feet
	Parking	
	Total Automobile Parking	581 (Required & Provided)
	Total Bicycle Parking	234 (Required & Provided)
	Total Covered Parking Area	263,937 square feet

Table 2, Estimated Fixture Count

	Residential Dwelling Units	Residential Common Area	Restaurant /Bar	Retail/ Commercial	Office	Hotel Rooms	Hotel Common Facility
Water Closets	N/A	17	5	0	0	N/A	0
Urinals	N/A	1	1	0	0	N/A	0
Lavatory Faucets	N/A	16	4	0	0	N/A	0
Kitchen Faucets	N/A	8	1	0	0	N/A	0
Commercial Kitchen Pre-Rinse Spray Faucets	N/A	0	1	0	0	N/A	0
Showerheads	N/A	6	0	0	0	N/A	0
Clothes Washer (Residential)	536	0	0	0	0	0	0
Clothes Washer (Commercial)	0	0	0	0	0	0	0
Dishwasher (Residential)	536	1	0	0	0	0	0
Dishwasher (Commercial)	0	0	1	0	0	0	0

**Table 3, Landscaping Water Usage Estimate**

Hydrozone	Plant Factor (PF)	Irrigation Method	Irrigation Efficiency (IE)	ETAF (PF/IE)	Landscape Area	ETAF x Area	Estimated Water Use (gallons per year)
Ground Level	0.3	Drip	0.81	0.37	102	37.74	11,72.29
Podium (Level 5 & 6)	0.3	Drip	0.81	0.37	5,336	1974.32	61,326.13
Terraces (levels 21 and 41)	0.3	Drip	0.81	0.37	182	67.34	2091.84
Roof Deck	0.3	Drip	0.81	0.37	784	290.08	9,011.01
Synthetic turf	0.1	Spray	0.75	0.13	1,308	170.04	5,281.71
<b>TOTAL:</b>					8,043.00	3,262.27	78,882.98
Source: EPT Design (Project Landscape Architect)							

**Project Conformance with the General Plan and Municipal Code**

The Project site is located within the Central City Community Plan Area and designated for Regional Center Commercial land uses. The residential objectives of the Central City Community Plan are:

- Objective 1-1 To promote development of residential units in South Park.
- Objective 1-2 To increase the range of housing choices available to Downtown employees and residents.



- Objective 1-3 To foster residential development which can accommodate a full range of incomes
- Objective 1-4 To facilitate the conversion of historic buildings in the Historic Core to housing, office, art, and cultural uses in order to attract new residents.
- Objective 1-5 To preserve the existing low-income housing stock, including single room occupancy (SRO) units.
- Objective 1-6 To support additions to the housing stock in Little Tokyo.

The Project is generally consistent with these objectives as it develops residential units in South Park without removing any historic buildings or existing housing stock.

Consistent with the Community Plan Land Use Designation, the Project site is zoned C2-4D. The C2 Commercial Zone permits a variety of uses, such as multi-family residential; retail with limited manufacturing; service stations and garages; and office uses, hotels, and hospitals. The Project site is in Height District No. 4, which permits a maximum floor area ratio (FAR) of 13:1, with no limitation for building height. However, the "D" Development Limitation restricts the FAR to 6:1, unless the Project obtains Transfer of Floor Area Rights approval. The development proposed for Site 2 would require the following entitlements from the City:

- Transfer of Floor Area Rights (TFAR) of approximately 274,795 square feet of floor area from the Los Angeles Convention Center (Donor Site) to the Project Site on Site 2 (Receiver Site), pursuant to LAMC Section 14.5.7;
- Zone Variance to allow reduced parking stall dimensions of a minimum 8'-6" wide by 16' deep in lieu of the otherwise required 9'-4" wide by 18' deep parking stall and to allow reduced drive aisle widths of a minimum 25-foot-1-inch in lieu of the otherwise required 27-foot, 4-inch drive aisle, pursuant to LAMC Section 12.27;
- Director's Decision to provide less than one on-site tree per four dwelling units (115 trees in lieu of 134 trees required), pursuant to LAMC Section 12.21 G.3 and Ordinance No. 185,573;
- Site Plan Review, pursuant to LAMC Section 16.05;
- Conditional Use Permit for two off-site sale establishments and two on-site sale establishments for alcoholic beverages, pursuant to LAMC Section 12.24.W.1; and

- Vesting Tentative Tract Map No. 82109, pursuant to LAMC Section 17.01 et seq.

#### **Project Conformance with the SCAG 2016-2040 RTP/SCS**

The Project is consistent with the General Plan Land Use Designation, density, and building intensity outlined in the SCAG 2016-2040 RTP/SCS. The Project Site is within an area designated by the 2016-2040 RTP/SCS as "Urban," a land development category (LDC) with the highest density and intensity of land development. The 2016-2040 RTP/SCS describes the Urban LDC as areas often found within and/or directly adjacent to moderate and high-density urban centers, where virtually all new development would be considered infill or redevelopment. Housing tends to be higher density multi-family and attached single-family (townhome) varieties which, overall, consume less water and energy than detached residences in less urban locations. Urban LDC areas have high levels of mobility, particularly for people who choose not to drive or do not have access to a vehicle, seen through the presence of a variety of regional and local transit services and a development pattern that is conducive to walking. The proposed Project is consistent with the Urban Land Use Development Category.

The proposed Project is located within a highly urbanized area within the City of Los Angeles. The California State Department of Finance (DOF) average household size for the City of Los Angeles at 2.83 persons per household. The current DOF estimated City population as of January 2019 is approximately 4,040,079 people. Therefore, the proposed Project would represent an increase of less than one percent of the City's current population. According to growth estimates from SCAG's 2016-2040 RTP/SCS, the City had an estimated population of 3,845,500 people in 2012 and is projected to have a population of 4,609,400 in 2040. The addition of the Project would be within the SCAG's population forecasts for the City.

#### **Existing Water Consumption**

The site is a surface parking lot with no on-site facilities. As such, for purposes of this request, it is assumed that there is no existing water consumption associated with the site.

**Forecasted Water Demand**

The following table presents estimated water demand for the Project as provided by the Applicant.

<b>Table 4 – DTLA Site 2 Estimated Proposed Water Consumption</b>				
<b>BuildingUse</b>	<b>Water Consumption Rate per Unit (GPD)<sup>(a)</sup></b>	<b>Units</b>	<b>Quantity</b>	<b>Total Consumption (GPD)</b>
APT - BACHELOR	90	DU	89	8,010
1 BDR APT	132	DU	268	35,376
2 BDR APT	180	DU	176	31,680
3 BDR APT/PH	228	DU	3	684
RETAIL AREA	30/1,000	GSF	4,178	125
SWIMMING POOL	600	-	1	600
SPA/JACUZZI	600	-	1	600
LANDSCAPING <sup>(b)</sup>				216
<b>Total Estimated Proposed Water Consumption</b>			<b>TOTAL (GPD)</b>	<b>77,291</b>
<p>(a) The average daily flow based on 120% of City of Los Angeles sewerage generation factors.                      (b) See Table 3 above, converted to GPD</p>				

**Contact Information**

- **Lead Agency:**  
 Nuri Cho, City Planner  
 Los Angeles City Planning  
 200 N. Spring St., Room 621  
 Los Angeles, CA 90012  
 nuri.cho@lacity.org  
 (213) 978-1177
  
- **Applicant:**  
 DTLA South Park Properties Propco II LLC  
 Kevin Linquist, Chief Operating Officer  
 Mack Real Estate Development  
 1150 S. Olive Street, Suite 2250  
 Los Angeles, CA 90015  
 klindquist@mackregroup.com  
 (213) 542-4316

- CEQA Consultant:  
Meridian Consultants  
920 Hampshire Road, Suite A-5  
Westlake Village, California 91361  
[nbaldwin@MeridianConsultantsLLC.com](mailto:nbaldwin@MeridianConsultantsLLC.com)  
(805) 413-4185

Based on the above projections, the Department of City Planning is requesting your assistance in preparing a WSA pursuant to the requirements of SB 610. SB 610 requires a water supply assessment to evaluate whether total projected water supplies will meet the projected water demand for certain development projects that are otherwise subject to CEQA review.

Thank you for your assistance with this request. Your expert evaluation will help ensure that our analysis of the Project's impacts related to water demand is accurate and complete. If you have any questions or comments, please contact Nuri Cho at (213) 978-1177 or [Nuri.Cho@lacity.org](mailto:Nuri.Cho@lacity.org).

Sincerely,

VINCENT P. BERTONI, AICP  
Director of Planning



---

Nuri Cho, City Planner  
Central Project Planning Division  
Department of City Planning  
200 N. Spring Street, Room 621  
Los Angeles, CA 90012

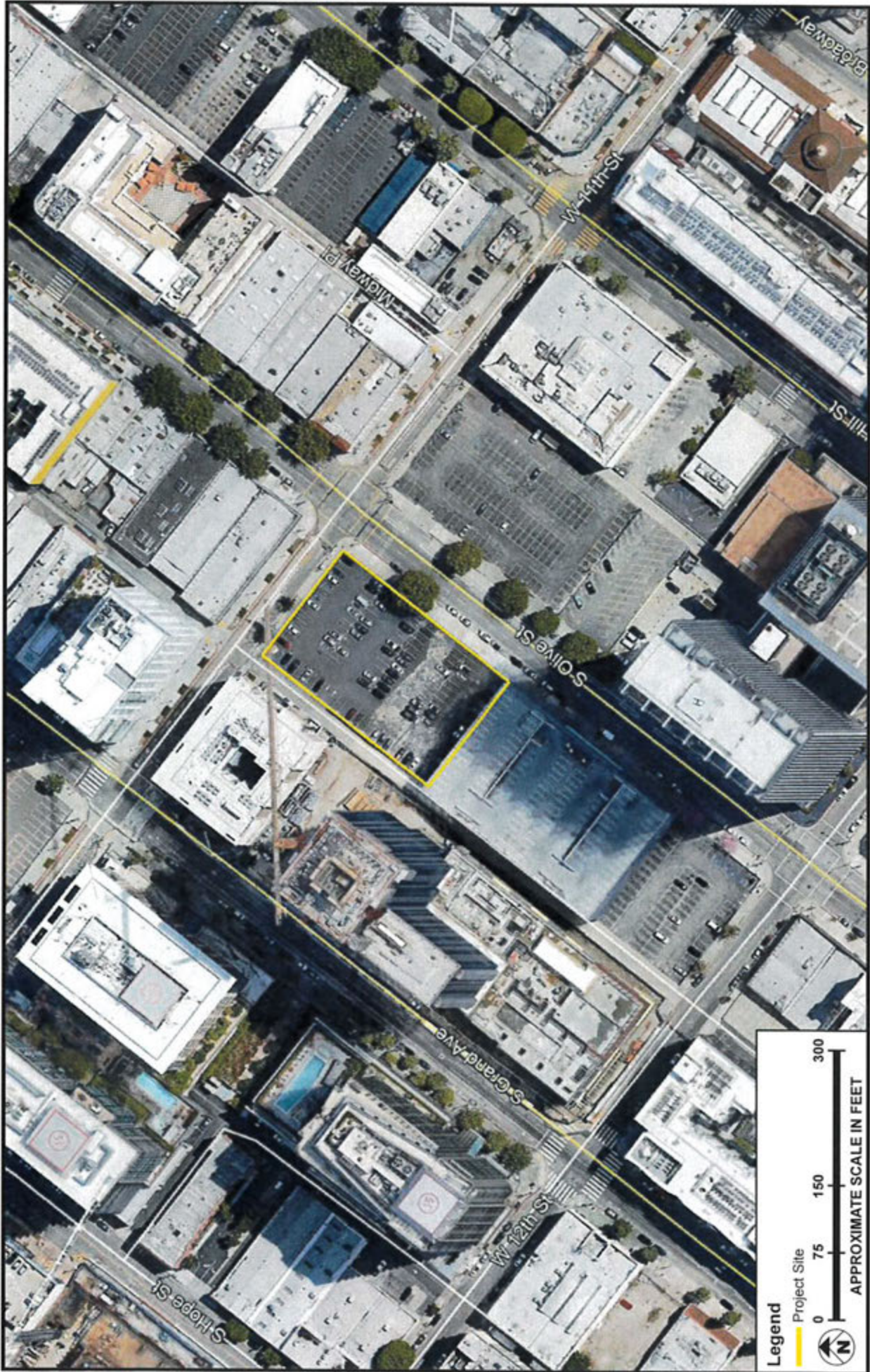
Attachments:

- A – Location Map
- B – Plot Plan
- C – Open Space Diagrams
- D – Landscape Plans

**Request for Water Supply Assessment**  
**DTLA South Park Properties Site 2**  
**1105-1123 South Olive Street, Los Angeles, CA 90015**

**Attachment A**  
**Location Map**





**Legend**

Project Site

0 75 150 300

APPROXIMATE SCALE IN FEET

N

SOURCE: Google Earth - 2020; Meridian Consultants, LLC - February 2020

SITE 2-A

**Meridian**  
Consultants

Site 2 Location

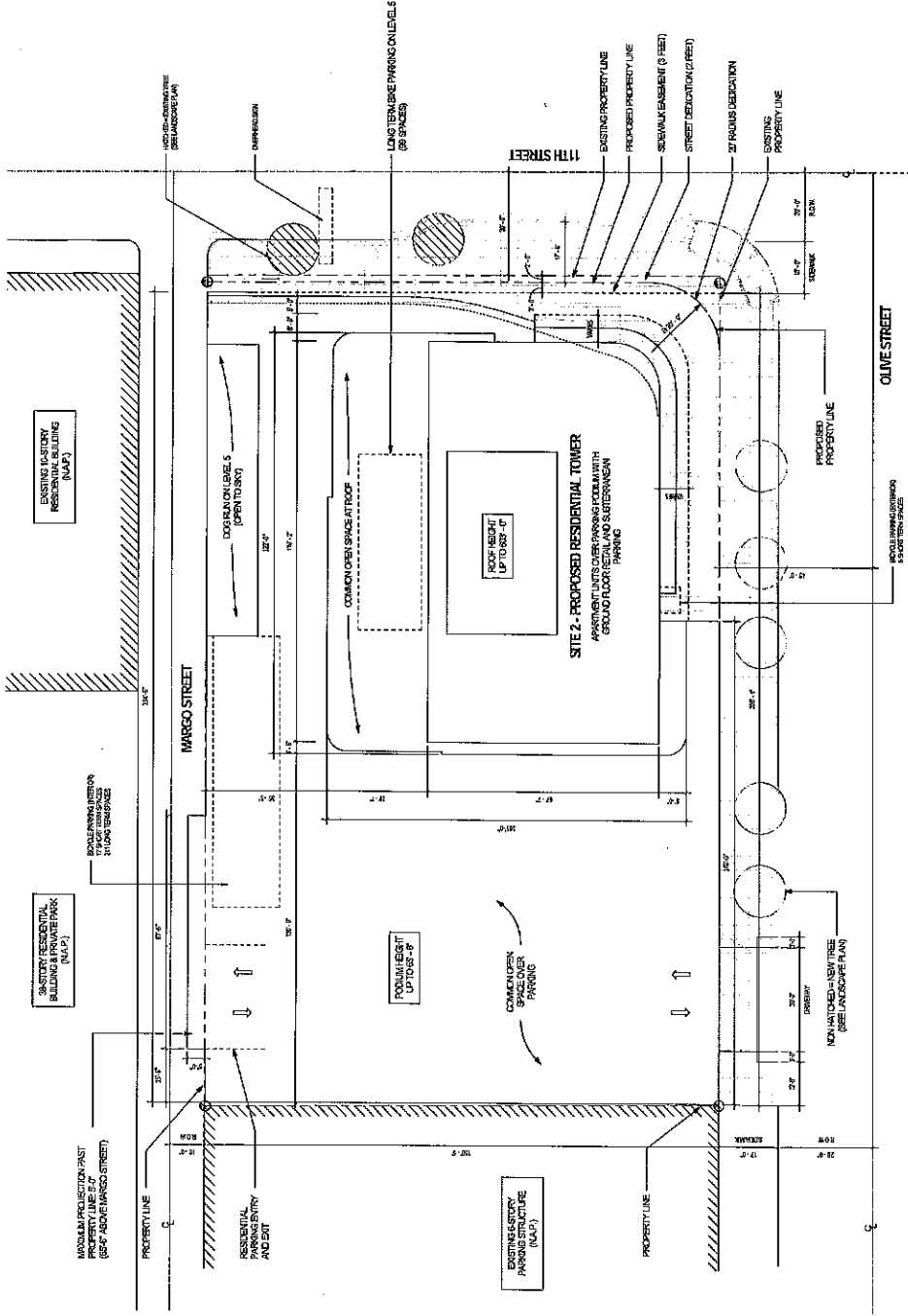


Request for Water Supply Assessment  
DTLA South Park Properties Site 2  
1105-1123 South Olive Street, Los Angeles, CA 90015

Attachment B

Plot Plan

Issue/Revision	Date	By
1. SITE PLAN REVIEW	10/24/19	TKL
2. SITE PLAN REVIEW	11/01/19	TKL
3. SITE PLAN REVIEW	11/22/19	TKL
4. SITE PLAN REVIEW	12/05/19	TKL
5. SITE PLAN REVIEW	12/12/19	TKL
6. SITE PLAN REVIEW	12/19/19	TKL
7. SITE PLAN REVIEW	12/26/19	TKL
8. SITE PLAN REVIEW	01/02/20	TKL
9. SITE PLAN REVIEW	01/09/20	TKL
10. SITE PLAN REVIEW	01/16/20	TKL
11. SITE PLAN REVIEW	01/23/20	TKL
12. SITE PLAN REVIEW	01/30/20	TKL
13. SITE PLAN REVIEW	02/06/20	TKL
14. SITE PLAN REVIEW	02/13/20	TKL
15. SITE PLAN REVIEW	02/20/20	TKL
16. SITE PLAN REVIEW	02/27/20	TKL
17. SITE PLAN REVIEW	03/06/20	TKL
18. SITE PLAN REVIEW	03/13/20	TKL
19. SITE PLAN REVIEW	03/20/20	TKL
20. SITE PLAN REVIEW	03/27/20	TKL
21. SITE PLAN REVIEW	04/03/20	TKL
22. SITE PLAN REVIEW	04/10/20	TKL
23. SITE PLAN REVIEW	04/17/20	TKL
24. SITE PLAN REVIEW	04/24/20	TKL
25. SITE PLAN REVIEW	05/01/20	TKL
26. SITE PLAN REVIEW	05/08/20	TKL
27. SITE PLAN REVIEW	05/15/20	TKL
28. SITE PLAN REVIEW	05/22/20	TKL
29. SITE PLAN REVIEW	05/29/20	TKL
30. SITE PLAN REVIEW	06/05/20	TKL
31. SITE PLAN REVIEW	06/12/20	TKL
32. SITE PLAN REVIEW	06/19/20	TKL
33. SITE PLAN REVIEW	06/26/20	TKL
34. SITE PLAN REVIEW	07/03/20	TKL
35. SITE PLAN REVIEW	07/10/20	TKL
36. SITE PLAN REVIEW	07/17/20	TKL
37. SITE PLAN REVIEW	07/24/20	TKL
38. SITE PLAN REVIEW	07/31/20	TKL
39. SITE PLAN REVIEW	08/07/20	TKL
40. SITE PLAN REVIEW	08/14/20	TKL
41. SITE PLAN REVIEW	08/21/20	TKL
42. SITE PLAN REVIEW	08/28/20	TKL
43. SITE PLAN REVIEW	09/04/20	TKL
44. SITE PLAN REVIEW	09/11/20	TKL
45. SITE PLAN REVIEW	09/18/20	TKL
46. SITE PLAN REVIEW	09/25/20	TKL
47. SITE PLAN REVIEW	10/02/20	TKL
48. SITE PLAN REVIEW	10/09/20	TKL
49. SITE PLAN REVIEW	10/16/20	TKL
50. SITE PLAN REVIEW	10/23/20	TKL
51. SITE PLAN REVIEW	10/30/20	TKL
52. SITE PLAN REVIEW	11/06/20	TKL
53. SITE PLAN REVIEW	11/13/20	TKL
54. SITE PLAN REVIEW	11/20/20	TKL
55. SITE PLAN REVIEW	11/27/20	TKL
56. SITE PLAN REVIEW	12/04/20	TKL
57. SITE PLAN REVIEW	12/11/20	TKL
58. SITE PLAN REVIEW	12/18/20	TKL
59. SITE PLAN REVIEW	12/25/20	TKL
60. SITE PLAN REVIEW	01/01/21	TKL



1 PLOT PLAN  
 1/16" = 1'-0"

Request for Water Supply Assessment  
DTLA South Park Properties Site 2  
1105-1123 South Olive Street, Los Angeles, CA 90015

Attachment C  
Open Space Diagrams

Callison|TKL Inc.  
3900 West 10th Street, Suite 400  
Denver, Colorado 80202  
Tel: 303.440.5000  
www.callison-tkl.com

DTA South Park  
Properties Site 2

Project Address:  
3900 West 10th Street  
Denver, CO 80202

Sheet No. Drawing Title

05/07/18	SITE PLAN/REVISION #1
11/07/18	SITE PLAN/REVISION #2
09/10/20	SITE PLAN/REVISION #3

OPEN SPACE  
DIAGRAMS

G0.06



① L1 - OPEN SPACE  
71,130 SF

② L5 - OPEN SPACE  
71,130 SF

④ L6 - OPEN SPACE  
71,130 SF



③ L21 - OPEN SPACE  
71,130 SF

⑤ L41 - OPEN SPACE  
71,130 SF

⑥ L51 - OPEN SPACE  
71,130 SF

ROOM NAME	ROOM NUMBER	INDOOR AMENITY		OUTDOOR AMENITY	
		AREA (SF)	COUNT	AREA (SF)	COUNT
1	101	10,000	1	500	1
2	102	10,000	1	500	1
3	103	10,000	1	500	1
4	104	10,000	1	500	1
5	105	10,000	1	500	1
6	106	10,000	1	500	1
7	107	10,000	1	500	1
8	108	10,000	1	500	1
9	109	10,000	1	500	1
10	110	10,000	1	500	1
11	111	10,000	1	500	1
12	112	10,000	1	500	1
13	113	10,000	1	500	1
14	114	10,000	1	500	1
15	115	10,000	1	500	1
16	116	10,000	1	500	1
17	117	10,000	1	500	1
18	118	10,000	1	500	1
19	119	10,000	1	500	1
20	120	10,000	1	500	1
21	121	10,000	1	500	1
22	122	10,000	1	500	1
23	123	10,000	1	500	1
24	124	10,000	1	500	1
25	125	10,000	1	500	1

NOT FOR CONSTRUCTION

Request for Water Supply Assessment  
DTLA South Park Properties Site 2  
1105-1123 South Olive Street, Los Angeles, CA 90015

Attachment D  
Landscape Plans

**DTLA South Park  
Properties Site 2**

Sheet Inventory Log

NO.	DATE	DESCRIPTION
1	11/15/11	ISSUE FOR PERMITTING
2	11/15/11	ISSUE FOR PERMITTING
3	11/15/11	ISSUE FOR PERMITTING
4	11/15/11	ISSUE FOR PERMITTING
5	11/15/11	ISSUE FOR PERMITTING
6	11/15/11	ISSUE FOR PERMITTING
7	11/15/11	ISSUE FOR PERMITTING
8	11/15/11	ISSUE FOR PERMITTING
9	11/15/11	ISSUE FOR PERMITTING
10	11/15/11	ISSUE FOR PERMITTING
11	11/15/11	ISSUE FOR PERMITTING

**LEGEND**

- 1 11th Street Improvements & Street Trees per MyFig Streetscape Plans; Refer to next sheet, L1.01B for more information.
- 2 Upgraded Paving within Property Line
- 3 Pre-Approved B.O.E. Specialty Finish Concrete
- 4 18" Wide Brick Band per Downtown Design Guidelines
- 5 7' x 15' Planter
- 6 Entry Drive
- 7 Existing Street Light
- 8 Short Term Bicycle Parking, 24 Spaces Provided
- 9 Raised Planter
- 10 Painted Graphic Connection to Neighboring Park
- 11 Approximate Curbside Parking Locations; 19' x 8', typ.



**Proposed Street Trees:**  
*Platanus acerifolia* - London Planetree

Level	Quantity
Ground Level	8
Level 5 Mezzanine	0
Level 6 Amenity	95
Level 21 Amenity	0
Level 41 Amenity	0
Level 51 Penthouse	12

**Common Open Space: 25,807 SF**  
**Landscaped Open Space Required: 6,452 SF**  
**Landscaped Open Space Provided: 6,452 SF**

Level	Area	Quantity
Ground Level	102 SF	
Level 5 Mezzanine	230 SF	
Level 6 Amenity	5,336 SF	
Level 21 Amenity	0 SF	
Level 41 Amenity	0 SF	
Level 51 Penthouse	784 SF	



SCALE: 1"=16'-0"

**NOT FOR CONSTRUCTION**



**DTLA South Park  
Properties Site 2**

Issue Description Log

Issue No.	Description	Resolution
1	11TH STREET IMPROVEMENTS & STREET TREES PER MYFIG	11/15/2017
2	STREET TREES PER MYFIG	11/15/2017
3	TEMPORARILY REMOVED AND PROTECTED DURING BUILDING CONSTRUCTION; TREES TO BE TRANSPORTED TO SAME LOCATION AS PART OF LANDSCAPE IMPROVEMENTS.	11/15/2017
4	EXISTING PROPERTY LINE	11/15/2017
5	PROPOSED PROPERTY LINE	11/15/2017
6	SHORT TERM BIKE PARKING	11/15/2017
7	curbside parking spots; Typical	11/15/2017
8	3'-0" MIN. wide walkway for every (2)	11/15/2017
9	7'-0" parkway zone	11/15/2017
10	9'-0" parkway zone	11/15/2017
11	25'-0" Average Spacing	11/15/2017
12	50' MIN.	11/15/2017

**SITE 2 LANDSCAPE  
LEVEL 1 -  
PLANTING AND  
OPEN SPACE PLAN**

**L1.01B**

**LEGEND**

COMMON OPEN SPACE		SQUARE FOOTAGE
EXTERIOR COMMON OPEN SPACE		750 SF
LANDSCAPED COMMON OPEN SPACE		102 SF
<b>TOTAL COMMON OPEN SPACE</b>		<b>852 SF</b>
REFER TO ARCHITECTURAL SHEET G0.01b FOR TOTAL OPEN SPACE INFORMATION		
LANDSCAPED AREA (SHOWN AS REFERENCE)		1,214 SF

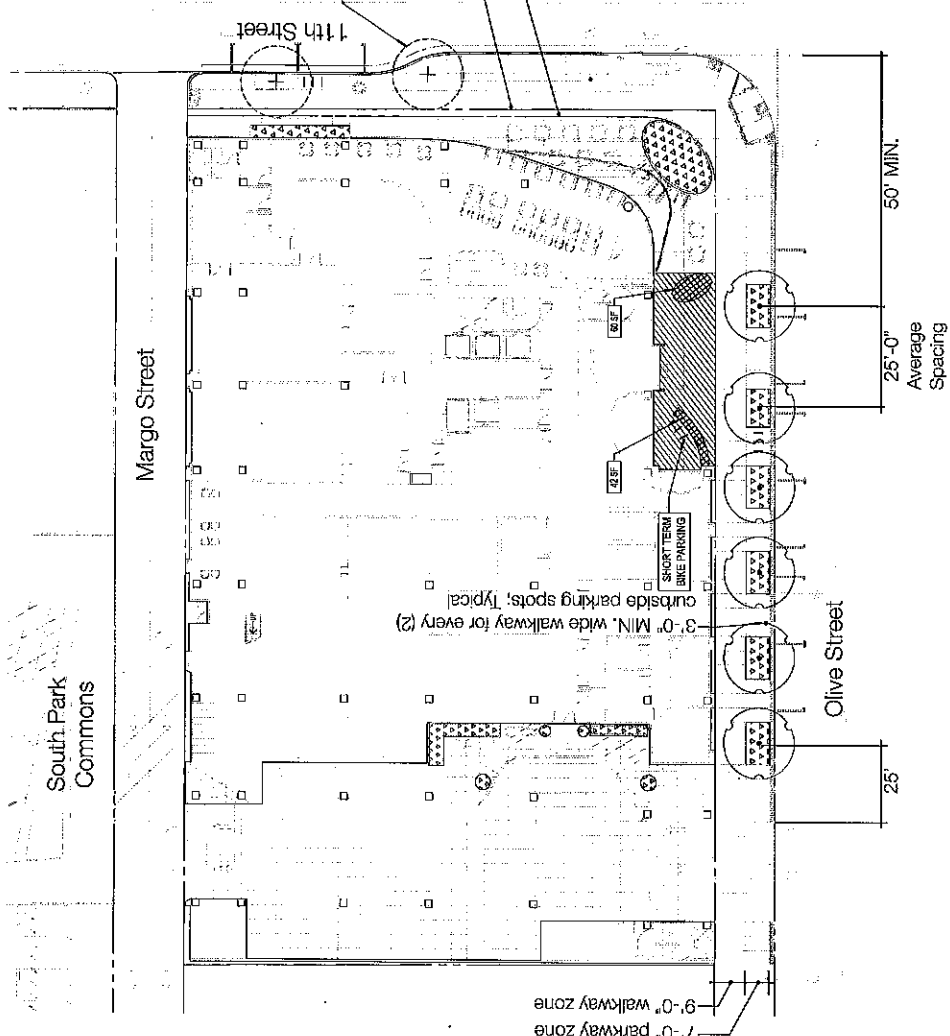
**PLANTING LEGEND: Trees Such As:**

SYMBOL	NAME	QTY	SIZE
+	EXISTING TREE TO BE TEMPORARILY REMOVED, PROTECTED AND TRANSPORTED: KOELREUTERIA BIPINNATA CHINESE FLAME TREE (ON 11TH STREET)**	2	EXISTING
○	PLATANUS ACERIFOLIA LONDON PLANE TREE (ON OLIVE STREET)	6	36" BOX STD

**PLANTING LEGEND: Shrubs/Groundcover Such As:**

SYMBOL	NAME	QTY	SIZE
AGAVE ATTERJUATA		40%	1 GAL @ 18" O.C.
FONATAL AGAVE			
ARGENTOPHYLLUS OVA-URSI			
EMERALD CARPET		40%	5 GAL @ 30" O.C.
CARPET MANZANITA			
DIANELLA REVOLUTA		1,316 SF	
LITTLE RED FLAX			
DIETES GRANDEFLORA			
FORTNIGHT LILY**			
LOMANORA LONGIFOLIA BREEZE		2%	15 GAL @ 36" O.C.
DWARF MAT RUSH**			

\*\* INDICATES PLANT SELECTION PER CITY OF LOS ANGELES MYFIG IMPROVEMENT PLAN



11TH STREET IMPROVEMENTS & STREET TREES PER MYFIG. STREET TREES PER MYFIG TO BE TEMPORARILY REMOVED AND PROTECTED DURING BUILDING CONSTRUCTION; TREES TO BE TRANSPORTED TO SAME LOCATION AS PART OF LANDSCAPE IMPROVEMENTS.

EXISTING PROPERTY LINE  
PROPOSED PROPERTY LINE

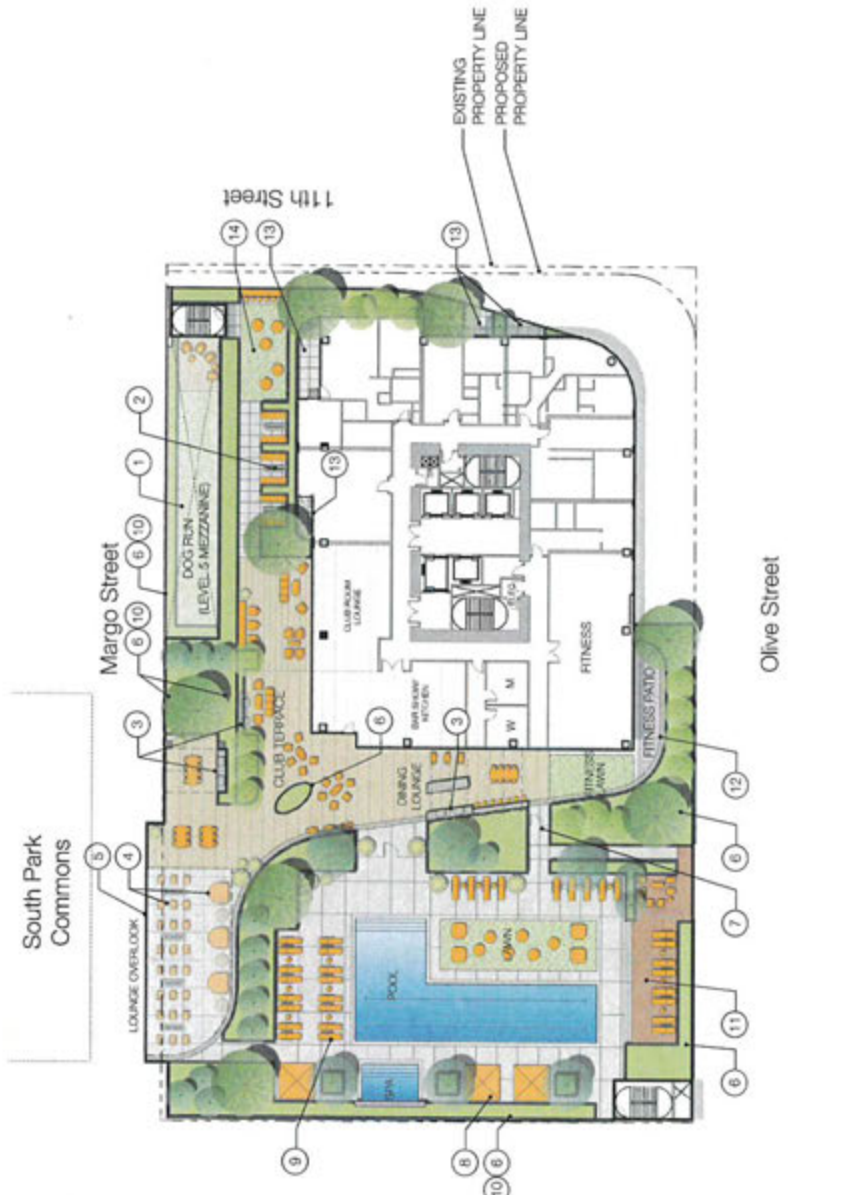
NOT FOR CONSTRUCTION  
SCALE: 1"=16'-0"

**LEGEND**

- 1 Dog Park Below with Enclosure Gate & Owner Lounge
- 2 Firepit and Lounge Seating
- 3 Counter Top with BBQ Grills
- 4 Firepits, Daybeds, & Overhead Tralls
- 5 5' Building Overhang
- 6 Raised Planter, Typical
- 7 5' High Glass Pool Enclosure Fence
- 8 Pool Cabanas
- 9 Chaise Lounges
- 10 Screening Hedge
- 11 Raised Sun Terrace
- 12 Rubberized Athletic Surface
- 13 Private Patio
- 14 Lawn Panel with Outdoor Games

**Proposed Trees:**

-  *Acacia stanogphylla* - Shoestring Acacia
-  *Cercidium x 'Desert Museum'* - Palo Verde 'Desert Museum'
-  *Olea europaea* - Fruitless Olive
-  *Prosopis alba 'Colorado'* - Thornless Argentine Mesquite



South Park Commons

SCALE: 1"=16'-0"  
NOT FOR CONSTRUCTION

NO.	DESCRIPTION	DATE	BY	CHK
1	PREPARE SITE PLAN REVIEW			
2	REVISIONS TO SITE PLAN REVIEW			
3	FINAL SITE PLAN REVIEW			
4	PREPARE SITE PLAN REVIEW			
5	REVISIONS TO SITE PLAN REVIEW			
6	FINAL SITE PLAN REVIEW			

**SITE 2 LANDSCAPE  
LEVEL 6 -  
PLANTING AND  
OPEN SPACE PLAN**

**L1.02B**

**LEGEND**

COMMON OPEN SPACE	AREA	SQUARE FOOTAGE
EXTERIOR COMMON OPEN SPACE	15,347 SF	
LANDSCAPED COMMON OPEN SPACE	5,565 SF	
<b>TOTAL COMMON OPEN SPACE</b>	<b>20,913 SF</b>	

REFER TO ARCHITECTURAL SHEET 60.01a FOR TOTAL OPEN SPACE INFORMATION

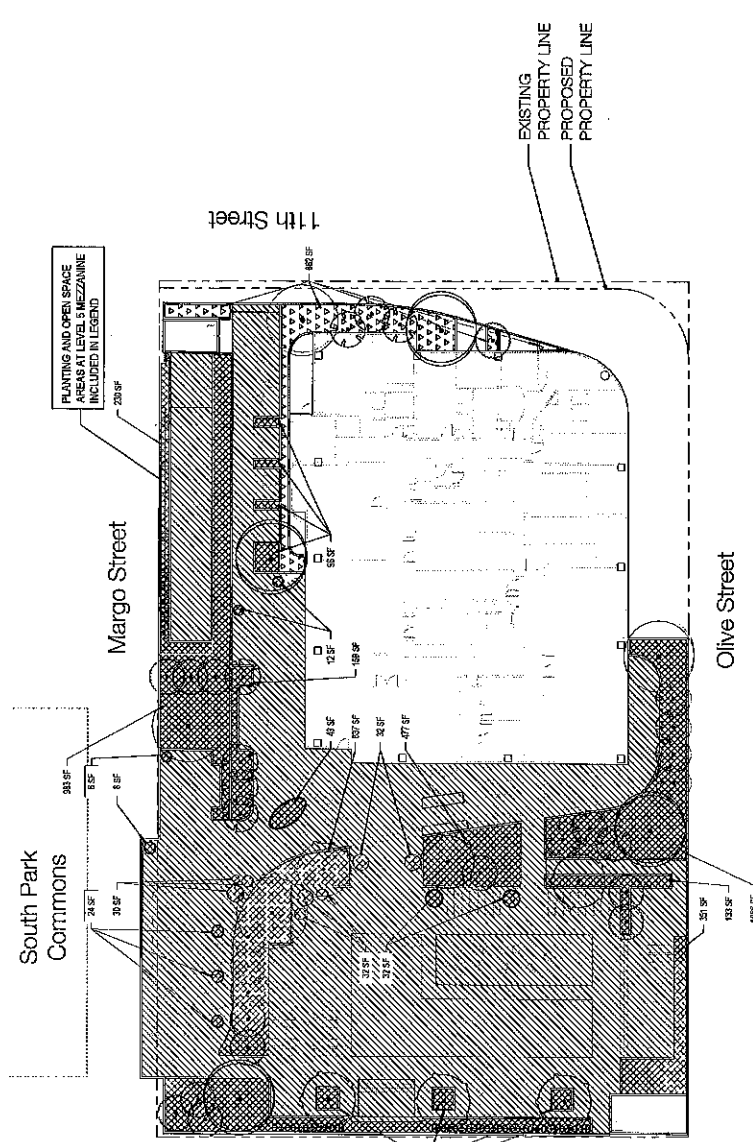
LANDSCAPED AREA (SHOWN AS REFERENCE)

**PLANTING LEGEND: Trees Such As:**

SYMBOL	NAME	QTY	SIZE
	ADONIA STENOPHYLLA	14	24" BOX STD
	SPODOSTREUM ACAIDA	15	24" BOX STD
	CERCIDIUM X DESERT MUSEUM	5	36" BOX STD
	OLEA EUROPEA SP FRUITLESS OLIVE	52	24" BOX STD
	PODOCARPUS E. MONNAL	8	36" BOX STD
	ICEE BLUE YELLOWWOOD		
	PRESOPSIS ALBA COLOSODON THORNLESS ARGENTINE MESQUITE		

**PLANTING LEGEND: Shrubs/Groundcover Such As:**

SYMBOL	NAME	QTY	SIZE
	AGAVE ATTENUATA		
	FOXTAIL AGAVE		
	AEONIUM JOLLY GREEN		
	AEONIUM		
	CAREX DIVULSA		
	BERKLEY SEDGE		
	DANELLA REVOLUTA CASSA BLUE		
	CASSA BLUE FLAX LILLY		
	DANELLA REVOLUTA LITTLE REV		
	LITTLE REV FLAX LILLY		
	DIETES GRANDIFLORA VIREGATA		
	STRIPED PORTULACA LILLY		
	FESTUCA SISKIYOU BLUE	16,228 SF	40% @ 18" O.C.
	SISKIYOU BLUE FESCUE		
	LOWANDRA LONGIFOLIA BREEZE DWARF MAT RUSH		
	OLEA EUROPEA MONTRA LITTLE OLIVE DWARF OLIVE		
	ROSMARINUS OFFICINALIS IRENE TRAILING BLUE ROSEMARY		
	SALVIA SP SAGE 180		
	SEDUM BLUE SPRUCE		
	BLUE SPRUCE STONECROP		
	SENECIO CYLINDRICUS		
	NARROWLEAF CHALKSTICKS		



SCALE: 1/8"=1'-0"

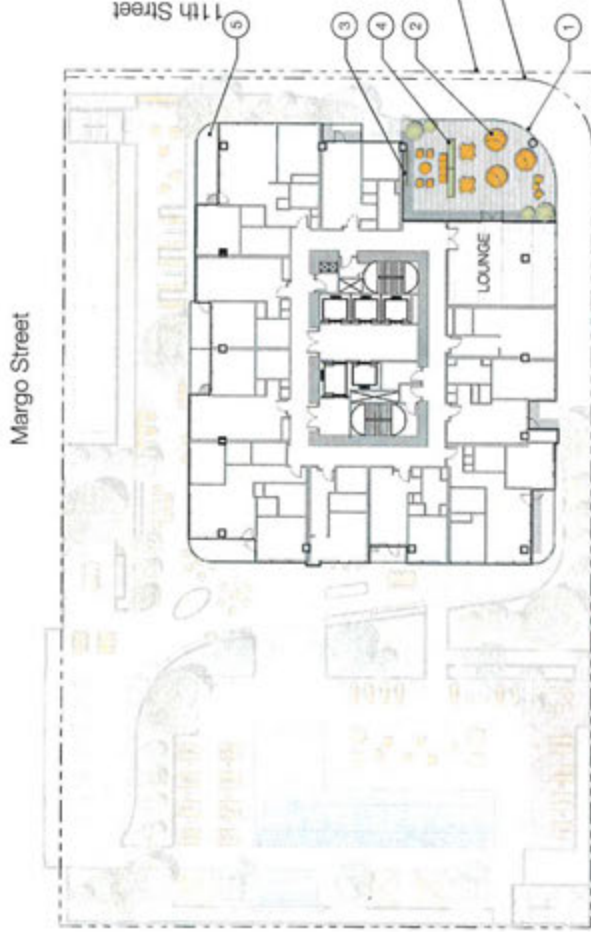
**NOT FOR CONSTRUCTION**

**DTLA South Park  
Properties Site 2**

**LEGEND**

- ① Glass Railing
- ② Lounge Seating
- ③ Entertainment Wall with Lounge Furniture
- ④ Low Planter
- ⑤ Private Patio

South Park Commons



EXISTING PROPERTY LINE  
PROPOSED PROPERTY LINE

SCALE: 1"=16'-0"

**NOT FOR CONSTRUCTION**

**DTLA South Park  
Properties Site 2**

Client Address:  
11111 North Central Expressway  
Suite 200  
Dallas, Texas 75243

Project Name:  
DTLA South Park Properties Site 2

Project Location:  
11111 North Central Expressway  
Suite 200  
Dallas, Texas 75243

Project Number:  
2023-001

Revision:  
1

Date:  
10/10/2023

**LEGEND**

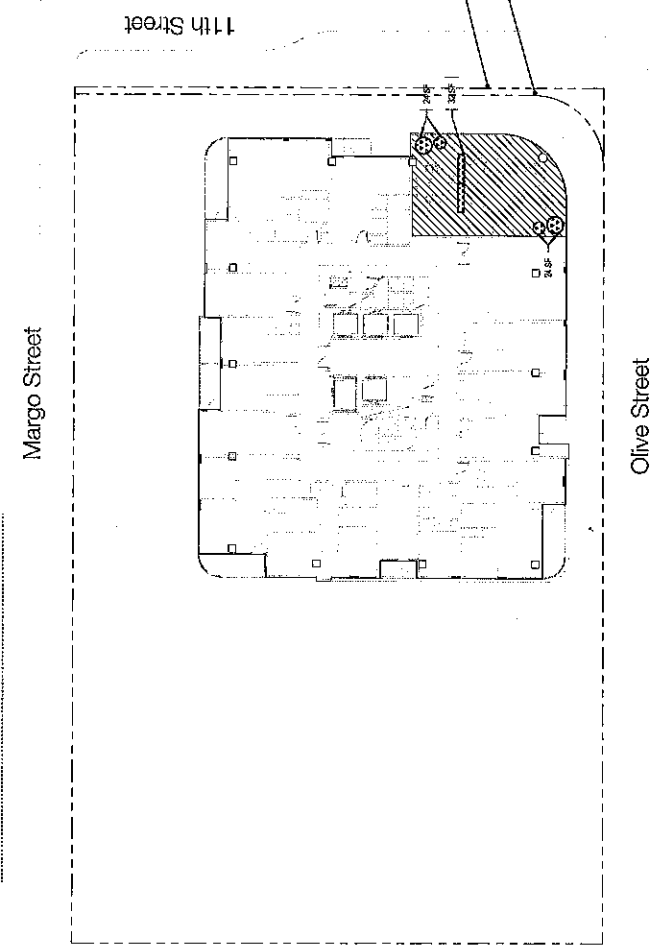
EXTERIOR AREA (SHOWN FOR REFERENCE)		SQUARE FOOTAGE
▨	EXTERIOR AREA (SHOWN FOR REFERENCE)	1,123 SF
▽▽▽▽	LANDSCAPED AREA (SHOWN FOR REFERENCE)	80 SF
▽▽▽▽	TOTAL EXTERIOR AREA	1,203 SF

REFER TO ARCHITECTURAL SHEET G0.01a FOR TOTAL OPEN SPACE INFORMATION

**PLANTING LEGEND: Shrubs/Groundcover Such As:**

SYMBOL	NAME	QTY	SIZE
▽▽▽▽	AGAVE ATTENUATA		
▽▽▽▽	FOXGLOVE		
▽▽▽▽	AEONIUM 'JOLLY GREEN'		
▽▽▽▽	AEONIUM		
▽▽▽▽	DIANELLA REVOLUTA 'CASSA BLUE'	1 ea.	18" O.C.
▽▽▽▽	CASSA BLUE FLAX LILY	40%	
▽▽▽▽	DIANELLA REVOLUTA 'LITTLE REY'		
▽▽▽▽	LITTLE REY FLAX LILY		
▽▽▽▽	FESTUCA 'SISKIYOU BLUE'	80 SF	40%
▽▽▽▽	SISKIYOU BLUE PSCIOE		5 ea. @ 30" O.C.
▽▽▽▽	LOMANDRAL LONGIFOLIA 'BREEZE'		15 ea. @ 18" O.C.
▽▽▽▽	DWARF MAT RUSH		
▽▽▽▽	ROSMARINUS OFFICINALIS 'IRENE'		
▽▽▽▽	TRAILING BLUE ROSEMARY		
▽▽▽▽	SEDUM 'BLUE SPRUCE'		
▽▽▽▽	BLUE SPRUCE STONECRIP		
▽▽▽▽	SENECO CYLINDRICUS		
▽▽▽▽	NARROW-LEAF CHALISTIKAS		

South Park Commons



SCALE: 1"=16'-0"  
NOT FOR CONSTRUCTION

DTLA South Park  
Properties Site 2

North Property Line

2024A	USE CLASSIFICATION	
1024A	USE CLASSIFICATION	
1024B	USE CLASSIFICATION	
1024C	USE CLASSIFICATION	
1024D	USE CLASSIFICATION	
1024E	USE CLASSIFICATION	
1024F	USE CLASSIFICATION	
1024G	USE CLASSIFICATION	
1024H	USE CLASSIFICATION	
1024I	USE CLASSIFICATION	
1024J	USE CLASSIFICATION	
1024K	USE CLASSIFICATION	
1024L	USE CLASSIFICATION	
1024M	USE CLASSIFICATION	
1024N	USE CLASSIFICATION	
1024O	USE CLASSIFICATION	
1024P	USE CLASSIFICATION	
1024Q	USE CLASSIFICATION	
1024R	USE CLASSIFICATION	
1024S	USE CLASSIFICATION	
1024T	USE CLASSIFICATION	
1024U	USE CLASSIFICATION	
1024V	USE CLASSIFICATION	
1024W	USE CLASSIFICATION	
1024X	USE CLASSIFICATION	
1024Y	USE CLASSIFICATION	
1024Z	USE CLASSIFICATION	

Aut.

LEGEND

- 1 Glass Railing
- 2 Lounge Seating
- 3 Entertainment Wall with Lounge Furniture
- 4 Low Planter
- 5 Private Patio

South Park Commons



EXISTING  
PROPERTY LINE  
PROPOSED  
PROPERTY LINE

SCALE: 1"=16'-0"

NOT FOR CONSTRUCTION



**DTLA South Park  
Properties Site 2**

**LEGEND**

AREA	SQUARE FOOTAGE
EXTERIOR AREA (SHOWN FOR REFERENCE)	1,006 SF
EXTERIOR AREA (SHOWN FOR REFERENCE)	102 SF
LANDSCAPED AREA (SHOWN FOR REFERENCE)	1,103 SF
<b>TOTAL EXTERIOR AREA</b>	<b>1,103 SF</b>

REFER TO ARCHITECTURAL SHEET G0.01a FOR TOTAL OPEN SPACE INFORMATION

**PLANTING LEGEND: Shrubs/Groundcover Such As:**

SYMBOL	NAME	QTY	SIZE
▽▽▽▽	AGAVE ATTENUATA		
▽▽▽▽	FOXTAIL AGAVE		
▽▽▽▽	AEDONUM JOLLY GREEN		
▽▽▽▽	AEDONUM		
▽▽▽▽	DIANELLA REVOLUTA CASSIA BLUE		40% @ 18" O.C.
▽▽▽▽	CASSIA BLUE FLAX LILY		
▽▽▽▽	DIANELLA REVOLUTA LITTLE REV		
▽▽▽▽	LITTLE REV FLAX LILY		
▽▽▽▽	FESTUCA SISKIYOU BLUE		
▽▽▽▽	SISKIYOU BLUE FESODE	102 SF	40% @ 30" O.C.
▽▽▽▽	LOMANORA LONGIFOLIA 'BREEZE		
▽▽▽▽	DWARF PINK BUSH		
▽▽▽▽	ROSMARINUS OFFICINALIS IRENE		
▽▽▽▽	TRAILING BLUE ROSEMARY		
▽▽▽▽	SEDUM 'BLUE SPRUCE'		
▽▽▽▽	BLUE SPRUCE STONECROP		20% @ 24" O.C.
▽▽▽▽	SENECIO CYLINDRICUS		
▽▽▽▽	NARROW-LEAF CHALKSTICKS		

South Park Commons

Margo Street

11th Street

Olive Street

EXISTING PROPERTY LINE  
PROPOSED PROPERTY LINE

SCALE: 1"=18'-0"  
NOT FOR CONSTRUCTION



NO.	DESCRIPTION	DATE
1	ISSUED FOR PERMITS REVIEW	08/14/2018
2	ISSUED FOR ARCHITECTURAL REVIEW	08/14/2018
3	ISSUED FOR CIVIL ENGINEERING REVIEW	08/14/2018
4	ISSUED FOR ELECTRICAL ENGINEERING REVIEW	08/14/2018
5	ISSUED FOR MECHANICAL ENGINEERING REVIEW	08/14/2018
6	ISSUED FOR STRUCTURAL ENGINEERING REVIEW	08/14/2018
7	ISSUED FOR LANDSCAPE ARCHITECTURE REVIEW	08/14/2018
8	ISSUED FOR PLANNING AND OPEN SPACE PLAN REVIEW	08/14/2018
9	ISSUED FOR TRAFFIC ENGINEERING REVIEW	08/14/2018
10	ISSUED FOR UTILITY ENGINEERING REVIEW	08/14/2018
11	ISSUED FOR ENVIRONMENTAL ENGINEERING REVIEW	08/14/2018
12	ISSUED FOR HISTORIC PRESERVATION REVIEW	08/14/2018
13	ISSUED FOR ARCHITECTURAL REVIEW	08/14/2018
14	ISSUED FOR CIVIL ENGINEERING REVIEW	08/14/2018
15	ISSUED FOR ELECTRICAL ENGINEERING REVIEW	08/14/2018
16	ISSUED FOR MECHANICAL ENGINEERING REVIEW	08/14/2018
17	ISSUED FOR STRUCTURAL ENGINEERING REVIEW	08/14/2018
18	ISSUED FOR LANDSCAPE ARCHITECTURE REVIEW	08/14/2018
19	ISSUED FOR PLANNING AND OPEN SPACE PLAN REVIEW	08/14/2018
20	ISSUED FOR TRAFFIC ENGINEERING REVIEW	08/14/2018
21	ISSUED FOR UTILITY ENGINEERING REVIEW	08/14/2018
22	ISSUED FOR ENVIRONMENTAL ENGINEERING REVIEW	08/14/2018
23	ISSUED FOR HISTORIC PRESERVATION REVIEW	08/14/2018

**LEGEND**

COMMON OPEN SPACE	AREA	SQUARE FOOTAGE
EXTERIOR COMMON OPEN SPACE	3,298 SF	3,298 SF
LANDSCAPED COMMON OPEN SPACE	784 SF	784 SF
<b>TOTAL COMMON OPEN SPACE</b>	<b>4,082 SF</b>	<b>4,082 SF</b>

REFER TO ARCHITECTURAL SHEET 00.010'S FOR TOTAL OPEN SPACE INFORMATION

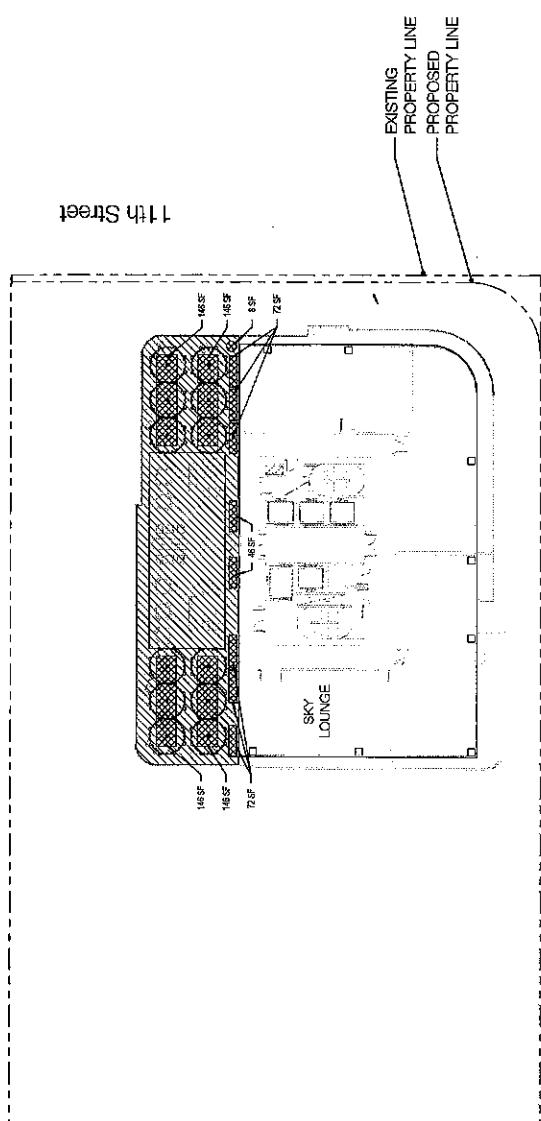
**PLANTING LEGEND: Trees Such As:**

SYMBOL	NAME	QTY	SIZE
	CITRUS SP. TBD	12	24" BOX STD

**PLANTING LEGEND: Shrubs/Groundcover Such As:**

SYMBOL	NAME	QTY	SIZE
	AGAVE ATTENUATA FOXTAIL AGAVE AECONIUM JOLLY GREEN AECONIUM CAREX DIVULSA BERKLEY SEDGE		
	DIANELLA REVOLUTA 'CASSA BLUE' CASSA BLUE FLAX LILY DIANELLA REVOLUTA 'LITTLE REV' LITTLE REV FLAX LILY	40%	1 GAL @ 15" O.C.
	FESTUCA SISKIYOU BLUE SISKIYOU BLUE FESCUE	40%	5 GAL @ 30" O.C.
	LOMANDELA LONGIFOLIA 'BREEZE' DIABAS 'MAY RUSH'	784 SF	
	ROSMARINUS OFFICINALIS 'WENE' TRAILING BLUE ROSEMARY SALVIA SP. SAGE, TBD	20%	15 GAL @ 48" O.C.
	SEDUM 'BLUE SPRUCE' BLUE SPRUCE STONECROP		
	SENEGEO CYLINDRICUS NARROW-LEAF CHALKSTICKS		

South Park Commons



11th Street

Margo Street

Olive Street

SCALE: 1"=16'-0"

NOT FOR CONSTRUCTION







**From:** [Nuri Cho](#)  
**To:** [Kim, Theresa](#)  
**Cc:** [Ned Baldwin](#); [Paul Garry](#); [markwareham@warehamconsultingllc.com](mailto:markwareham@warehamconsultingllc.com); [Andrew Dutton](#)  
**Subject:** [EXTERNAL] Re: Updated - WSA for DTLA South Park Properties Site 2 Scope Confirmation  
**Date:** Friday, April 16, 2021 10:05:04 AM

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EXTERNAL EMAIL! This email was generated from a non-LADWP address. If any links exist, do not click/open on them unless you are 100% certain of the associated site or source. ALWAYS hover over the link to preview the actual URL/site and confirm its legitimacy.

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Hi Theresa,

I would like to confirm that the scope of work is accurate in this table, thank you.

On Fri, Apr 16, 2021 at 9:12 AM Kim, Theresa <[Theresa.Kim@ladwp.com](mailto:Theresa.Kim@ladwp.com)> wrote:

Dear Nuri,

We are in the process of completing the Water Supply Assessment (WSA) Board Package for the Downtown Los Angeles South Park Properties at Site 2 Project. The LADWP requests that the Department of City Planning confirm, by e-mail, the correct detail scope (shown in the table below) for the Proposed Project. Your scope confirming e-mail will be included as part of the WSA and the confirmed scope is used for calculating the water demand in the WSA.

LADWP received the WSA Request Letter for the Proposed Project on November 20, 2020. The scope considered in LADWP's water demand calculations, as received in the initial WSA Request Letter and subsequent information from the Project Team, is as follows:

Existing Use to be Removed <sup>1</sup>	Quantity
Surface Parking Lot	36,120 sf
Proposed Use <sup>1</sup>	Quantity
<b>RESIDENTIAL UNITS</b>	
Residential: Studios	89 du
Residential: 1 bd	266 du
Residential: 1 bd Apartment with den	2 du
Residential: 2 bd Apartment	176 du
Residential: 3 bd	3 du
<b>Residential Units Total</b>	<b>536 du</b>



RESIDENTIAL AMENITIES AND COMMERCIAL		
Synthetic Turf Ares (lvl 5 Outdoor Dog Run, Lvl 6 pool and fitness area)	1,600	sf
Dog Lounge (lvl 5)	1,749	sf
Fitness (lvl 5, 6)	3,518	sf
Office (lvl 5 "co-working")	2,860	sf
Lounge (lvl 6, 21, 41, 51) <sup>2</sup>	277	seats
Pool and Spa (lvl 6)	1,632	sf
Office (lvl 1)	1,470	sf
Restaurant-seating area (lvl 1) <sup>3</sup>	139	seats
		(Assume half the space of 4178 sf is for dining)
Restaurant- kitchen/storage/etc (lvl 1) <sup>3</sup>	2,089	sf
		(Assume half the space of 4178 sf is for dining)
<b>Landscaping</b>	<b>8,612</b>	<b>sf</b>
<b>Covered Parking</b>	<b>258,647</b>	<b>sf</b>
<b>Cooling Tower Total</b>		
Chiller Capacity	1,000	ton
Operating Hours	24hrs/day, 365	days/year

### Notes

1. Proposed Uses that do not have a water demand are not shown here.
2. Lounge Areas that contain a preparation area with plumbing fixtures were included in the water demand.
3. Restaurant area's water demand was calculated based on 50% dining and 50% kitchen area for water demand

Also, the Proposed Project is consistent with the demographic projections in both the 2012 and 2016 Regional Transportation Plan (RTP) by Southern California Association of Governments (SCAG) for the City of Los Angeles.

**If the above listed project scope information is accurate and consistent with the Proposed Project, please reply to this e-mail to confirm. If not, please edit the scope accordingly and send back to me by e-mail. If you have any questions, feel free to contact me.**

Theresa Vu Kim

Los Angeles Department of Water and Power

111 N. Hope Street, Room 314

Los Angeles, CA 90012

O: (213) 367-1491

-----Confidentiality Notice-----

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**Nuri Cho**

Pronouns: She, Her, Hers

City Planner

**Los Angeles City Planning**

200 N. Spring St., Room 620

Los Angeles, CA 90012

T: (213) 978-1177 | [Planning4LA.org](http://Planning4LA.org)



## Appendix B

Water Conservation Commitment Letter

**MREG 1105 Olive LLC**  
1150 S Olive Street  
Suite 2250  
Los Angeles, CA 90015

March 10, 2021

Richard F. Harasick  
Senior Assistant General Manager for Water Systems  
Los Angeles Department of Water & Power  
111 North Hope Street, Room 1455  
Los Angeles, CA 90012-5701

Re: WATER CONSERVATION COMMITMENTS FOR THE DOWNTOWN LOS ANGELES (DTLA) SOUTH PARK PROPERTY AT SITE 2 PROJECT  
1105 S. Olive Street  
City Planning Department Case No. VTT-82109, CPC-2018-2600-TDR-CUP-ZV-DD-SPR

Dear Mr. Harasick:

MREG 1105 Olive, LLC proposes to develop the DTLA South Park Property at Site 2 Project (Project) within the Central City Community Plan Area of the City of Los Angeles. The project site, which encompasses approximately 0.83 acres, is generally bounded by 11<sup>th</sup> Street to the north, Olive Street to the east, a commercial parking structure to the south, and an alley (Margo Street) to the west. The proposed project would develop approximately 4,178 square feet of retail/restaurant space and 536 residential units. The Project would also include approximately 258,647 square feet of covered parking and 8,612 square feet of landscaping. As part of the project, an existing surface parking lot would be removed.

The Applicant understands the City of Los Angeles' policy that future water needs shall be met by expanding water recycling and conservation. In order to reduce the Project's water demand, the Applicant has committed to implement the following water conservation measures that are in addition to those required by codes and ordinances for the entire Project:

- Fixtures
  - Showerheads with a flow rate of "1.75" gallons per minute, or less
- Landscape and irrigation
  - Artificial Turf
  - California Friendly® plants or native plants
  - Drip/ Subsurface Irrigation (Micro-Irrigation)
  - Micro-Spray
  - Proper Hydro-zoning/Zoned Irrigation-(groups plants with similar water requirements together).
- Pool
  - Install a sub-meter on the pool make-up line so water use can be monitored and leaks can be identified and repaired
  - Leak Detection System for swimming pools and Jacuzzi

- Pool splash troughs around the perimeter that drain back into the pool
- Pool/Spa recirculating filtration equipment
- Water-Saving Pool Filter
  
- Cooling Tower Plant
  - Ownership shall provide an approved Los Angeles County Health Department /Los Angeles City Department Building and Safety Gray Water System for 100% of Cooling Tower Make-up Water.
  
- Utilities
  - Individual metering and billing for water use for every commercial unit.
  - Leak detector at main building water boiler system.

The Applicant has also committed to comply with the City of Los Angeles Low Impact Development Ordinances (City Ordinance No. 181899 and No. 183833) and to implement Best Management Practices that have stormwater recharge or reuse benefits for the entire Project as applicable:

(Note: BMPs listed based on hierarchy established by City of Los Angeles Low Impact Development Handbook)

- Pretreatment BMPs – As appropriate, a combination of the following:
  - Catch Basin Insert – a device that can be inserted into an existing catch basin to provide some level of runoff contaminant removal.
  - Downspout Filter – a device that can be inserted into a downspout pipe to provide some level of runoff contaminant removal.
  - Hydrodynamic Separator – a prefabricated in-line chamber which removes debris and pollutants through screening and settlement of influent stormwater.
  - Pre-settling Chamber – a prefabricated in-line chamber which removes debris and pollutants through settlement and controlled discharge.
- Infiltration BMPs – If feasible for the Project
  - Drywell(s) – a vertical system which allows for stormwater infiltration deep beneath proposed foundations/surfaces.
- Capture and Re-use BMPs – If infiltration is considered infeasible
  - Cistern – captures stormwater runoff as it comes down through the roof gutter system to offset domestic water demand.

Should you have any questions, please do not hesitate to call at 213-542-4316.

Sincerely,

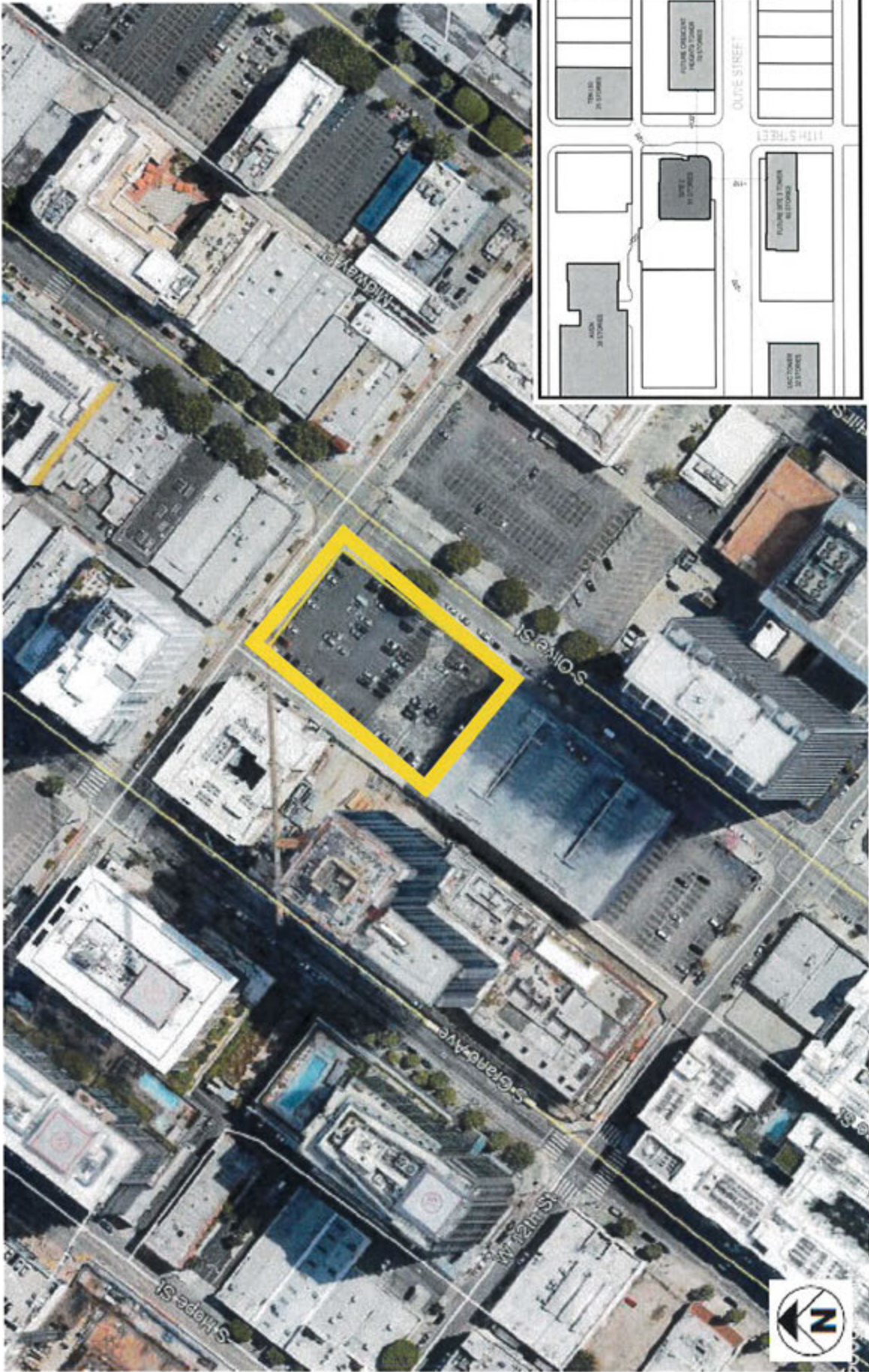


Kevin Lindquist  
 Authorized Signatory  
 MREG 1105 Olive LLC

## Appendix C

### Project Location Map





SOURCE: Google Earth - 2020; Meridian Consultants, LLC - February 2020

## Appendix D

### Adjudicated Groundwater Basin Judgments

- San Fernando Basin – Judgment No. 650079
- Sylmar Basin – Judgment No. 650079
- Central Basin – Judgment No, 786656

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SUPERIOR COURT OF THE STATE OF CALIFORNIA  
FOR THE COUNTY OF LOS ANGELES

THE CITY OF LOS ANGELES,

Plaintiff,

vs.

CITY OF SAN FERNANDO, ET AL.

Defendants.

No. 650079

JUDGMENT

There follows by consecutive paging Recitals (page 1), Definitions and List of Attachments (pages 1 to 6), Designation of Parties (page 6), Declaration re Geology and Hydrology (pages 6 to 12), Declaration of Rights (pages 12 to 21), Injunctions (pages 21 to 22), Continuing Jurisdiction (page 23), Watermaster (pages 23 to 29), Physical Solution (pages 29 to 34), and Miscellaneous Provisions (pages 34 to 35), and Attachments (pages 36 to 46). Each and all of said several parts constitute a single integrated Judgment herein.

1           4.2.3 Separate Ground Water Basins. The physical and geologic characteristics of each  
2 of the ground water basins, Eagle rock, Sylmar, Verdugo and San Fernando, cause impediments  
3 to inter-basin ground water flow whereby there is created separate underground reservoirs. Each  
4 of said basins contains a common source of water supply to parties extracting ground water from  
5 each of said basins. The amount of underflow from Sylmar Basin, Verdugo Basin and Eagle  
6 Rock Basin to San Fernando Basin is relatively small, and on the average has been  
7 approximately 540 acre feet per year from the Sylmar Basin; 80 acre feet per year from Verdugo  
8 Basin; and 50 acre feet per year from Eagle Rock Basin. Each has physiographic, geologic and  
9 hydrologic differences; one from the other, and each meets the hydrologic definition of "basin".  
10 The extractions of water in the respective basins affect the other water users within that basin but  
11 do not significantly or materially affect the ground water levels in any of the other basins. The  
12 underground reservoirs of Eagle Rock, Verdugo and Sylmar Basins are independent of one  
13 another and of the San Fernando Basin.

14           4.2.4 Safe Yield and Native Safe Yield. The safe yield and native safe yield, stated in  
15 acre feet, of the three largest basins for the year 1964-65 was as follows:

<u>Basin</u>	<u>Safe Yield</u>	<u>Native Safe Yield</u>
San Fernando	90,680	43,660
Sylmar	6,210	3,850
Verdugo	7,150	3,590

20 The safe yield of Eagle Rock Basin is derived from imported water delivered by Los Angeles.

21 There is no measurable native safe yield.

22           4.2.5 Separate Basins -- Separate Rights. The rights of the parties to extract ground  
23 water within ULARA are separate and distinct as within each of the several ground water basins  
24 within said watershed.

25           4.2.6 Hydrologic Condition of Basins. The several basins within ULARA are in varying  
26 hydrologic conditions, which result in different legal consequences.

27           4.2.6.1 San Fernando Basin. The first full year of overdraft in San Fernando  
28 Basin was 1954-55. It remained in overdraft continuously until 1968, when an injunction

1 LAGERLOF, SENICAL, DRESCHER & SWIFT

2 301 North Lake Avenue, 10th Floor

3 Pasadena, California 91101

4 (818) 793-9400 or (213) 385-4345

5

6

7

8

SUPERIOR COURT OF THE STATE OF CALIFORNIA

9

FOR THE COUNTY OF LOS ANGELES

10

11 CENTRAL AND WEST BASIN WATER  
REPLENISHMENT DISTRICT, etc.,

) No. 786,656  
) SECOND AMENDED  
) JUDGMENT

12

Plaintiff,)

13

v.

) (Declaring and establishing water rights in  
) Central Basin and enjoining extractions  
) therefrom in excess of specified quantities.)

14

CHARLES E. ADAMS, et al.,

15

)  
)  
) Defendants.)

16

CITY OF LAKEWOOD, a municipal  
corporation,

17

)  
)  
) Cross-Complaint.)

18

v.

19

CHARLES E. ADAMS, et al.,

20

)  
)  
) Cross-Defendants.)

21

22

23

The above-entitled matter duly and regularly came on for trial in Department 73

24

of the above-entitled Court (having been transferred thereto from Department 75 by order of the

25

presiding Judge), before the Honorable Edmund M. Moor, specially assigned Judge, on May 17,

26

1965, at 10:00 a.m. Plaintiff was represented by its attorneys BEWLEY, KNOOP,

27



1 of the close of the water year ending September 30, 1978 in accordance with the Watermaster  
2 Reports on file with this Court and the records of the Plaintiff. This tabulation does not take into  
3 account additions or subtractions from any Allowed Pumping Allocation of a producer for the  
4 1978-79 water year, nor other adjustments not representing change in fee title to water rights,  
5 such as leases of water rights, nor does it include the names of lessees of landowners where the  
6 lessees are exercising the water rights. The exercise of all water rights is subject, however, to the  
7 provisions of this Judgment is hereinafter contained. All of said rights are of the same legal  
8 force and effect and are without priority with reference to each other. Each party whose name is  
9 hereinafter set forth in the tabulation set forth in Appendix "2" of this judgment, and after whose  
10 name there appears under the column "Total Water Right" the figure "0" owns no rights to  
11 extract any ground water from Central Basin, and has no right to extract any ground water from  
12 Central Basin.

13 (b) Defendant The City of Los Angeles is the owner of the right to extract fifteen  
14 thousand (15,000) acre feet per annum of ground water from Central Basin. Defendant  
15 Department of Water and Power of the City of Los Angeles has no right to extract ground water  
16 from Central Basin except insofar as it has the right, power, duty or obligation on behalf of  
17 defendant The City of Los Angeles to exercise the water rights in Central Basin of defendant The  
18 City of Los Angeles. The exercise of said rights are subject, however, to the provisions of this  
19 judgment hereafter contained, including but not limited to, sharing with other parties in any  
20 subsequent decreases or increases in the quantity of extractions permitted from Central Basin,  
21 pursuant to continuing jurisdiction of the Court, on the basis that fifteen thousand (15,000) acre  
22 feet bears to the Allowed Pumping Allocations of the other parties.

23 (c) No party to this action is the owner of or has any right to extract ground water  
24 from Central Basin except as herein affirmatively determined.

25 2. Parties Enjoined as Regards Quantities of Extractions.

26

27



## Appendix E

Water Supply Assessment Provisions  
California Water Code Section 10910-10915

**State of California**

**WATER CODE**

**Section 10910**

---

10910. (a) Any city or county that determines that a project, as defined in Section 10912, is subject to the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) under Section 21080 of the Public Resources Code shall comply with this part.

(b) The city or county, at the time that it determines whether an environmental impact report, a negative declaration, or a mitigated negative declaration is required for any project subject to the California Environmental Quality Act pursuant to Section 21080.1 of the Public Resources Code, shall identify any water system whose service area includes the project site and any water system adjacent to the project site that is, or may become as a result of supplying water to the project identified pursuant to this subdivision, a public water system, as defined in Section 10912, that may supply water for the project. If the city or county is not able to identify any public water system that may supply water for the project, the city or county shall prepare the water assessment required by this part after consulting with any entity serving domestic water supplies whose service area includes the project site, the local agency formation commission, and any public water system adjacent to the project site.

(c) (1) The city or county, at the time it makes the determination required under Section 21080.1 of the Public Resources Code, shall request each public water system identified pursuant to subdivision (b) to determine whether the projected water demand associated with a proposed project was included as part of the most recently adopted urban water management plan adopted pursuant to Part 2.6 (commencing with Section 10610).

(2) If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f), and (g).

(3) If the projected water demand associated with the proposed project was not accounted for in the most recently adopted urban water management plan, or the public water system has no urban water management plan, the water supply assessment for the project shall include a discussion with regard to whether the public water system's total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the public water system's existing and planned future uses, including agricultural and manufacturing uses.

(4) If the city or county is required to comply with this part pursuant to subdivision (b), the water supply assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry, and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses.

(d) (1) The assessment required by this section shall include an identification of any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, and a description of the quantities of water received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts.

(2) An identification of existing water supply entitlements, water rights, or water service contracts held by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall be demonstrated by providing information related to all of the following:

(A) Written contracts or other proof of entitlement to an identified water supply.

(B) Copies of a capital outlay program for financing the delivery of a water supply that has been adopted by the public water system.

(C) Federal, state, and local permits for construction of necessary infrastructure associated with delivering the water supply.

(D) Any necessary regulatory approvals that are required in order to be able to convey or deliver the water supply.

(e) If no water has been received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts, the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall also include in its water supply assessment pursuant to subdivision (c), an identification of the other public water systems or water service contractholders that receive a water supply or have existing water supply entitlements, water rights, or water service contracts, to the same source of water as the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has identified as a source of water supply within its water supply assessments.

(f) If a water supply for a proposed project includes groundwater, the following additional information shall be included in the water supply assessment:

(1) A review of any information contained in the urban water management plan relevant to the identified water supply for the proposed project.

(2) (A) A description of any groundwater basin or basins from which the proposed project will be supplied.

(B) For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the public water system, or the city

or county if either is required to comply with this part pursuant to subdivision (b), has the legal right to pump under the order or decree.

(C) For a basin that has not been adjudicated that is a basin designated as high- or medium-priority pursuant to Section 10722.4, information regarding the following:

(i) Whether the department has identified the basin as being subject to critical conditions of overdraft pursuant to Section 12924.

(ii) If a groundwater sustainability agency has adopted a groundwater sustainability plan or has an approved alternative, a copy of that alternative or plan.

(D) For a basin that has not been adjudicated that is a basin designated as low- or very low priority pursuant to Section 10722.4, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current bulletin of the department that characterizes the condition of the groundwater basin, and a detailed description by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), of the efforts being undertaken in the basin or basins to eliminate the long-term overdraft condition.

(3) A detailed description and analysis of the amount and location of groundwater pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), for the past five years from any groundwater basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(4) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), from any basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(5) An analysis of the sufficiency of the groundwater from the basin or basins from which the proposed project will be supplied to meet the projected water demand associated with the proposed project. A water supply assessment shall not be required to include the information required by this paragraph if the public water system determines, as part of the review required by paragraph (1), that the sufficiency of groundwater necessary to meet the initial and projected water demand associated with the project was addressed in the description and analysis required by paragraph (4) of subdivision (b) of Section 10631.

(g) (1) Subject to paragraph (2), the governing body of each public water system shall submit the assessment to the city or county not later than 90 days from the date on which the request was received. The governing body of each public water system, or the city or county if either is required to comply with this act pursuant to subdivision (b), shall approve the assessment prepared pursuant to this section at a regular or special meeting.

(2) Prior to the expiration of the 90-day period, if the public water system intends to request an extension of time to prepare and adopt the assessment, the public water

system shall meet with the city or county to request an extension of time, which shall not exceed 30 days, to prepare and adopt the assessment.

(3) If the public water system fails to request an extension of time, or fails to submit the assessment notwithstanding the extension of time granted pursuant to paragraph (2), the city or county may seek a writ of mandamus to compel the governing body of the public water system to comply with the requirements of this part relating to the submission of the water supply assessment.

(h) Notwithstanding any other provision of this part, if a project has been the subject of a water supply assessment that complies with the requirements of this part, no additional water supply assessment shall be required for subsequent projects that were part of a larger project for which a water supply assessment was completed and that has complied with the requirements of this part and for which the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has concluded that its water supplies are sufficient to meet the projected water demand associated with the proposed project, in addition to the existing and planned future uses, including, but not limited to, agricultural and industrial uses, unless one or more of the following changes occurs:

(1) Changes in the project that result in a substantial increase in water demand for the project.

(2) Changes in the circumstances or conditions substantially affecting the ability of the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), to provide a sufficient supply of water for the project.

(3) Significant new information becomes available that was not known and could not have been known at the time when the assessment was prepared.

(i) For the purposes of this section, hauled water is not considered as a source of water.

(Amended by Stats. 2016, Ch. 594, Sec. 2. (SB 1262) Effective January 1, 2017.)

**State of California**

**WATER CODE**

**Section 10911**

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10911. (a) If, as a result of its assessment, the public water system concludes that its water supplies are, or will be, insufficient, the public water system shall provide to the city or county its plans for acquiring additional water supplies, setting forth the measures that are being undertaken to acquire and develop those water supplies. If the city or county, if either is required to comply with this part pursuant to subdivision (b), concludes as a result of its assessment, that water supplies are, or will be, insufficient, the city or county shall include in its water supply assessment its plans for acquiring additional water supplies, setting forth the measures that are being undertaken to acquire and develop those water supplies. Those plans may include, but are not limited to, information concerning all of the following:

(1) The estimated total costs, and the proposed method of financing the costs, associated with acquiring the additional water supplies.

(2) All federal, state, and local permits, approvals, or entitlements that are anticipated to be required in order to acquire and develop the additional water supplies.

(3) Based on the considerations set forth in paragraphs (1) and (2), the estimated timeframes within which the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), expects to be able to acquire additional water supplies.

(b) The city or county shall include the water supply assessment provided pursuant to Section 10910, and any information provided pursuant to subdivision (a), in any environmental document prepared for the project pursuant to Division 13 (commencing with Section 21000) of the Public Resources Code.

(c) The city or county may include in any environmental document an evaluation of any information included in that environmental document provided pursuant to subdivision (b). The city or county shall determine, based on the entire record, whether projected water supplies will be sufficient to satisfy the demands of the project, in addition to existing and planned future uses. If the city or county determines that water supplies will not be sufficient, the city or county shall include that determination in its findings for the project.

(Amended by Stats. 2001, Ch. 643, Sec. 5. Effective January 1, 2002.)



**State of California**

**WATER CODE**

**Section 10912**

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10912. For the purposes of this part, the following terms have the following meanings:

- (a) "Project" means any of the following:
- (1) A proposed residential development of more than 500 dwelling units.
  - (2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.
  - (3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
  - (4) A proposed hotel or motel, or both, having more than 500 rooms.
  - (5) A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.
  - (6) A mixed-use project that includes one or more of the projects specified in this subdivision.
  - (7) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.
- (b) If a public water system has fewer than 5,000 service connections, then "project" means any proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of the public water system's existing service connections, or a mixed-use project that would demand an amount of water equivalent to, or greater than, the amount of water required by residential development that would represent an increase of 10 percent or more in the number of the public water system's existing service connections.
- (c) "Public water system" means a system for the provision of piped water to the public for human consumption that has 3,000 or more service connections. A public water system includes all of the following:
- (1) Any collection, treatment, storage, and distribution facility under control of the operator of the system that is used primarily in connection with the system.
  - (2) Any collection or pretreatment storage facility not under the control of the operator that is used primarily in connection with the system.
  - (3) Any person who treats water on behalf of one or more public water systems for the purpose of rendering it safe for human consumption.
- (d) This section shall become operative on January 1, 2018.

(Amended (as added by Stats. 2011, Ch. 588, Sec. 2) by Stats. 2016, Ch. 669, Sec. 2. (AB 2561) Effective September 26, 2016. Section operative January 1, 2018, by its own provisions.)

**State of California**

**WATER CODE**

**Section 10914**

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10914. (a) Nothing in this part is intended to create a right or entitlement to water service or any specific level of water service.

(b) Nothing in this part is intended to either impose, expand, or limit any duty concerning the obligation of a public water system to provide certain service to its existing customers or to any future potential customers.

(c) Nothing in this part is intended to modify or otherwise change existing law with respect to projects which are not subject to this part.

(d) This part applies only to a project for which a notice of preparation is submitted on or after January 1, 1996.

(Added by Stats. 1995, Ch. 881, Sec. 4. Effective January 1, 1996.)

**State of California**

**WATER CODE**

**Section 10915**

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10915. The County of San Diego is deemed to comply with this part if the Office of Planning and Research determines that all of the following conditions have been met:

(a) Proposition C, as approved by the voters of the County of San Diego in November 1988, requires the development of a regional growth management plan and directs the establishment of a regional planning and growth management review board.

(b) The County of San Diego and the cities in the county, by agreement, designate the San Diego Association of Governments as that review board.

(c) A regional growth management strategy that provides for a comprehensive regional strategy and a coordinated economic development and growth management program has been developed pursuant to Proposition C.

(d) The regional growth management strategy includes a water element to coordinate planning for water that is consistent with the requirements of this part.

(e) The San Diego County Water Authority, by agreement with the San Diego Association of Governments in its capacity as the review board, uses the association's most recent regional growth forecasts for planning purposes and to implement the water element of the strategy.

(f) The procedures established by the review board for the development and approval of the regional growth management strategy, including the water element and any certification process established to ensure that a project is consistent with that element, comply with the requirements of this part.

(g) The environmental documents for a project located in the County of San Diego include information that accomplishes the same purposes as a water supply assessment that is prepared pursuant to Section 10910.

(Amended by Stats. 2001, Ch. 643, Sec. 8. Effective January 1, 2002.)

## Appendix F

Metropolitan Water District of Southern California

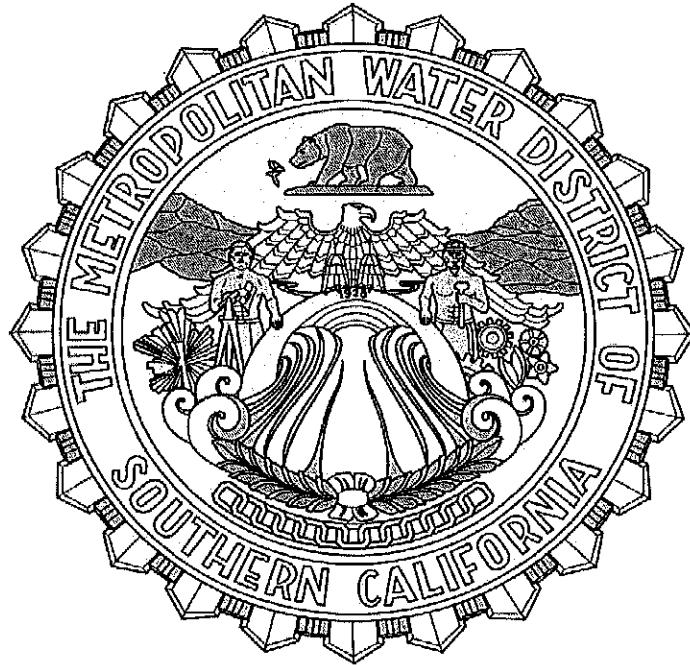
(APPENDIX A)

# APPENDIX A

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## The Metropolitan Water District of Southern California

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## TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION .....	A-1
Formation and Purpose .....	A-1
Member Agencies .....	A-1
Service Area.....	A-2
COVID-19 Pandemic.....	A-3
GOVERNANCE AND MANAGEMENT.....	A-5
Board of Directors.....	A-5
Management.....	A-6
Employee Relations .....	A-8
Risk Management .....	A-8
Cybersecurity.....	A-8
METROPOLITAN’S WATER SUPPLY .....	A-8
General.....	A-8
Current Water Conditions .....	A-9
Integrated Water Resources Plan.....	A-10
State Water Project .....	A-12
Colorado River Aqueduct .....	A-21
Endangered Species Act and Other Environmental Considerations .....	A-27
Water Transfer, Storage and Exchange Programs .....	A-30
Storage Capacity and Water in Storage .....	A-36
CONSERVATION AND WATER SHORTAGE MEASURES .....	A-38
General.....	A-38
Water Surplus and Drought Management Plan.....	A-39
Water Supply Allocation Plan .....	A-39
Increased Drought Resiliency.....	A-39
REGIONAL WATER RESOURCES.....	A-40
Los Angeles Aqueduct.....	A-41
Local Water Supplies.....	A-42
METROPOLITAN’S WATER DELIVERY SYSTEM.....	A-45
Primary Facilities and Method of Delivery.....	A-45
Water Quality and Treatment.....	A-46
Seismic Considerations and Emergency Response Measures .....	A-49
Security Measures.....	A-51
CAPITAL INVESTMENT PLAN.....	A-52
General Description .....	A-52
Projection of Capital Investment Plan Expenditures .....	A-52
Capital Investment Plan Financing .....	A-53
Major Projects of Metropolitan’s Capital Investment Plan.....	A-53
METROPOLITAN REVENUES.....	A-55
General.....	A-55

**TABLE OF CONTENTS**  
**(Continued)**

	<u>Page</u>
Summary of Revenues by Source .....	A-56
Revenue Allocation Policy and Tax Revenues .....	A-56
Water Revenues .....	A-57
Principal Customers .....	A-58
Rate Structure .....	A-58
Member Agency Purchase Orders .....	A-60
Other Charges .....	A-61
Classes of Water Service .....	A-62
Water Rates .....	A-63
Financial Reserve Policy .....	A-64
California Ballot Initiatives .....	A-65
Preferential Rights .....	A-66
Litigation Challenging Rate Structure .....	A-66
Other Revenue Sources .....	A-72
Investment of Moneys in Funds and Accounts .....	A-72
<b>METROPOLITAN EXPENSES .....</b>	<b>A-74</b>
General .....	A-74
Revenue Bond Indebtedness and Other Obligations .....	A-74
Limitations on Additional Revenue Bonds .....	A-75
Variable Rate Exposure Policy .....	A-76
Outstanding Senior Revenue Bonds and Senior Parity Obligations .....	A-77
Outstanding Subordinate Revenue Bonds and Subordinate Parity Obligations .....	A-83
Other Junior Obligations .....	A-86
General Obligation Bonds .....	A-86
State Water Contract Obligations .....	A-87
Power Sources and Costs; Related Long-Term Commitments .....	A-90
Defined Benefit Pension Plan and Other Post-Employment Benefits .....	A-92
<b>HISTORICAL AND PROJECTED REVENUES AND EXPENSES .....</b>	<b>A-97</b>
<b>MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND</b>	
<b>EXPENSES .....</b>	<b>A-101</b>
Water Transactions Projections .....	A-101
Water Revenues .....	A-102
Projected Fiscal Year 2020-21 Results .....	A-102

## INTRODUCTION

*This Appendix A provides general information regarding The Metropolitan Water District of Southern California ("Metropolitan"), including information regarding Metropolitan's operations and finances. Certain statements included or incorporated by reference in this Appendix A constitute "forward-looking statements." Such statements are generally identifiable by the terminology used such as "plan," "project," "expect," "estimate," "budget" or other similar words. Such statements are based on facts and assumptions set forth in Metropolitan's current planning documents including, without limitation, its most recent biennial budget. The achievement of results or other expectations contained in such forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Actual results may differ from Metropolitan's forecasts. Metropolitan is not obligated to issue any updates or revisions to the forward-looking statements in any event.*

*Metropolitan maintains a website that may include information on programs or projects described in this Appendix A; however, none of the information on Metropolitan's website is incorporated by reference or intended to assist investors in making an investment decision or to provide any additional information with respect to the information included in this Appendix A. The information presented on Metropolitan's website is not part of the Official Statement and should not be relied upon in making investment decisions.*

### **Formation and Purpose**

Metropolitan is a metropolitan water district created in 1928 under authority of the Metropolitan Water District Act (California Statutes 1927, Chapter 429, as reenacted in 1969 as Chapter 209, as amended (herein referred to as the "Act")). The Act authorizes Metropolitan to: levy property taxes within its service area; establish water rates; impose charges for water standby and service availability; incur general obligation bonded indebtedness and issue revenue bonds, notes and short-term revenue certificates; execute contracts; and exercise the power of eminent domain for the purpose of acquiring property. In addition, Metropolitan's Board of Directors (the "Board") is authorized to establish terms and conditions under which additional areas may be annexed to Metropolitan's service area.

Metropolitan's primary purpose is to provide a supplemental supply of water for domestic and municipal uses at wholesale rates to its member public agencies. If additional water is available, such water may be sold for other beneficial uses. Metropolitan serves its member agencies as a water wholesaler and has no retail customers.

The mission of Metropolitan, as promulgated by the Board, is to provide its service area with adequate and reliable supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way.

Metropolitan's charges for water transactions and availability are fixed by its Board and are not subject to regulation or approval by the California Public Utilities Commission or any other state or federal agency. Metropolitan imports water from two principal sources: northern California via the Edmund G. Brown California Aqueduct (the "California Aqueduct") of the State Water Project owned by the State of California (the "State" or "California") and the Colorado River via the Colorado River Aqueduct ("CRA") owned by Metropolitan.

### **Member Agencies**

Metropolitan is comprised of 26-member public agencies, including 14 cities, 11 municipal water districts, and one county water authority, which collectively serve the residents and businesses of more than 300 cities and numerous unincorporated communities. Member agencies request water from Metropolitan at

various delivery points within Metropolitan’s system and pay for such water at uniform rates established by the Board for each class of water service. Metropolitan’s water is a supplemental supply for its member agencies, most of whom have other sources of water. See “METROPOLITAN REVENUES–Principal Customers” in this Appendix A for a listing of the ten-member agencies representing the highest level of water transactions and revenues of Metropolitan during the fiscal year ended June 30, 2020. Metropolitan’s member agencies may, from time to time, develop additional sources of water. See also “REGIONAL WATER RESOURCES.” No member is required to purchase water from Metropolitan, but all member agencies are required to pay readiness-to-serve charges whether or not they purchase water from Metropolitan. See “METROPOLITAN REVENUES–Rate Structure,” “–Member Agency Purchase Orders” and “–Other Charges” in this Appendix A.

The following table lists the 26-member agencies of Metropolitan.

Municipal Water Districts		Cities		County Water Authority
Calleguas	Las Virgenes	Anaheim	Los Angeles	San Diego <sup>(1)</sup>
Central Basin	Orange County	Beverly Hills	Pasadena	
Eastern	Three Valleys	Burbank	San Fernando	
Foothill	West Basin	Compton	San Marino	
Inland Empire Utilities Agency		Fullerton	Santa Ana	
Upper San Gabriel Valley		Glendale	Santa Monica	
Western of Riverside County		Long Beach	Torrance	

<sup>(1)</sup> The San Diego County Water Authority, currently Metropolitan’s largest customer based on water transactions, is a plaintiff in litigation challenging the allocation of costs to certain rates adopted by the Board and asserting other claims. See “METROPOLITAN REVENUES–Litigation Challenging Rate Structure” in this Appendix A.

### Service Area

Metropolitan’s service area comprises approximately 5,200 square miles and includes all or portions of the six counties of Los Angeles, Orange, Riverside, San Bernardino, San Diego and Ventura. When Metropolitan began delivering water in 1941, its service area consisted of approximately 625 square miles. Its service area has increased by 4,575 square miles since that time. The expansion was primarily the result of annexation of the service areas of additional member agencies.

Metropolitan estimates that approximately 19 million people lived in Metropolitan’s service area in 2019, based on official estimates from the California Department of Finance and on population distribution estimates from the Southern California Association of Governments (“SCAG”) and the San Diego Association of Governments (“SANDAG”). Population projections prepared by SCAG in 2012 and SANDAG in 2013, as part of their planning process to update regional transportation and land use plans, and used as base data for Metropolitan’s 2015 Integrated Water Resources Plan update and subsequent water transactions forecasts, show expected population growth of about 18 percent in Metropolitan’s service area between 2010 and 2035, with the estimated population in the service area in 2020 then projected at approximately 19.35 million. The economy of Metropolitan’s service area is exceptionally diverse. In 2019, the economy of the six counties which contain Metropolitan’s service area had a gross domestic product larger than all but twelve nations of the world. Metropolitan has historically provided between 40 and 60 percent of the water used annually within its service area. For additional economic and demographic information concerning the six-county area containing Metropolitan’s service area, see Appendix E–“SELECTED DEMOGRAPHIC AND ECONOMIC INFORMATION FOR METROPOLITAN’S SERVICE AREA.”

The climate in Metropolitan’s service area ranges from moderate temperatures throughout the year in the coastal areas to hot and dry summers in the inland areas. Since 2000, annual rainfall has ranged from

approximately 4 to 27 inches along the coastal area, 6 to 38 inches in foothill areas, and 5 to 20 inches in inland areas.

### **COVID-19 Pandemic**

The spread of the novel strain of coronavirus and the disease it causes (now known as “COVID-19”) is having significant adverse health and financial impacts throughout the world, including in Southern California. The World Health Organization declared the COVID-19 outbreak to be a pandemic, and states of emergency have been declared in the United States (the “U.S.”), the State of California, and numerous counties throughout the State, including in the six counties all or portions of which comprise the service area of Metropolitan. On March 17, 2020, Metropolitan’s General Manager declared a state of emergency at Metropolitan. The purposes behind these declarations were to initiate emergency response protocols, coordinate and formalize emergency actions across federal, state and local governmental agencies, and to proactively prepare for and react to the anticipated wider spread of the virus.

In response to the COVID-19 outbreak, State and local governments implemented “stay-at-home” (or “safer-at-home”) orders for citizens to remain at home except for certain essential purposes, imposing restrictions on mass gatherings and resulting in the widespread temporary closure of businesses, universities and schools (including within the jurisdiction of Metropolitan and its member agencies). As a result, economic activity slowed considerably throughout the U.S. and the region. Employment data released since the imposition of the restrictions have shown a dramatic increase in unemployment rates. In addition, stock markets in the U.S. and globally experienced sharp declines in market value following the onset of the outbreak that were attributed to COVID-19 concerns, and although rebounds in the markets have since occurred, increased volatility in the financial markets continues.

The Governor of the State of California has taken a variety of actions and issued a number of executive orders addressing issues relating to the pandemic response. On May 4, 2020, the Governor issued an executive order informing local health jurisdictions and industry sectors that they could gradually re-open under modifications and guidance provided by the State. On August 28, 2020, the Governor announced a new, four-tiered color-coded statewide system (or “blueprint”) with revised criteria for loosening and tightening restrictions on activities based upon the prevalence of COVID-19 in each county and the extent of community spread. A phased re-opening of various sectors has been underway in accordance with the Governor’s four-tiered plan. Pursuant to the re-opening plan, some of the restrictions on activities have been eased; however, restrictions have been re-imposed in various jurisdictions (including in the six counties all or portions of which comprise the service area of Metropolitan) as local conditions warrant. Such restrictions may be modified, lifted, or reinstated, from time to time, as the COVID-19 pandemic continues. It is widely expected that global, national, and local economies will continue to be negatively affected by the pandemic, at least for some period of time.

Metropolitan has taken, and is taking, a number of steps to protect the health of its employees, maintain continuity of its critical and essential business functions and avoid widespread impacts to its workforce from the COVID-19 outbreak. Metropolitan’s Pandemic Action Plan is in effect. The following actions have been undertaken and are underway. A COVID-19 Task Force is meeting regularly to review and update plans, prepare and implement action plans and coordinate Metropolitan’s overall response activities. Metropolitan’s Emergency Operations Center Duty Officer is monitoring the status of COVID-19 and its effects in Metropolitan’s service area, and updating the Business Transition Team and COVID-19 Task Force regularly. The Duty Officer and Emergency Management staff are maintaining regular communications with State and county emergency operations centers and public health agencies to monitor the status of COVID-19. Metropolitan’s water system is in a federally designated critical infrastructure sector with exemptions under Governor Newsom’s Statewide “stay-at-home” order as needed to maintain continuity of operations. Personnel necessary to the operation and delivery of water supplies remain on-site, with staffing strategies being utilized to promote “social distancing.” Enhanced facility cleaning and disinfection practices have also been put in place to promote a safe and healthful workplace for these

employees. Telecommuting arrangements or paid administrative leave is being implemented for employees performing other functions, and non-essential business travel has been limited.

COVID-19 is not believed to present a threat to the safety of Metropolitan's treated water supplies. Metropolitan has also taken steps to ensure it has the necessary backup equipment, supplies and treatment chemicals in the event of disruptions to the supply chain for these items. To date, Metropolitan's ability to treat and deliver water has not been impaired.

Metropolitan continues to assess the effects the ongoing COVID-19 pandemic has had, and will have, on Metropolitan and its business and operations, as well as in the region, including the adverse financial impacts likely to be experienced by its member agencies. Metropolitan has experienced an increase in certain costs, primarily expenses for personal protective equipment, enhancing cleaning, technology costs to accommodate teleworking and other related expenditures. However, such increased expenses have been modest and are generally offset by reductions in travel and other office expenses. The COVID-19 pandemic has caused disruptions in certain supply chains and some construction activities. While Metropolitan initially paused certain construction work on non-essential capital projects at the onset of the COVID-19 outbreak, such activity has resumed and Metropolitan continues to advance a variety of infrastructure and system reliability projects. See also "CAPITAL INVESTMENT PLAN." More broadly, press reports and analyses have suggested that water service providers serving residential, commercial and industrial end-use customers (referred to herein as "retail water service providers"), which includes some Metropolitan member agencies and agencies that purchase water from them, anticipate their customers are likely to be adversely impacted financially. As a measure to help mitigate such financial impacts and assure access to water service, on April 2, 2020, Governor Newsom issued an executive order which, among other things, orders the restoration of water service to residential customers in occupied residences whose service was discontinued for nonpayment during the state of emergency, and suspends the authority of retail water service providers to discontinue water service to residential and qualifying small business customers for non-payment. Voluntary measures may also be taken by retail water service providers in the State to assist their customers facing financial hardship as a result of the COVID-19 outbreak. The financial impacts to retail water customers and measures taken to assist them may result in more non-payment of utility bills than normal and forecasted, which is likely to further create financial stress on retail water service providers, including some Metropolitan member agencies.

In recognition of the changed circumstances and the uncertainties created by the ongoing COVID-19 outbreak, in the weeks following the declaration of a pandemic by the World Health Organization on March 11, 2020, Metropolitan reviewed its preliminary biennial budget initially presented to the Board in February 2020, and modified certain assumptions previously made in the proposed budget. The biennial budget for fiscal years 2020-21 and 2021-22, and water rates and charges for calendar years 2021 and 2022 adopted by the Board on April 14, 2020, reflected these adjustments, which included (i) a reduction in the overall rate increases for calendar years 2021 and 2022 from those previously proposed; (ii) a reduction in capital expenditures for fiscal year 2020-21 in recognition of likely delays in scheduling of construction work as a result of COVID-19; (iii) a reduction in the internal funding objective for the funding of capital program expenditures from current revenues for fiscal year 2020-21; and (iv) to review the adopted budget and rates no later than September 2020 to consider further impacts resulting from the COVID-19 crisis. See "METROPOLITAN'S REVENUES--Water Rates" and "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES."

As contemplated by the Board's April 14, 2020 action, Metropolitan reviewed the impacts of the COVID-19 pandemic on Metropolitan's biennial budget for fiscal years 2020-21 and 2021-22, and water rates and charges for calendar years 2021 and 2022 at its September 15, 2020 Board meeting. The Board determined to maintain the previously adopted rates and charges for calendar years 2021 and 2022 and approved certain cost containment measures, estimated to reduce Metropolitan expenditures by approximately \$10.7 million in fiscal year 2020-21, and by approximately \$1.0 million in fiscal year



2021-22. The Board also directed staff to develop a payment deferral program for member agencies that record and report significant customer payment delinquencies and likewise grant deferrals to their customers; evaluate potential new revenue-generating programs; and place a moratorium on non-emergency unbudgeted spending.

At its December 8, 2020 meeting, Metropolitan's Board adopted the COVID-19 Member Agency Payment Deferral Program. Under the approved program, Metropolitan will provide up to a six-month deferral of a portion of a requesting member agency's payment obligations due to Metropolitan for water transactions equal to the percentage of the member agency's own customers' delinquency rates, but not to exceed 10 percent of each monthly obligation. Additionally, under the program, late payments, penalties, and interest will be waived to the deferred amount over a period of up to 12 months. The program is available to all member agencies that meet Board-approved eligibility criteria and will apply to invoices for water transactions occurring only from January 1, 2021 to June 30, 2021. All amounts deferred under the program will be due and payable no later than December 29, 2021. To the extent that member agencies participate in the program, the COVID-19 Member Agency Payment Deferral Program is expected to result in a shift of some revenue collections from fiscal year 2020-21 to fiscal year 2021-22.

The COVID-19 outbreak is ongoing and developments will continue. The degree of impact to Metropolitan's finances and operations is difficult to predict due to the evolving nature of the COVID-19 pandemic, including uncertainties relating thereto. The extent of the fiscal impacts on Metropolitan will depend on, among other things, (i) the duration of the outbreak and the imposed restrictions on activities; (ii) the extent of the disruption to or decline in the local and global economies and financial markets; (iii) the degree to which business closures, increased unemployment, housing foreclosures and/or other economic consequences may reduce water demands in the region and Metropolitan's water transactions, or negatively affect future property values in Metropolitan's service area and/or Metropolitan's property tax levy receipts, and reduce Metropolitan's revenues; (iv) the extent to which a protracted disruption in the manufacturing or construction industry may affect supply chains or delay construction schedules for, or the implementation of, Metropolitan's capital improvement programs and projects, or the costs of such programs or projects or Metropolitan's water system operations; and (v) the ramifications of future actions that may be taken or required by governmental authorities to contain and respond to the outbreak. If the COVID-19 pandemic and/or the economic recovery is prolonged, the likelihood or magnitude of potential adverse impacts to Metropolitan's finances or operations from the factors discussed herein or from other factors, could be increased. As a result, Metropolitan's finances and operations may be adversely impacted by COVID-19. To date, Metropolitan does not believe the impacts of the COVID-19 pandemic will have a material adverse impact on its ability to pay debt service on its bonds or other debt obligations.

## **GOVERNANCE AND MANAGEMENT**

### **Board of Directors**

Metropolitan is governed by a 38-member Board of Directors, made up of representatives from all of Metropolitan's member agencies. Each member public agency is entitled to have at least one representative on the Board, plus an additional representative for each full five percent of the total assessed valuation of property in Metropolitan's service area that is within the member public agency. Changes in relative assessed valuation do not terminate any director's term. In 2019, California Assembly Bill 1220 (Garcia) amended the Act to provide that "A member public agency shall not have fewer than the number of representatives the member public agency had as of January 1, 2019." Accordingly, the Board may, from time to time, have more than 38 directors.

The Board includes business, professional and civic leaders. Directors are appointed by member agencies in accordance with those agencies' processes and the Act. They serve on the Board without compensation from Metropolitan. Voting is based on assessed valuation, with each member agency being entitled to cast one vote for each \$10 million or major fractional part of \$10 million of assessed valuation of

property within the member agency, as shown by the assessment records of the county in which the member agency is located. The Board administers its policies through the Metropolitan Water District Administrative Code (the "Administrative Code"), which was adopted by the Board in 1977. The Administrative Code is periodically amended to reflect new policies or changes to existing policies that occur from time to time.

## **Management**

Metropolitan's day-to-day management is under the direction of its General Manager, who serves at the pleasure of the Board, as do Metropolitan's General Counsel, General Auditor and Ethics Officer. Following is a biographical summary of Metropolitan's principal executive officers.

*Jeffrey Kightlinger, General Manager* – Mr. Kightlinger was appointed as General Manager in February 2006, leaving the position of General Counsel, which he had held since February 2002. Before becoming General Counsel, Mr. Kightlinger was a Deputy General Counsel and then Assistant General Counsel, representing Metropolitan primarily on Colorado River matters, environmental issues, water rights and a number of Metropolitan's water transfer and storage programs. Prior to joining Metropolitan in 1995, Mr. Kightlinger worked in private practice representing numerous public agencies including municipalities, redevelopment agencies and special districts. Mr. Kightlinger earned his bachelor's degree in history from the University of California, Berkeley, and his law degree from Santa Clara University. At the March 2020 Board meeting, Mr. Kightlinger announced his plans to step down as General Manager. Metropolitan's Board will conduct a recruitment process for a successor General Manager with the intention of making a selection (subject to such delays in schedule as may result from prolonged limitations due to COVID-19 response actions) prior to Mr. Kightlinger's departure. It is anticipated that Mr. Kightlinger will continue in his position while Metropolitan's recruitment process is ongoing until a successor is named.

*Marcia Scully, General Counsel* – Ms. Scully assumed the position of General Counsel in March 2012. She previously served as Metropolitan's Interim General Counsel from March 2011 to March 2012. Ms. Scully joined Metropolitan in 1995, after a decade of private law practice, providing legal representation to Metropolitan on construction, employment, Colorado River and significant litigation matters. From 1981 to 1985 she was assistant city attorney for the City of Inglewood. Ms. Scully served as president of University of Michigan's Alumnae Club of Los Angeles and is a recipient of the 1996 State Bar of California, District 7 President's Pro Bono Service Award and the Southern California Association of Non-Profit Housing Advocate of the Year Award. She is also a member of the League of Women Voters for Whittier and was appointed for two terms on the City of Whittier's Planning Commission, three years of which were served as chair. Ms. Scully earned a bachelor's degree in liberal arts from the University of Michigan, a master's degree in urban planning from Wayne State University and her law degree from Loyola Law School.

*Gerald C. Riss, General Auditor* – Mr. Riss was appointed as Metropolitan's General Auditor in July 2002. As General Auditor, he is responsible for the independent evaluation of the policies, procedures and systems of control throughout Metropolitan. Mr. Riss is a certified fraud examiner, certified financial services auditor and certified risk professional with more than 25 years of experience in accounting, audit and risk management. Prior to joining Metropolitan, Mr. Riss was Vice President and Assistant Division Head of Risk Management Administration at United California Bank/Bank of the West. He also served as Senior Vice President, Director of Risk Management and General Auditor of Tokai Bank of California from 1988 until its reorganization as United California Bank in 2001. He earned a bachelor's degree in accounting and a master's degree in business administration from Wayne State University.

*Abel Salinas, Ethics Officer* – Mr. Salinas was appointed as Metropolitan's Ethics Officer in July 2019. He is responsible for making recommendations regarding rules and policies related to lobbying, conflicts of interest, contracts, campaign contributions and internal disclosures, while providing education and advice about these rules. Prior to joining Metropolitan, Mr. Salinas worked as the Special Agent in Charge in the U.S. Department of Labor's Office of Inspector General. Before joining that agency, he served

for three years in the U.S. Office of Personnel Management. Mr. Salinas holds a bachelor's degree in criminal justice from University of Texas – Pan American and a master's degree in policy management from Georgetown University.

*Katano Kasaine, Assistant General Manager/Chief Financial Officer* – Ms. Kasaine has been serving as the Assistant General Manager/Chief Financial Officer since August 2019. She is responsible for directing Metropolitan's financial activities, including accounting and financial reporting, debt issuance and management, financial planning and strategy, managing Metropolitan's investment portfolio, budget administration, financial analysis, financial systems, and developing rates and charges. In addition, she is responsible for risk management and business continuity activities. Prior to joining Metropolitan, Ms. Kasaine worked for the City of Oakland for nearly 25 years in various roles, including Finance Director/Treasurer. She holds a bachelor's degree in business administration from Dominican University in San Rafael, California and a master's degree in public health from Loma Linda University.

*Deven Upadhyay, Assistant General Manager/Chief Operating Officer* – Mr. Upadhyay was appointed to his current position in November 2017. In this capacity, he oversees the management of Metropolitan's Water System Operations, Engineering Services and Water Resource Management. In addition, following the retirement of Metropolitan's Assistant General Manager/Strategic Water Initiatives at the end of 2020, Mr. Upadhyay has assumed oversight responsibility for Metropolitan's Bay-Delta initiatives. Mr. Upadhyay has over 25 years of experience in the water industry. He joined Metropolitan in 1995, beginning as a Resource Specialist and then left Metropolitan in 2005 to work at the Municipal Water District of Orange County. In 2008, he returned to Metropolitan as a Budget and Financial Planning Section Manager and became a Water Resource Management Group Manager in 2010. Mr. Upadhyay has a Bachelor of Arts degree in economics from the California State University, Fullerton and a master's degree in public administration from the University of La Verne.

*Shane Chapman, Assistant General Manager/Chief Administrative Officer* – Mr. Chapman was appointed to his current position in January 2018 and is responsible for the strategic direction and management of Metropolitan's administrative functions. His primary responsibilities include managing human resources, information technology, real property, environmental planning, and administrative services. Mr. Chapman joined Metropolitan as a Resource Specialist in 1991, progressing to the level of Program Manager in 2001. He became the Revenue, Rates and Budget Manager in 2003 and Assistant Group Manager in Water System Operations in 2006. Mr. Chapman served as General Manager of the Upper San Gabriel Valley Municipal Water District for seven years. Mr. Chapman has a Bachelor of Arts degree in economics from Claremont McKenna College and a master's degree in public administration from the University of Southern California.

*Dee Zinke, Assistant General Manager/Chief External Affairs Officer* – Ms. Zinke was appointed to her current position in January 2016. She is responsible for Metropolitan's communications, business outreach, education and legislative matters. She joined Metropolitan in 2009 as Manager of the Legislative Services Section. Before coming to Metropolitan, Ms. Zinke was the Manager of Governmental and Legislative Affairs at the Calleguas Municipal Water District for nearly 10 years, where she received recognition for her significant contributions to the Association of California Water Agencies, the Ventura County Special Districts Association and the Association of Water Agencies of Ventura County. During her tenure at Calleguas, she was named Chair of the Ventura County Watersheds Coalition and appointed by then-Secretary of Resources Mike Chrisman to the State Watershed Advisory Committee. Prior to her public service, she worked in the private sector as the Executive Officer and Senior Legislative Advocate for the Building Industry Association of Greater Los Angeles and Ventura Counties and as Director of Communications for E-Systems, a defense contractor specializing in communication, surveillance and navigation systems in Washington, D.C. Ms. Zinke holds a Bachelor of Arts degree in communication and psychology from Virginia Polytechnic Institute and State University.

## **Employee Relations**

The total number of budgeted regular full-time Metropolitan employees on November 1, 2020 was 1,907 with 1,806 positions filled, and the remaining positions under recruitment or vacant. Of the filled positions, 1,249 were represented by AFSCME Local 1902, 94 by the Supervisors Association, 304 by the Management and Professional Employees Association and 127 by the Association of Confidential Employees. The remaining 32 employees are unrepresented. The four bargaining units represent 98 percent of Metropolitan's employees. The Memorandum of Understanding ("MOU") with each of AFSCME Local 1902, the Supervisors Association, the Management and Professional Employees Association and the Association of Confidential Employees were updated through negotiations and cover the period January 1, 2017 through December 31, 2021.

## **Risk Management**

Metropolitan is exposed to various risks of loss related to, among other things, the design and construction of facilities, and the treatment and delivery of water. With the assistance of third party claims administrators, Metropolitan is self-insured for property losses, liability, and workers' compensation. Metropolitan self-insures the first \$25 million per liability occurrence, with commercial general liability coverage of \$75 million in excess of the self-insured retention. The \$25 million self-insured retention is maintained as a separate restricted reserve. Metropolitan is also self-insured for loss or damage to its property, with the \$25 million self-insured retention also being accessible for emergency repairs and Metropolitan property losses. In addition, Metropolitan obtains other excess and specialty insurance coverages such as directors' and officers' liability, fiduciary liability and aircraft hull and liability coverage.

Metropolitan self-insures the first \$5 million for workers' compensation with statutory excess coverage. The self-insurance retentions and reserve levels currently maintained by Metropolitan may be modified by the Board at its sole discretion.

## **Cybersecurity**

Metropolitan has adopted and maintains an active Cybersecurity Program ("CSP") that includes policies reviewed by Metropolitan's Office of Enterprise Cybersecurity, Audit department and independent third-party auditors and consultants. Metropolitan has appointed an Information Security Officer who is responsible for overseeing the annual review of the CSP and its alignment with Metropolitan's Strategic Plan. Metropolitan's policies and procedures on information governance, risk management, and compliance are consistent with the U.S. Commerce Department's National Institute of Standards and Technology Cybersecurity Framework and are consistent with the requirements prescribed by the America's Water Infrastructure Act (AWIA) for risk assessment and emergency response. Metropolitan's Cybersecurity Team is responsible for identifying cybersecurity risks to Metropolitan, preventing, investigating, and responding to any cybersecurity incidents, and providing guidance and education on the implementation of new technologies at Metropolitan. All persons or entities authorized to use Metropolitan's computer resources are required to participate in Metropolitan's Cybersecurity Awareness Training.

## **METROPOLITAN'S WATER SUPPLY**

### **General**

Metropolitan's principal sources of water supplies are the State Water Project and the Colorado River. Metropolitan receives water delivered from the State Water Project under State Water Contract provisions, including contracted supplies, use of carryover storage in San Luis Reservoir, and surplus supplies. Metropolitan holds rights to a basic apportionment of Colorado River water and has priority rights to an additional amount depending on availability of surplus supplies. Water management programs supplement these Colorado River supplies. To secure additional supplies, Metropolitan also has groundwater banking partnerships and water transfer and storage arrangements within and outside its service area.

Metropolitan's principal water supply sources, and other supply arrangements and water management are more fully described herein.

Metropolitan faces a number of challenges in providing adequate, reliable and high-quality supplemental water supplies for Southern California. These include, among others: (1) population growth within the service area; (2) increased competition for low-cost water supplies; (3) variable weather conditions; (4) increased environmental regulations; and (5) climate change. Metropolitan's resources and strategies for meeting these long-term challenges are set forth in its Integrated Water Resources Plan, as updated from time to time. See "Integrated Water Resources Plan." In addition, Metropolitan manages water supplies in response to the prevailing hydrologic conditions by implementing its Water Surplus and Drought Management ("WSDM") Plan, and in times of prolonged or severe shortages, the Water Supply Allocation Plan (the "Water Supply Allocation Plan"). See "CONSERVATION AND WATER SHORTAGE MEASURES—Water Surplus and Drought Management Plan" and "Water Supply Allocation Plan" in this Appendix A.

Hydrologic conditions can have a significant impact on Metropolitan's imported water supply sources. For Metropolitan's State Water Project supplies, precipitation in California's northern Sierra Nevada during the fall and winter helps replenish storage levels in Lake Oroville, a key State Water Project facility. The subsequent runoff from the spring snowmelt helps satisfy regulatory requirements in the San Francisco Bay/Sacramento-San Joaquin River Delta ("Bay-Delta") bolstering water supply reliability in the same year. See "State Water Project – Bay-Delta Proceedings Affecting State Water Project." The source of Metropolitan's Colorado River supplies is primarily the watersheds of the Upper Colorado River Basin in the states of Colorado, Utah, and Wyoming. Although precipitation is primarily observed in the winter and spring, summer storms are common and can affect water supply conditions.

Uncertainties from potential future temperature and precipitation changes in a climate driven by increased concentrations of atmospheric carbon dioxide also present challenges. Areas of concern to California water planners identified by researchers include: reduction in Sierra Nevada and Colorado Basin snowpack; increased intensity and frequency of extreme weather events; and rising sea levels resulting in increased risk of damage from storms, high-tide events, and the erosion of levees and potential cutbacks of deliveries of imported water. While potential impacts from climate change remain subject to study and debate, climate change is among the uncertainties that Metropolitan seeks to address through its planning processes.

### **Current Water Conditions**

As of January 11, 2021, the northern Sierra precipitation was 41 percent of the 50-year average for the time of year, and northern Sierra snowpack measured at 60 percent of average for such time of year. On December 1, 2020, the California Department of Water Resources ("DWR") notified State Water Contractors (defined below) that its initial calendar year 2021 allocation estimate of State Water Project water is 10 percent, or 191,150 acre-feet for Metropolitan. (An acre-foot is the amount of water that will cover one acre to a depth of one foot and equals approximately 325,851 gallons, which represents the needs of three average families in and around the home for one year within Metropolitan's service area.) Changes to the 2021 allocation may occur and are dependent on the developing hydrologic conditions. See "State Water Project."

As of January 11, 2021, the Upper Colorado River Basin snowpack accumulation measured 70 percent of the 30-year average as of this date and the total system storage in the Colorado River Basin was 46 percent of capacity, a decrease of six percent or 3.8 million acre-feet from the same time the prior year. Because of the current storage level, no shortage will be declared in Colorado River water supply availability conditions for calendar year 2021, resulting in projected available supply of Colorado River water in calendar year 2021 of 1,007,700 acre-feet for Metropolitan. See "Colorado River Aqueduct."

See also “–Storage Capacity and Water in Storage.”

### **Integrated Water Resources Plan**

**Overview.** The Integrated Water Resources Plan (hereafter, “IRP”) is Metropolitan’s principal water resources planning document. Metropolitan, its member agencies, subagencies and groundwater basin managers developed their first IRP as a long-term planning guideline for resources and capital investments. The purpose of the IRP was the development of a portfolio of preferred resources to meet the water supply reliability and water quality needs for the region in a cost-effective and environmentally sound manner. The first IRP was adopted by the Board in January 1996 and has been subsequently updated in 2004, 2010 and 2015. As noted below, the 2020 IRP Update is under development. See “–2020 IRP Update.”

The last completed IRP update in 2015 (the “2015 IRP Update”) was adopted by Metropolitan’s Board on January 12, 2016, as a strategy to set goals and a framework for water resources development. This strategy enables Metropolitan and its member agencies to manage future challenges and changes in California’s water conditions and to balance investments with water reliability benefits. The 2015 IRP Update provides an adaptive management approach to address future uncertainty, including uncertainty from climate change. It was formulated with input from member agencies, retail water agencies, and other stakeholders including water and wastewater managers, environmental and business interests and the community.

The 2015 IRP Update seeks to provide regional reliability through 2040 by stabilizing Metropolitan’s traditional imported water supplies and continuing to develop additional conservation programs and local resources, with an increased emphasis on regional collaboration. It also advances long-term planning for potential future contingency resources, such as storm water capture and seawater desalination. The 2015 IRP Update and associated materials are available on Metropolitan’s website at: <http://www.mwdh2o.com/AboutYourWater/Planning/Planning-Documents/Pages/default.aspx>. The materials and other information set forth on Metropolitan’s website is not incorporated by reference.

Specific projects developed by Metropolitan in connection with the implementation of its IRP are subject to Board consideration and approval, as well as environmental and regulatory documentation and compliance.

**An Adaptive Management Strategy.** Adaptive water management, as opposed to a rigid set of planned actions over the coming decades, is the most nimble and cost-effective manner for Metropolitan and local water districts throughout Southern California to effectively prepare for the future. An adaptive management approach began to evolve with Metropolitan’s first IRP in 1996, after drought-related shortages in 1991 prompted a rethinking of Southern California’s long-term water strategy. Reliance on imported supplies to meet future water needs has decreased steadily over time, replaced by plans for local actions to meet new demands. The 2015 IRP Update continues to build a robust portfolio approach to water management.

The following paragraphs describe the goals, approaches and targets for each of the resource areas that are needed to ensure reliability under planned conditions.

**State Water Project.** The State Water Project is one of Metropolitan’s two major sources of water. The goal for State Water Project supplies is to adaptively manage flow and export regulations in the near term and to achieve a long-term Bay-Delta solution that addresses ecosystem and water supply reliability challenges. In furtherance of this goal, Metropolitan continues to participate and seek successful outcomes for a potential Bay-Delta conveyance project and the California EcoRestore efforts. See “–State Water Project” and “REGIONAL WATER RESOURCES–Local Water Supplies” in this Appendix A. The stated goal of the IRP is to manage State Water Project supplies in compliance with regulatory restrictions in the near-term for an average of 980,000 acre-feet of annual supplies, and to pursue an outcome for a potential



Bay-Delta conveyance project and California EcoRestore efforts aimed towards achieving long-term average supplies of approximately 1.2 million acre-feet annually from this resource. See “–State Water Project –Bay-Delta Proceedings Affecting State Water Project.”

Colorado River Aqueduct. The CRA delivers water from the Colorado River, Metropolitan’s original source of supply. Metropolitan has helped to fund and implement agricultural conservation programs, improvements to river operation facilities, land management programs and water transfers and exchanges through agreements with agricultural water districts in Southern California, entities in Arizona and Nevada that use Colorado River water, and the Bureau of Reclamation. See “–Colorado River Aqueduct” and “–Water Transfer, Storage and Exchange Programs – Colorado River Aqueduct Agreements and Programs.” The stated goal of the IRP for the CRA supplies is to maintain current levels of water supplies from existing programs, while also developing flexibility through dry-year programs and storage to ensure that a minimum of 900,000 acre-feet of CRA deliveries are available when needed, with a target of 1.2 million acre-feet in dry years.

Water Transfers and Exchanges. Under voluntary water transfer or exchange agreements, agricultural communities using irrigation water may periodically sell or conserve some of their water allotments for use in urban areas. The water may be delivered through existing State Water Project or CRA facilities or may be exchanged for water that is delivered through such facilities. Metropolitan’s policy toward potential transfers states that the transfers will be designed to protect and, where feasible, enhance environmental resources and avoid the mining of local groundwater supplies. See “–Water Transfer, Storage and Exchange Programs.” The stated goal of the IRP is to pursue transfers and exchanges to hedge against shorter-term water demand and supply imbalances while long-term water supply solutions are developed and implemented.

Water Conservation. Conservation and other water use efficiencies are integral components of Metropolitan’s IRP. Metropolitan has invested in conservation programs since the 1980s. Historically, most of the investments have been in water efficient fixtures in the residential sector. With outdoor water use comprising at least 50 percent of residential water demand, in more recent years, Metropolitan has increased its conservation efforts to target outdoor water use reduction in its service area. See “CONSERVATION AND WATER SHORTAGE MEASURES” in this Appendix A. The stated goal of the IRP is to pursue further water conservation savings of 485,000 acre-feet annually by 2040 through continued increased emphasis on outdoor water-use efficiency using incentives, outreach/education and other programs. The conservation program is regularly reviewed and revised in order to meet the stated goal of the IRP.

Local Water Supplies. Local supplies are a significant and growing component of the region’s diverse water portfolio. While the extent to which each member agency’s water supply is provided by imported water purchased from Metropolitan varies, in the aggregate, local supplies can provide over half of the region’s water in a given year, and the maintenance of these supplies remain an integral part of the IRP. Similar to water conservation, local supplies serve the important function of reducing demands for imported water supplies and thereby making regional water system capacity and storage available and accessible to meet the needs of the region. Local water supply projects may include, among other things, recycled water, groundwater recovery, conjunctive use, stormwater, and seawater desalination. Metropolitan offers financial incentives to member agencies to help fund the development of a number of these types of local supply projects. The stated goal of the IRP is to seek to develop 227,000 acre-feet of additional local supplies produced by existing and future projects, with the region reaching a target of 2.4 million acre-feet of total dependable local supplies by 2040. Additionally, in 2018, an interim Local Resources Program target was adopted to spur development of additional local supplies in furtherance of the stated goal of the IRP. See “REGIONAL WATER RESOURCES–Local Water Supplies” in this Appendix A.

**2020 IRP Update.** Development of Metropolitan’s 2020 IRP is underway. The year 2020 marks the conclusion of the 25-year planning cycle envisioned by the inaugural 1996 IRP. The 2020 IRP is anticipated

to build upon Metropolitan's adaptive management strategy utilizing a scenario planning approach. This approach will evaluate a variety of potential scenarios and therefore prepare the region for a wider range of potential outcomes by identifying solutions and policies that are robust across a variety of possible future conditions.

Metropolitan initiated the 2020 IRP process in February 2020. Crucial to scenario development for the 2020 IRP is determining how to describe and measure impacts of scenario drivers of change (that is, specific factors whose future values and outcomes are uncertain, but significantly impact future water supply reliability) on water resources and demands. Metropolitan developed an extensive array of drivers affecting water supply and demand by incorporating feedback from the Board, member agencies, retail agencies, and other stakeholders through multiple workshops hosted by Metropolitan as well as an online survey. A draft assessment was assembled with in-house area experts to establish and evaluate more than 80 relevant supply and demand links that covered all identified drivers. As of November 2020, Metropolitan staff was developing parameters and preliminary analyses of draft scenarios for member agency and Board review. A draft of the 2020 IRP Update is expected to be available in 2021.

## **State Water Project**

### **Background**

One of Metropolitan's two major sources of water is the State Water Project, which is owned by the State, and managed and operated by DWR. The State Water Project is the largest state-built, multipurpose, user-financed water project in the country. It was designed and built primarily to deliver water, but also provides flood control, generates power for pumping, is used for recreation, and enhances habitat for fish and wildlife. The State Water Project provides irrigation water to 750,000 acres of farmland, mostly in the San Joaquin Valley, and provides municipal and industrial water to approximately 27 million of California's estimated 39.9 million residents, including the population within the service area of Metropolitan.

The State Water Project's watershed encompasses the mountains and waterways around the Feather River, the principal tributary of the Sacramento River, in the Sacramento Valley of Northern California. Through the State Water Project, Feather River water stored in and released from Oroville Dam (located about 70 miles north of Sacramento, east of the city of Oroville, California) and unregulated flows diverted directly from the Bay-Delta are transported south through the Central Valley of California, over the Tehachapi Mountains and into Southern California, via the California Aqueduct, to four delivery points near the northern and eastern boundaries of Metropolitan's service area. The total length of the California Aqueduct is approximately 444 miles. See "METROPOLITAN'S WATER DELIVERY SYSTEM—Primary Facilities and Method of Delivery –State Water Project" in this Appendix A.

### **State Water Contract**

*Terms of the Contract.* In 1960, Metropolitan signed a water supply contract (as amended, the "State Water Contract") with DWR to receive water from the State Water Project. Metropolitan is one of 29 agencies and districts that have long-term contracts for water service from DWR (known collectively as the "State Water Contractors" and sometimes referred to herein as "Contractors"). Metropolitan is the largest of the State Water Contractors in terms of the number of people it serves (approximately 19 million), the share of State Water Project water that it has contracted to receive (approximately 46 percent), and the percentage of total annual payments made to DWR by agencies with State water supply contracts (approximately 50 percent for fiscal year 2019-20). Metropolitan received its first delivery of State Water Project water in 1972.

Pursuant to the terms of the State water supply contracts, all water-supply related expenditures for capital and operations, maintenance, power, and replacement costs associated with the State Water Project facilities are paid for by the State Water Contractors as components of their annual payment obligations to DWR. In exchange, Contractors have the right to participate in the system, with an entitlement to water

service from the State Water Project and the right to use the portion of the State Water Project conveyance system necessary to deliver water to them. Each year DWR estimates the total State Water Project water available for delivery to the State Water Contractors and allocates the available project water among the State Water Contractors in accordance with the State water supply contracts. Late each year, DWR announces an initial allocation estimate for the upcoming year, but periodically provides subsequent estimates throughout the year if warranted by developing precipitation and water supply conditions. Based upon the updated rainfall and snowpack values, DWR's total water supply availability projections are refined during each calendar year and allocations to the State Water Contractors are adjusted accordingly.

Metropolitan's State Water Contract has been amended a number of times since its original execution and delivery. Several of the amendments, entered into by DWR and various subsets of State Water Contractors, relate to the financing and construction of a variety of State Water Project facilities and improvements and impose certain cost responsibility therefor on the affected Contractors, including Metropolitan. For a description of Metropolitan's financial obligations under its State Water Contract, including with respect to such amendments, see "METROPOLITAN EXPENSES—State Water Contract Obligations" in this Appendix A.

Amendments, approved by Metropolitan's Board in 1995, and since executed by DWR and 27 of the State Water Contractors (collectively known as the "Monterey Amendment"), among other things, made explicit that the Contractors' rights to use the portion of the State Water Project conveyance system necessary to deliver water to them also includes the right to convey non-State Water Project water at no additional cost as long as capacity exists. These amendments also expanded the ability of the State Water Contractors to carry over State Water Project water in State Water Project storage facilities, allowed participating Contractors to borrow water from terminal reservoirs, and allowed Contractors to store water in groundwater storage facilities outside a Contractor's service area for later use. These amendments provided the means for individual Contractors to increase supply reliability through water transfers and storage outside their service area. Metropolitan has subsequently developed and actively manages a portfolio of water supplies to convey through the California Aqueduct pursuant to these contractual rights. See "—Water Transfer, Storage and Exchange Programs." The Monterey Amendment is the subject of ongoing litigation. See "—Related Litigation—Monterey Amendment" below.

Under its State Water Contract, Metropolitan has a contractual right to its proportionate share of the State Water Project water that DWR determines annually is available for allocation to the Contractors. This determination is made by DWR each year based on existing supplies in storage, forecasted hydrology, and other factors, including water quality and environmental flow obligations and other operational considerations. Available State Water Project water is then allocated to the Contractors in proportion to the amounts set forth in "Table A" of their respective State water supply contract (sometimes referred to herein as "Table A State Water Project water"). Pursuant to Table A of its State Water Contract, Metropolitan is entitled to approximately 46 percent of the total annual allocation made available to State Water Contractors each year. Metropolitan's State Water Contract, under a 100 percent allocation, provides Metropolitan 1,911,500 acre-feet of water. The 100 percent allocation is referred to as the contracted amount.

DWR operates the State Water Project in coordination with the federal Central Valley Project, which is operated by the Bureau of Reclamation. Since 1986, the coordinated operations have been undertaken pursuant to a Coordinated Operations Agreement for the Central Valley Project and State Water Project (the "COA"). The COA defines how the State and federal water projects share water quality and environmental flow obligations imposed by regulatory agencies. The agreement calls for periodic review to determine whether updates are needed in light of changed conditions. After completing a joint review process, DWR and the Bureau of Reclamation agreed to amend the COA to reflect water quality regulations, biological opinions and hydrology updated since the 1986 agreement was signed. On December 13, 2018, DWR and the Bureau of Reclamation executed an Addendum to the COA (the "COA Addendum"). Through the COA Addendum, DWR will adjust current State Water Project operations to modify pumping operations, as well

as project storage withdrawals to meet in-basin uses, pursuant to revised calculations based on water year types. The COA Addendum will shift responsibilities for meeting obligations between the Central Valley Project and the State Water Project, resulting in a shift of approximately 120,000 acre-feet in long-term average annual exports from the State Water Project to the Central Valley Project. In executing the COA Addendum, DWR found the agreement to be exempt from environmental review under the California Environmental Quality Act ("CEQA") as an ongoing project and that the adjustments in operations are within the original scope of the project. On January 16, 2019, commercial fishing groups and a tribe ("petitioners") filed a lawsuit against DWR alleging that entering into the COA Addendum violated CEQA, the Delta Reform Act, and the public trust doctrine. On April 11, 2019, Westlands Water District ("Westlands") filed a motion to intervene, which was not opposed by any parties. The court granted Westlands' motion on June 7, 2019. On October 7, 2019, the North Delta Water Agency filed a motion to intervene. On November 19, 2019, the court granted North Delta Water Agency's motion. The petitioners are still in the process of preparing the administrative record and no date for a hearing on the merits has been set. The effect of this lawsuit on the COA Addendum and State Water Project operations cannot be determined at this time.

From calendar years 2005 through 2019, the amount of water received by Metropolitan from the State Water Project, including water from water transfer, groundwater banking and exchange programs delivered through the California Aqueduct (described under "Water Transfer, Storage and Exchange Programs" below), varied from a low of 593,000 acre-feet in calendar year 2015 to a high of 1,695,000 acre-feet in 2006. In calendar year 2019, DWR's allocation to State Water Contractors was 75 percent of contracted amounts, or 1,433,625 acre-feet, for Metropolitan. In calendar year 2020, DWR's allocation to State Water Contractors was 20 percent of contracted amounts, or 382,300 acre-feet, for Metropolitan.

On December 1, 2020, DWR announced an initial calendar year 2021 allocation of 10 percent. Changes to the 2021 allocation may occur and are dependent on the developing hydrologic conditions.

The term of Metropolitan's State Water Contract currently extends to December 31, 2035 or until all DWR bonds issued to finance construction of project facilities are repaid, whichever is longer. Upon expiration of the State Water Contract term, Metropolitan has the option to continue service under substantially the same terms and conditions. Metropolitan and other State Water Contractors have undertaken negotiations with DWR to extend their State water supply contracts. In June 2014, DWR and the State Water Contractors reached an Agreement in Principle (the "Agreement in Principle") on an amendment to the State water supply contract to extend the contract and to make certain changes related to financial management of the State Water Project in the future. DWR and 25 of the State Water Contractors, including Metropolitan, have signed the Agreement in Principle. Under the Agreement in Principle, the term of the State water supply contract for each Contractor that signs an amendment would be extended until December 31, 2085. The Agreement in Principle served as the "proposed project" for purposes of environmental review under CEQA. In August 2016, DWR released for public comment a draft Environmental Impact Report ("EIR") for the proposed project. The public review period on the draft EIR ended in October 2016. State law requires DWR to make a presentation to the State Legislature at an informational hearing at least 60 days prior to final approval of a State water supply contract extension. That hearing occurred on September 11, 2018. DWR released the final EIR on November 16, 2018 and certified the final EIR and issued a Notice of Determination on December 11, 2018. Concurrently, Metropolitan considered the certified final EIR and approved the water supply contract extension amendment at its December 11, 2018 Board meeting. That same day, DWR filed a lawsuit seeking to validate the contract extension. In January 2019, North Coast Rivers Alliance and others separately filed two petitions for writ of mandate and a complaint for declaratory and injunctive relief challenging DWR's final EIR and approval of the State water supply contract extension amendment under CEQA, the Delta Reform Act, and public trust doctrine. Mandatory CEQA settlement conferences were held on February 22, 2019. On June 18, 2019, the validation and CEQA cases were deemed related, and on August 20, 2019, they were assigned to a single judge. On August 28, 2020, DWR certified the CEQA administrative record. On September 28, 2020, DWR filed answers in the two CEQA

cases. No date for a hearing on the merits has been set and no briefing has occurred in any of the three actions. Any adverse impact of this litigation and rulings on Metropolitan's State Water Project supplies cannot be determined at this time. DWR has yet to execute the contract extension amendment. To date, 22 of the 29 State Water Contractors have executed the amendment, exceeding the DWR established threshold needed for it to be fully executed. DWR is awaiting a decision at the trial court on the validation litigation described above before moving forward with implementation of the amendments with individual State Water Contractors. Unless the contract extension amendment is implemented, the amortization period for any future State Water Project bonds will end in 2035.

In a process separate from the State Water Contract extension amendment described above, Metropolitan and other State Water Contractors undertook negotiations with DWR to amend their State water supply contracts to clarify how costs would be allocated for the California WaterFix project approved by DWR in 2017, as well as to clarify the criteria applicable to certain water management tools including single and multi-year water transfers and exchanges. In 2018, DWR and the State Water Contractors reached an agreement in principle (the "2018 AIP") and DWR subsequently issued a draft EIR. On April 29, 2019, Governor Newsom issued an executive order directing State agencies to develop a comprehensive statewide strategy to build a climate-resilient water system that included consideration of a potential single-tunnel Bay-Delta conveyance facility ("Delta Conveyance Project") instead of the approved California WaterFix project. Following its rescission of all project approvals for the California WaterFix project, DWR removed the California WaterFix cost provisions from the 2018 AIP and, on February 28, 2020, recirculated the draft EIR for only the 2018 AIP's water management provisions. DWR certified a Final EIR for the revised 2018 AIP in August 2020, and finalized the form of the amendment to implement the 2018 AIP in October 2020. The water management provisions would allow for greater flexibility for transfers and exchanges among the State Water Contractors. Specifically, it would confirm existing practices for exchanges, allow more flexibility for non-permanent water transfers, and allow for the transfer and exchange of certain portions of Article 56 carry over water.

In light of the State's change in direction from California WaterFix to a potential single tunnel Delta Conveyance Project, Metropolitan and other State Water Contractors embarked on a third public process to further negotiate proposed amendments to their State water supply contracts related to cost allocation for the potential Delta Conveyance Project. In March of 2020, DWR and the State Water Contractors reached an Agreement in Principle (the "Delta Conveyance AIP") that would be the basis for amendment of the State water supply contracts to provide a mechanism that would allow for the costs related to any Delta Conveyance Project to be allocated for and collected by DWR. The Delta Conveyance AIP also provides for the allocation of benefits for any Delta Conveyance Project in proportion to each State Water Contractor's participation. Contract language for the proposed amendments is under development. Consideration of the amendments for approval by DWR and the State Water Contractors would not occur until after DWR's completion of the Delta Conveyance Project environmental review, which is not expected before 2024. See "Bay-Delta Planning Activities; Delta Conveyance" under "Bay Delta Proceedings Affecting State Water Project," below.

**Related Litigation—Monterey Amendment.** On May 4, 2010, DWR completed an EIR and concluded a remedial CEQA review for the Monterey Amendment (described under " – Terms of the Contract" above), which reflects the settlement of certain disputes regarding the allocation of State Water Project water. Central Delta Water Agency, South Delta Water Agency, California Water Impact Network, California Sportfishing Protection Alliance, and the Center For Biological Diversity filed a lawsuit against DWR in Sacramento County Superior Court challenging the validity of the EIR under CEQA and the validity of underlying agreements under a reverse validation action (the "Central Delta I" case). In January 2013, the Court ruled that the validation cause of action in Central Delta I was time barred by the statute of limitations. The court also held that DWR must complete a limited scope remedial CEQA review addressing the potential impacts of the Kern Water Bank, a portion of the Monterey Amendment that does not directly affect Metropolitan. The court also ruled that the State Water Project may continue to be operated under the terms of the

Monterey Amendment while the remedial CEQA review is prepared and leaves in place the underlying project approvals while DWR prepares the remedial CEQA review. Plaintiffs appealed. Briefing by the parties was completed, but no date for oral argument has been set.

In September 2016, DWR certified the Final Revised Draft EIR for the Monterey Amendment, recorded a Notice of Determination, and filed papers in the trial demonstrating compliance with the court's order for remedial CEQA review. On October 21, 2016, the petitioner group from Central Delta I and a new lead petitioner, Center for Food Safety, filed litigation against DWR challenging this EIR and named Metropolitan and the other State Water Project contractors as respondent parties. On October 2, 2017, the court denied Center for Food Safety's petition. Plaintiffs appealed. Briefing in this appeal has been completed. No date for oral argument has been set. Any adverse impact of any of the litigation and rulings relating to the Monterey Amendment on Metropolitan's State Water Project supplies cannot be determined at this time.

### **2017 Oroville Dam Spillway Incident**

Oroville Dam, the earthfill embankment dam on the Feather River which impounds Lake Oroville, is operated by DWR as a facility of the State Water Project. On February 7, 2017, the main flood control spillway at Oroville Dam, a gated and concrete lined facility, experienced significant damage as DWR released water to manage higher inflows driven by continued precipitation in the Feather River basin. The damaged main spillway impaired DWR's ability to manage lake levels causing water to flow over the emergency spillway structure, an ungated, 1,730-foot-long concrete barrier located adjacent to and north of the main flood control spillway structure. Use of the emergency spillway structure resulted in erosion that threatened the stability of the emergency spillway structure. This concern prompted the Butte County Sheriff, on February 12, 2017, to issue an evacuation order for approximately 200,000 people living in Oroville and the surrounding communities.

On November 1, 2018, DWR completed reconstruction of the main spillway to its original design capacity of approximately 270,000 cubic feet per second ("cfs"), a capacity almost twice its highest historical outflow. Work on the emergency spillway was substantially completed in April 2019. Mitigation measures such as slope revegetation are expected to be completed in 2021. Although the full extent of the costs of the response and recovery efforts are unknown at this time, DWR has indicated that the total costs of the recovery and restoration project prior to any federal or other reimbursement are estimated to be approximately \$1.2 billion. Cost estimates are based on actual and projected work and may be adjusted further as work continues through completion of the project in 2021. Funding from the Federal Emergency Management Agency ("FEMA") is generally available under FEMA's Public Assistance Program to recover 75 percent of eligible costs to restore facilities damaged as a result of natural disasters to their pre-disaster condition. As of October 1, 2020, DWR estimates that repair costs will total \$1.2 billion and has submitted \$815 million to FEMA as eligible costs for reimbursement. FEMA has provided \$259 million in reimbursement funding through October 1, 2020 as its 75 percent share of eligible costs. FEMA has determined that costs associated with the upper portion of the main spillway are eligible for reimbursement, and has approved, or is expected to authorize approximately \$371 in additional reimbursements for such costs. FEMA denied claims for reimbursement of \$278 million of emergency spillway costs; however, DWR is seeking partial reimbursement of these costs through the FEMA's hazard mitigation grant funding program. FEMA's review of those costs is underway. Any unrecovered costs to be paid for by the State Water Contractors under the State water contracts are expected to be financed long-term with DWR bonds. Metropolitan's potential share of the cost for the unreimbursed work totals about \$243 million. About \$22 million of this amount has already been paid through the State Water Project annual statement of charges.

Various lawsuits have been filed against DWR asserting claims for property damage, economic losses, environmental impacts and civil penalties related to this incident. Neither Metropolitan nor any other State Water Contractor was named as a defendant in any of these lawsuits. These cases, which have been coordinated in Sacramento Superior Court (Case No. JCCP 4974), include a lawsuit filed by the Butte



County District Attorney (“DA”) that seeks up to \$51 billion in civil penalties. This lawsuit asserts a single claim under California Fish and Game Code section 5650, *et seq.*, which makes it unlawful to deposit or place certain substances into the waters of the State, including lime, slag and “any substance or material deleterious to fish, plant life, mammals, or bird life.” Among other things, the statute provides for the assessment of civil penalties of up to \$25,000 a day and \$10 per pound of material deposited in violation of its strictures.

The State water supply contracts provide that Metropolitan and the other State Water Contractors are not liable for any claim of damage of any nature arising out of or connected the control, carriage, handling, use, disposal or distribution of State Water Project water prior to the point where it reaches their turnouts. However, DWR recently has asserted that regardless of legal liability all costs of the State Water Project system must be borne by State Water Contractors. Thus, DWR has indicated that it intends to bill the State Water Contractors for any expenditures related to this litigation (cost of litigation, settlements, damages awards/verdicts).

In light of DWR’s position, Metropolitan, the State Water Contractors, Santa Clara Valley Water District, Mojave Water Agency, and Kern County Water Agency filed a motion to intervene in the Butte County DA case on September 3, 2020, in order to protect their contractual rights and interests in the State Water Project. A hearing on that motion had been scheduled for January 8, 2021.

DWR filed a motion for summary judgment in the Butte County DA case on September 3, 2020. On December 18, 2020, the Sacramento Superior Court issued a ruling granting DWR’s motion. In its ruling, the court determined that, as a matter of law, DWR is not a person subject to the penalty provisions of the California Fish and Game Code section at issue, and therefore the Butte County DA’s complaint failed to state a cause of action. As a result of the granting of the motion, the matter will be dismissed by the trial court. The Butte County DA has 60 days to file an appeal after the court enters the judgment. The judgment was entered on January 11, 2021. At this time, Metropolitan cannot predict the outcome of this litigation or the amount of civil penalties that might be assessed in the event the Butte County DA prevails on an appeal of the decision.

#### **Bay-Delta Proceedings Affecting State Water Project**

**General.** In addition to being a source of water for diversion into the State Water Project, the Bay-Delta is the source of water for local agricultural, municipal and industrial needs, and also supports significant resident and anadromous fish and wildlife resources and important recreational uses of water. Both the State Water Project’s upstream reservoir operations and its Bay-Delta diversions can at times affect these other uses of Bay-Delta water directly, or indirectly, through impacts on Bay-Delta water quality. A variety of proceedings and other activities are ongoing with the participation of various State and federal agencies, as well as California’s environmental, urban and agricultural communities, in an effort to develop long-term, collectively-negotiated solutions to the environmental and water management issues concerning the Bay-Delta, and Metropolitan actively participates in these proceedings. Metropolitan cannot predict the ultimate outcome of any of the litigation or regulatory processes described below but believes that a materially adverse impact on the operation of State Water Project pumps, Metropolitan’s State Water Project deliveries or Metropolitan’s water reserves could result.

**SWRCB Regulatory Activities and Decisions.** The State Water Resources Control Board (the “SWRCB”) is the agency responsible for setting water quality standards and administering water rights throughout California. The SWRCB exercises its regulatory authority over the Bay-Delta by means of public proceedings leading to regulations and decisions that can affect the availability of water to Metropolitan and other users of State Water Project water. These include the Water Quality Control Plan (“WQCP”) for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary, which establishes the water quality objectives and proposed flow regime of the estuary, and water rights decisions, which assign responsibility for

implementing the objectives of the WQCP to users throughout the system by adjusting their respective water rights permits.

Since 2000, SWRCB's Water Rights Decision 1641 ("D-1641") has governed the State Water Project's ability to export water from the Bay-Delta for delivery to Metropolitan and other agencies receiving water from the State Water Project. D-1641 allocated responsibility for meeting flow requirements and salinity and other water quality objectives established earlier by the WQCP.

The WQCP gets reviewed periodically and new standards and allocations of responsibility can be imposed on the State Water Project as a result. The last review was completed in 2006, and the current review has been ongoing since approximately 2010.

The SWRCB's current review and update of the WQCP is being undertaken in phased proceedings. In December 2018, the SWRCB completed Phase 1 of the WQCP proceedings, adopting the plan amendments and environmental documents to support new flow standards for San Joaquin River tributaries and revised southern Delta salinity objectives. Various stakeholders filed suit against the SWRCB challenging these amendments. As part of Phase 2 proceedings, a framework document for the second plan amendment process, focused on the Sacramento River and its tributaries, Delta eastside tributaries, Delta outflows, and interior Delta flows, was released in July 2018. The framework describes changes that will likely be proposed by the SWRCB through formal proposed amendments and supporting environmental documents. The proposed changes include certain unimpaired flow requirements for the Sacramento River and its salmon-bearing tributaries. The SWRCB has also encouraged all stakeholders to work together to reach one or more voluntary agreements for consideration by the SWRCB that could implement the proposed amendments to the WQCP through a variety of tools, while seeking to protect water supply reliability. Metropolitan is participating in the Phase 2 proceedings and voluntary agreement negotiations.

***Bay-Delta Planning Activities; Delta Conveyance.*** In 2000, several State and federal agencies released the CALFED Bay-Delta Programmatic Record of Decision and Environmental Impact Report/Environmental Impact Statement ("EIR/EIS") that outlined and disclosed the environmental impacts of a 30-year plan to improve the Bay-Delta's ecosystem, water supply reliability, water quality, and levee stability. The CALFED Record of Decision remains in effect and many of the State, federal, and local projects begun under CALFED continue.

Building on CALFED and other Bay-Delta planning activities, in 2006 multiple State and federal resource agencies, water agencies, and other stakeholder groups entered into a planning agreement for the Bay-Delta Conservation Plan ("BDCP"). The BDCP was originally conceived as a comprehensive conservation strategy for the Bay-Delta designed to restore and protect ecosystem health, water supply, and water quality within a stable regulatory framework to be implemented over a 50-year time frame with corresponding long-term permit authorizations from fish and wildlife regulatory agencies. The BDCP includes both alternatives for new water conveyance infrastructure and extensive habitat restoration in the Bay-Delta. The existing State Water Project Delta water conveyance system needs to be improved and modernized to address operational constraints on pumping in the south Delta as well as risks to water supplies and water quality from climate change, earthquakes, and flooding. Operational constraints are largely due to biological opinions and incidental take permits to which the State Water Project is subject that substantially limit the way DWR operates the State Water Project.

In 2015, the State and federal lead agencies proposed an alternative implementation strategy and new alternatives to the BDCP to provide for the protection of water supplies conveyed through the Bay-Delta and the restoration of the ecosystem of the Bay-Delta, termed "California WaterFix" and "California EcoRestore," respectively. In this alternative approach, DWR and the Bureau of Reclamation would implement planned water conveyance improvements (California WaterFix) as a stand-alone project with the required habitat restoration limited to that directly related to construction mitigation. The associated costs of

such mitigation would be underwritten by the public water agencies participating in the conveyance project. Ecosystem improvements and habitat restoration more generally (California EcoRestore) would be undertaken under a more phased approach than previously contemplated by the BDCP and would not be linked with the conveyance project or permits.

As part of California EcoRestore, which was initiated in 2015, the State is pursuing more than 30,000 acres of Delta habitat restoration. Work on a number of EcoRestore projects is ongoing. Among other things, EcoRestore was undertaken to implement restoration projects required by the biological opinions to which the State Water Project has been and is subject. EcoRestore is estimated to cost approximately \$500 million in the first five years (which is 2015-2020) for implementation and planning costs. This includes certain amounts being paid by the State Water Contractors, including Metropolitan, for the costs of habitat restoration required to mitigate State and federal water project impacts pursuant to the biological opinions. See also “–Endangered Species Act and Other Environmental Considerations – Endangered Species Act Considerations – State Water Project.”

In July 2017, DWR certified a final EIR and approved the California WaterFix as an improvement to the State Water Project. The California Water Fix, as then approved, would have included new north Bay-Delta water diversion facilities with a total maximum capacity of 9,000 cfs and two tunnels for the transportation of State Water Project and Central Valley Project water from the north Delta.

In July 2018, Metropolitan’s Board approved Metropolitan’s funding in the aggregate of up to 64.6 percent of the overall capital cost of the California WaterFix, including its share as a State Water Contractor and through various forms of additional financial support Metropolitan would contribute to the project.

On February 12, 2019, in his first State of the State address, then recently elected Governor Gavin Newsom announced a conceptual proposal supporting a single-tunnel configuration for new Bay-Delta conveyance instead of the two-tunnel California WaterFix. Subsequently, on April 29, 2019, Governor Newsom issued an executive order directing identified State agencies to develop a comprehensive statewide strategy to build a climate-resilient water system. Among other things, the Governor’s executive order directed the State agencies to inventory and assess the current planning for modernizing conveyance through the Bay-Delta with a new single tunnel project. Following the Governor’s executive order, in May 2019, DWR withdrew approval of the California WaterFix project and decertified the EIR. In August 2019, DWR rescinded the last permit application associated with the project. Between mid-2017 and mid-2019, California WaterFix was subject to several lawsuits primarily related to DWR’s powers to finance and construct the project and various environmental approvals and related matters. The lawsuits, administrative proceedings, and other matters were dismissed as a result of the cancellation of the California WaterFix project.

Consistent with the Governor’s direction, DWR is pursuing a new environmental review and planning process for a proposed single tunnel project to modernize the State Water Project’s Bay-Delta conveyance, commonly referred to as the Delta Conveyance Project. The formal environmental review process for a proposed single tunnel Delta Conveyance Project commenced with the issuance by DWR of a Notice of Preparation under CEQA on January 15, 2020. The new conveyance facilities being reviewed would include intake structures on the Sacramento River, with a total capacity of 6,000 cfs, and a single tunnel to convey water to the existing pumping plants in the south Delta. Planning, environmental review and conceptual design work by DWR is expected to be completed in the 2023-2024 timeframe.

On August 20, 2020, the U.S. Army Corps of Engineers, the lead agency for the Delta Conveyance Project under NEPA, issued a notice of intent of the development of the environmental impact statement for the Delta Conveyance Project. The draft environmental impact statement is currently anticipated to be available for public review and comment in mid-2021.

Metropolitan's Board has previously authorized Metropolitan's participation in two joint powers agencies relating to a Bay-Delta conveyance project (originally formed in connection with California WaterFix): the Delta Conveyance Design and Construction Authority (the "DCA"), formed by the participating water agencies to actively participate with DWR in the design and construction of the conveyance project in coordination with DWR and under the control and supervision of DWR; and the Delta Conveyance Finance Authority (the "Financing JPA"), formed by the participating water agencies to facilitate financing for the conveyance project. The DCA is providing engineering and design activities to support the DWR's planning and environmental analysis for the potential new Delta Conveyance Project.

In August 2020, the DCA released preliminary cost information for the proposed Delta Conveyance Project based on an early cost assessment prepared by the DCA. The DCA's early assessment is based on preliminary engineering, not a full conceptual engineering report, and includes project costs for construction, management, oversight, mitigation, planning, soft costs, and contingencies. Based on these assumptions, the DCA's early assessment estimated a project cost of approximately \$15.9 billion in 2020 non-discounted dollars, which includes a 44 percent overall contingency applied to the preliminary construction costs. The DCA noted that such estimate has been developed at an early stage in the proposed project and will be revised over time.

The preliminary cost assessment information was prepared to inform various public water agencies' decisions on whether to participate in funding the environmental review, planning, preliminary design and engineering, and other pre-construction activities, for the proposed Delta Conveyance Project, and if so, at what level. Approximately \$340.7 million of investment is estimated to be needed over four years (2021 through 2024) to fund these costs. At its December 8, 2020 Board meeting, Metropolitan's Board authorized the General Manager to execute a funding agreement with DWR and commit funding for a Metropolitan participation level of 47.2 percent of such costs of preliminary design, environmental planning and other pre-construction activities to assist in the environmental process for the proposed Delta Conveyance Project. Metropolitan's 47.2 percent share amounts to an estimated funding commitment of \$160.8 million over the next four years. Eighteen other State Water Contractors also have approved funding a share of the planning and pre-construction costs. The funding agreement includes funding environmental and pre-construction activities for DWR and work that is authorized by DWR under the DCA joint exercise of powers agreement. Similar to prior agreements for BDCP and California WaterFix, the funding agreement provides that funds would be reimbursed to Metropolitan if the project is approved and when the first bonds, if any, for the project are issued. In connection with approving the funding agreement, at its December 2020 Board meeting, the Board also authorized the General Manager to execute an amendment to the DCA joint exercise of powers agreement. The amendment was developed to address changes in the anticipated participation structure for the proposed Delta Conveyance Project from that contemplated for California WaterFix. The amendment revises the board composition and voting procedures to align with public water agencies' participation in the environmental review, planning, design and engineering of the proposed Delta Conveyance Project as described above.

Metropolitan's December 8, 2020 action to approve fund planning and pre-construction costs does not commit Metropolitan to participate in the Delta Conveyance Project. Any final decision to commit to the project and incur final design and construction costs would require Board approval following completion of the environmental review for the proposed Delta Conveyance Project, which is not expected to occur until 2024 or later.

On August 6, 2020, DWR adopted certain resolutions to authorize the issuance of bonds to finance costs of Delta Conveyance Project environmental review, planning, design and, if and when such a project is approved, the costs of acquisition and construction thereof. The same day, it filed a complaint in Sacramento County Superior Court seeking to validate its authority to issue the bonds. Fourteen answers have been filed in the validation action, and one related case was filed in the same court alleging that DWR violated CEQA by adopting the bond resolutions before completing environmental review of the Delta Conveyance Project.

Additional lawsuits could be filed in the future with respect to any new Bay-Delta conveyance project and may impact the anticipated timing and costs of any proposed new single tunnel Delta Conveyance Project.

## **Colorado River Aqueduct**

### **Background**

The Colorado River was Metropolitan's original source of water after Metropolitan's establishment in 1928. Metropolitan has a legal entitlement to receive water from the Colorado River under a permanent service contract with the Secretary of the Interior. Water from the Colorado River and its tributaries is also available to other users in California, as well as users in the states of Arizona, Colorado, Nevada, New Mexico, Utah, and Wyoming (collectively, the "Colorado River Basin States"), resulting in both competition and the need for cooperation among these holders of Colorado River entitlements. In addition, under a 1944 treaty, Mexico has right to delivery of 1.5 million acre-feet of Colorado River water annually except as provided under shortage conditions described in Treaty Minute 323. The United States and Mexico agreed to conditions for reduced deliveries of Colorado River water to Mexico in Treaty Minute 323, adopted in 2017. That Minute established the rules under which Mexico agreed to take shortages and create reservoir storage in Lake Mead. Those conditions are in parity with the requirements placed on the Lower Basin States (defined below) in the Lower Basin Drought Contingency Plan (described under "– Colorado River Operations: Surplus and Storage Guidelines – Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead" in this Appendix A). Mexico can also schedule delivery of an additional 200,000 acre-feet of Colorado River water per year if water is available in excess of the requirements in the United States and the 1.5 million acre-feet allotted to Mexico.

Construction of the CRA, which is owned and operated by Metropolitan, was undertaken by Metropolitan to provide for the transportation of its Colorado River water entitlement to its service area. The CRA originates at Lake Havasu on the Colorado River and extends approximately 242 miles through a series of pump stations and reservoirs to its terminus at Lake Mathews in Riverside County. Up to 1.25 million acre-feet of water per year may be conveyed through the CRA to Metropolitan's member agencies, subject to availability of Colorado River water for delivery to Metropolitan as described below. Metropolitan first delivered CRA water to its member agencies in 1941.

### **Colorado River Water Apportionment and Seven-Party Agreement**

Pursuant to the federal Boulder Canyon Project Act of 1928, California is apportioned the use of 4.4 million acre-feet of water from the Colorado River each year plus one-half of any surplus that may be available for use collectively in Arizona, California and Nevada (the "Lower Basin States"). Under an agreement entered into in 1931 among the California entities that expected to receive a portion of California's apportionment of Colorado River water (the "Seven-Party Agreement") and which has formed the basis for the distribution of Colorado River water made available to California, Metropolitan holds the fourth priority right to 550,000 acre-feet per year. This is the last priority within California's basic apportionment. In addition, Metropolitan holds the fifth priority right to 662,000 acre-feet of water, which is in excess of California's basic apportionment. Until 2003, Metropolitan had been able to take full advantage of its fifth priority right as a result of the availability of surplus water and water apportioned to Arizona and Nevada that was not needed by those states. However, during the 1990s Arizona and Nevada increased their use of water from the Colorado River, and by 2002 no unused apportionment was available for California. As a result, California has limited its annual use to 4.4 million acre-feet since 2003, not including supplies made available under water supply programs such as intentionally-created surplus and certain conservation and storage agreements. In addition, a severe drought in the Colorado River Basin from 2000-2004 reduced storage in system reservoirs, ending the availability of surplus deliveries to Metropolitan. Prior to 2003, Metropolitan could divert over 1.25 million acre-feet in any year. Since 2003, Metropolitan's net diversions of Colorado River water have ranged from a low of 537,607 acre-feet in 2019 to a high of approximately 1,179,000 acre-feet in 2015. Average annual net diversions for 2010 through 2019 were nearly 900,291 acre-feet, with annual volumes dependent primarily on programs to augment supplies, including transfers of

conserved water from agriculture. See “– Quantification Settlement Agreement” and “– Colorado River Operations: Surplus and Shortage Guidelines.” See also “–Water Transfer, Storage and Exchange Programs – Colorado River Aqueduct Agreements and Programs.” In 2019, total available Colorado River supply was just over one million acre-feet. A portion of the available supply that was not diverted was stored in Lake Mead for future usage. See also “–Storage Capacity and Water in Storage.”

The following table sets forth the existing priorities of the California users of Colorado River water established under the 1931 Seven-Party Agreement.

**PRIORITIES UNDER THE 1931 CALIFORNIA SEVEN-PARTY AGREEMENT<sup>(1)</sup>**

Priority	Description	Acre-Feet Annually
1	Palo Verde Irrigation District gross area of 104,500 acres of land in the Palo Verde Valley	3,850,000
2	Yuma Project in California not exceeding a gross area of 25,000 acres in California	
3(a)	Imperial Irrigation District and other lands in Imperial and Coachella Valleys <sup>(2)</sup> to be served by All-American Canal	
3(b)	Palo Verde Irrigation District - 16,000 acres of land on the Lower Palo Verde Mesa	
4	Metropolitan Water District of Southern California for use on the coastal plain	550,000
	<b>SUBTOTAL</b>	4,400,000
5(a)	Metropolitan Water District of Southern California for use on the coastal plain	550,000
5(b)	Metropolitan Water District of Southern California for use on the coastal plain <sup>(3)</sup>	112,000
6(a)	Imperial Irrigation District and other lands in Imperial and Coachella Valleys to be served by the All-American Canal	300,000
6(b)	Palo Verde Irrigation District - 16,000 acres of land on the Lower Palo Verde Mesa	
	<b>TOTAL</b>	5,362,000
7	Agricultural use in the Colorado River Basin in California	Remaining surplus

Source: Metropolitan.

(1) Agreement dated August 18, 1931, among Palo Verde Irrigation District, Imperial Irrigation District, Coachella Valley County Water District, Metropolitan, the City of Los Angeles, the City of San Diego and the County of San Diego. These priorities were memorialized in the agencies’ respective water delivery contracts with the Secretary of the Interior.

(2) The Coachella Valley Water District serves Coachella Valley.

(3) In 1946, the City of San Diego, the San Diego County Water Authority, Metropolitan and the Secretary of the Interior entered into a contract that merged and added the City and County of San Diego’s rights to storage and delivery of Colorado River water to the rights of Metropolitan.



### **Quantification Settlement Agreement**

The Quantification Settlement Agreement (“QSA”), executed by the Coachella Valley Water District (“CVWD”), Imperial Irrigation District (“IID”), Metropolitan, and others in October 2003, establishes Colorado River water use limits for IID and CVWD, and provides for specific acquisitions of conserved water and water supply arrangements. The QSA and related agreements provide a framework for Metropolitan to enter into other cooperative Colorado River supply programs and set aside several disputes among California’s Colorado River water agencies.

Specific programs under the QSA and related agreements include lining portions of the All-American and Coachella Canals, which were completed in 2009 and conserve over 98,000 acre-feet annually. Metropolitan receives this water and delivers over 77,000 acre-feet of exchange water annually to San Diego County Water Authority (“SDCWA”), and provides 16,000 acre-feet of water annually by exchange to the United States for use by the La Jolla, Pala, Pauma, Rincon and San Pasqual Bands of Mission Indians, the San Luis Rey River Indian Water Authority, the City of Escondido and the Vista Irrigation District. Water became available for exchange with the United States following a May 17, 2017 notice from the Federal Energy Regulatory Commission (“FERC”) satisfying the last requirement of Section 104 of the San Luis Rey Indian Water Rights Settlement Act (Title I of Public Law 100-675, as amended). The QSA and related agreements also authorized the transfer of conserved water annually by IID to SDCWA (up to a maximum expected amount in 2021 of 205,000 acre-feet, then stabilizing to 200,000 acre-feet per year). Metropolitan also receives this water and delivers an equal amount of exchange water annually to SDCWA. See description under “– Metropolitan and San Diego County Water Authority Exchange Agreement” below; see also “METROPOLITAN REVENUES–Principal Customers” in this Appendix A. Also included under the QSA related agreements is a delivery and exchange agreement between Metropolitan and CVWD that provides for Metropolitan, when requested, to deliver annually up to 35,000 acre-feet of Metropolitan’s State Water Project contractual water to CVWD by exchange with Metropolitan’s available Colorado River supplies.

### **Metropolitan and San Diego County Water Authority Exchange Agreement**

No facilities exist to deliver conserved water acquired by SDCWA from IID and water allocated to SDCWA that has been conserved as a result of the lining of the All-American and Coachella Canals. See “– Quantification Settlement Agreement.” Accordingly, in 2003, Metropolitan and SDCWA entered into an exchange agreement (the “Exchange Agreement”), pursuant to which SDCWA makes available to Metropolitan at its intake at Lake Havasu on the Colorado River the conserved Colorado River water SDCWA receives under the QSA related agreements. Metropolitan delivers an equal volume of water from its own sources of supply through its delivery system to SDCWA. The Exchange Agreement limits the amount of water that Metropolitan delivers to 277,700 acre-feet per year, except that an additional 5,000 acre-feet and an additional 2,500 acre-feet will be exchanged in years 2021 and 2022, respectively. In consideration for the conserved water made available to Metropolitan by SDCWA, SDCWA pays the agreement price for the exchange water delivered by Metropolitan. The price payable by SDCWA is calculated using the charges set by Metropolitan’s Board from time to time to be paid by its member agencies for the conveyance of water through Metropolitan’s facilities. See “METROPOLITAN REVENUES–Litigation Challenging Rate Structure” in this Appendix A for a description of Metropolitan’s charges for the conveyance of water through Metropolitan’s facilities and litigation in which SDCWA is challenging such charges. The term of the Exchange Agreement, as it relates to conserved water transferred by IID to SDCWA, extends through 2047, and as it relates to water allocated to SDCWA that has been conserved as a result of the lining of the All-American and Coachella Canals, extends through 2112; subject, in each case, to the right of SDCWA, upon a minimum of five years’ advance written notice to Metropolitan, to permanently reduce the aggregate quantity of conserved water made available to Metropolitan under the Exchange Agreement to the extent SDCWA decides continually and regularly to transport such conserved water to SDCWA through alternative facilities (which do not presently exist). In 2019, approximately 237,711 acre-feet were delivered to Metropolitan by SDCWA for exchange, consisting of 160,000 acre-feet

of IID conservation plus 77,711 acre-feet of conserved water from the Coachella Canal and All-American Canal lining projects.

### **Colorado River Operations: Surplus and Shortage Guidelines**

**General.** The Secretary of the Interior is vested with the responsibility of managing the mainstream waters of the lower Colorado River pursuant to federal law. Each year, the Secretary of the Interior is required to declare the Colorado River water supply availability conditions for the Lower Basin States in terms of “normal,” “surplus” or “shortage” and has adopted operations criteria in the form of guidelines to determine the availability of surplus or potential shortage allocations among the Lower Basin States and reservoir operations for such conditions.

**Interim Surplus Guidelines.** In January 2001, the Secretary of the Interior adopted guidelines (the “Interim Surplus Guidelines”), initially for use through 2016, in determining the availability and quantity of surplus Colorado River water available for use in California, Arizona and Nevada. The Interim Surplus Guidelines were amended in 2007 and now extend through 2026. The purpose of the Interim Surplus Guidelines was to provide mainstream users of Colorado River water, particularly those in California and Nevada who had been utilizing surplus flows, a greater degree of predictability with respect to the availability and quantity of surplus water. Under the Interim Surplus Guidelines, Metropolitan initially expected to divert up to 1.25 million acre-feet of Colorado River water annually under foreseeable runoff and reservoir storage scenarios from 2004 through 2016. However, an extended drought in the Colorado River Basin reduced these initial expectations, and Metropolitan has not received any surplus water since 2002.

**Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead.** In May 2005, the Secretary of the Interior directed the Bureau of Reclamation to develop additional strategies for improving coordinated management of the reservoirs of the Colorado River system. In November 2007, the Bureau of Reclamation issued a Final EIS regarding new federal guidelines concerning the operation of the Colorado River system reservoirs, particularly during drought and low reservoir conditions. These guidelines provide water release criteria from Lake Powell and water storage and water release criteria from Lake Mead during shortage and surplus conditions in the Lower Basin, provide a mechanism for the storage and delivery of conserved system and non-system water in Lake Mead and extend the Interim Surplus Guidelines through 2026 (as noted above). The Secretary of the Interior issued the final guidelines through a Record of Decision signed in December 2007. The Record of Decision and accompanying agreement among the Colorado River Basin States protect reservoir levels by reducing deliveries during low inflow periods, encourage agencies to develop conservation programs and allow the Colorado River Basin States to develop and store new water supplies. The Colorado River Basin Project Act of 1968 insulates California from shortages in all but the most extreme hydrologic conditions. Consistent with these legal protections, under the guidelines, Arizona and Nevada are first subject to the initial annual shortages identified by the Secretary up to 500,000 acre-feet.

The guidelines also created the Intentionally Created Surplus (“ICS”) program, which allows water contractors in the Lower Basin States to store conserved water in Lake Mead. Under this program, ICS water (water that has been conserved through an extraordinary conservation measure, such as land fallowing) is eligible for storage in Lake Mead by Metropolitan. ICS can be created through 2026 and delivered through 2036. See the table entitled “Metropolitan’s Water Storage Capacity and Water in Storage” under “Storage Capacity and Water in Storage.” Under the guidelines and the Colorado River Drought Contingency Plan Authorization Act, California is able to create and deliver up to 400,000 acre-feet of extraordinary conservation ICS (“EC ICS”) annually and accumulate up to 1.7 million acre-feet of EC ICS in Lake Mead. In December 2007, California contractors for Colorado River water executed the California Agreement for the Creation and Delivery of Extraordinary Conservation Intentionally Created Surplus (the “California ICS Agreement”), which established terms and conditions for the creation, accumulation, and delivery of EC ICS by California contractors receiving Colorado River water. Under the California ICS Agreement, the State’s EC ICS creation, accumulation, and delivery limits provided to California under the 2007 Interim Surplus

Guidelines are apportioned between IID and Metropolitan. No other California contractors were permitted to create or accumulate ICS. Under the terms of the agreement, IID is allowed to store up to 25,000 acre-feet per year of EC ICS in Lake Mead with a cumulative limit of 50,000 acre-feet. Metropolitan is permitted to use the remaining available EC ICS creation, delivery, and accumulation limits provided to California.

The Secretary of the Interior delivers the stored ICS water to Metropolitan in accordance with the terms of December 13, 2007, January 6, 2010, and November 20, 2012 Delivery Agreements between the United States and Metropolitan. As of January 1, 2021, Metropolitan had an estimated 1,308,000 acre-feet in its ICS accounts. These ICS accounts include water conserved by fallowing in the Palo Verde Valley, projects implemented with IID in its service area, groundwater desalination, the Warren H. Brock Reservoir Project, and international agreements that converted water conserved by Mexico to the United States.

Since the 2007 Lower Basin shortage guidelines were issued for the coordinated operations of Lake Powell and Lake Mead, the Colorado River has continued to experience drought conditions. The seven Colorado River Basin States, the U.S. Department of Interior through the Bureau of Reclamation, and water users in the Colorado River basin, including Metropolitan, began developing Drought Contingency Plans (“DCPs”) to reduce the risk of Lake Powell and Lake Mead declining below critical elevations through 2026.

In April 2019, the President signed legislation directing the Secretary of the Interior to sign and implement four DCP agreements related to the Upper and Lower Basin DCPs without delay. The agreements were executed and the Upper and Lower Basin DCPs became effective on May 20, 2019. The Lower Basin Drought Contingency Plan Agreement requires California, Arizona and Nevada to store defined volumes of water in Lake Mead at specified lake levels. California would begin making contributions if Lake Mead’s elevation is projected to be 1,045 feet above sea level or below on January 1. Lake Mead elevation in January 2020 was 1,090 feet. Depending on the lake’s elevation, California’s contributions would range from 200,000 to 350,000 acre-feet a year (“DCP Contributions”). Pursuant to intrastate implementation agreements, Metropolitan will be responsible for 93 percent of California’s DCP Contributions under the Lower Basin DCP. CVWD will be responsible for 7 percent of California’s required DCP Contributions.

Implementation of the Lower Basin DCP enhances Metropolitan’s ability to store water in Lake Mead and ensures that water in storage can be delivered at a later date. The Lower Basin DCP increases the total volume of water that California may store in Lake Mead by 200,000 acre-feet, which Metropolitan will have the right to use. Water stored as ICS will be available for delivery as long as Lake Mead’s elevation remains above 1,025 feet. Previously, that water would likely have become inaccessible below a Lake Mead elevation of 1,075 feet. DCP Contributions may be made through conversion of existing ICS. These types of DCP Contributions become DCP ICS. DCP Contributions may also be made by leaving water in Lake Mead that there was a legal right to have delivered. This type of DCP Contribution becomes system water and may not be recovered. Rules are set for delivery of DCP ICS through 2026 and between 2027-2057.

The Lower Basin DCP will be effective through 2026. Before the DCP and 2007 Lower Basin shortage guidelines terminate in 2026, the U.S. Department of Interior through the Bureau of Reclamation, the seven Colorado River Basin States, and water users in the Colorado River basin, including Metropolitan, will begin work on the development of new shortage guidelines for the management and operation of the Colorado River.

On April 22, 2019, Metropolitan was served notice of a CEQA lawsuit filed by IID against Metropolitan. In this lawsuit, IID is seeking to vacate Metropolitan’s Board actions taken on December 11, 2018 and March 12, 2019 authorizing Metropolitan’s entering into the agreements implementing the Lower Basin DCP under CEQA and to block Metropolitan from implementing the Lower Basin DCP and any related agreements. The trial for this matter occurred on January 4, 2021. On January 5, 2021, the court issued its final order denying IID’s writ petition. In its ruling, the court held that IID’s petition was barred because IID did not exhaust its administrative remedies. The court further found that Metropolitan provided

adequate public notice of the grounds of its CEQA exemption determination and that substantial evidence supported such determination. IID has 60 days to file an appeal after the court enters the judgment. Metropolitan is unable to assess at this time the likelihood of success of this litigation in the event IID appeals the ruling, or of any future claims, or their potential effect on future implementation of the Lower Basin DCP.

***Related Litigation—Navajo Nation Suit.*** The Navajo Nation filed litigation against the Department of the Interior, specifically the Bureau of Reclamation and the Bureau of Indian Affairs, in 2003, alleging that the Bureau of Reclamation has failed to determine the extent and quantity of the water rights of the Navajo Nation in the Colorado River and that the Bureau of Indian Affairs has failed to otherwise protect the interests of the Navajo Nation. The complaint challenges the adequacy of the environmental review for the Interim Surplus Guidelines (described under “–Colorado River Operations: Surplus and Shortage Guidelines – Interim Surplus Guidelines”) and seeks to prohibit the Department of the Interior from allocating any “surplus” water until such time as a determination of the rights of the Navajo Nation is completed. Metropolitan and other California water agencies filed motions to intervene in this action. In October 2004 the court granted the motions to intervene and stayed the litigation to allow negotiations among the Navajo Nation, federal defendants, Central Arizona Water Conservation District (“CAWCD”), State of Arizona and Arizona Department of Water Resources. After years of negotiations, a tentative settlement was proposed in 2012 that would provide the Navajo Nation with specified rights to water from the Little Colorado River and groundwater basins under the reservation, along with federal funding for development of water supply systems on the tribe’s reservation. The proposed agreement was rejected by tribal councils for both the Navajo and the Hopi, who were seeking to intervene. On May 16, 2013, the stay of proceedings was lifted. On June 3, 2013, the Navajo Nation moved for leave to file a first amended complaint, which the court granted on June 27, 2013. The amended complaint added a legal challenge to the Lower Basin Shortage Guidelines adopted by the Secretary of the Interior in 2007 that allow Metropolitan and other Colorado River water users to store water in Lake Mead (described under “– Colorado River Operations: Surplus and Shortage Guidelines – Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead”). Metropolitan has used these new guidelines to store over 1,000,000 acre-feet of water in Lake Mead, a portion of which has been delivered, and the remainder of which may be delivered at Metropolitan’s request in future years. On July 22, 2014, the district court dismissed the lawsuit in its entirety, ruling that the Navajo Nation lacked standing and that the claim was barred against the federal defendants. The district court denied a motion by the Navajo Nation for leave to amend the complaint further after the dismissal. On September 19, 2014, the Navajo Nation appealed the dismissal of its claims related to the Interim Surplus Guidelines, the Lower Basin Shortage Guidelines, and breach of the federal trust obligation to the tribe. On December 4, 2017, the Ninth Circuit Court of Appeals held that the Navajo Nation lacked standing for its National Environmental Policy Act claims, but that the breach of trust claim was not barred against the federal defendants.

The matter was remanded to the district court in January 2018 to consider the Navajo Nation’s breach of trust claim on its merits. The Navajo Nation sought leave to file an amended complaint on its breach of trust claim twice. On August 23, 2019, the district court issued its order denying the motion to amend, entered judgment against the Navajo Nation, and dismissed the action. On October 18, 2019, the Navajo Nation filed its notice of appeal in the Ninth Circuit. The Navajo Nation filed its opening brief on February 26, 2020. Defendants and Intervenor answering briefs were due April 27, 2020. Metropolitan filed a joint answering brief with several other Defendant-Intervenor, including, among others, the State of Arizona, the State of Nevada, CVWD, and IID. The case was fully briefed as of July 1, 2020. Oral argument was held on October 16, 2020 before the Ninth Circuit. No ruling has yet been issued. Metropolitan is unable to assess at this time the likelihood of success of this litigation or any future claims, or their potential effect on Colorado River water supplies.

## **Endangered Species Act and Other Environmental Considerations**

### **Endangered Species Act Considerations - State Water Project**

*General.* DWR has altered the operations of the State Water Project to accommodate species of fish listed as threatened or endangered under the federal Endangered Species Act (“ESA”) and/or California ESA. Currently, three species (the winter-run and spring-run Chinook salmon and the Delta smelt) are listed under both ESAs. The Central Valley steelhead, the North American green sturgeon and the killer whale are listed under the federal ESA, and the Longfin smelt is listed as a threatened species under the California ESA.

The federal ESA requires that before any federal agency authorizes, funds, or carries out an action that may affect a listed species or designated critical habitat, it must consult with the appropriate federal fishery agency (either the National Marine Fisheries Service (“NMFS”) or the U.S. Fish and Wildlife Service (“USFWS”) depending on the species) to determine whether the action would jeopardize the continued existence of any threatened or endangered species, or adversely modify habitat critical to the species’ needs. The result of the consultation is known as a “biological opinion.” In a biological opinion, a federal fishery agency determines whether the action would cause jeopardy to a threatened or endangered species or adverse modification to critical habitat; and if jeopardy or adverse modification is found, recommends reasonable and prudent alternatives that would allow the action to proceed without causing jeopardy or adverse modification. If no jeopardy or adverse modification is found, the fish agency issues a “no jeopardy opinion.” The biological opinion also includes an “incidental take statement.” The incidental take statement allows the action to go forward even though it will result in some level of “take,” including harming or killing some members of the species, incidental to the agency action, provided that the agency action does not jeopardize the continued existence of any threatened or endangered species and complies with reasonable mitigation and minimization measures recommended by the federal fishery agency or as incorporated into the project description.

The California ESA generally requires an incidental take permit or consistency determination for any action that may cause take of a State-listed species of fish or wildlife. To issue an incidental take permit or consistency determination, the California Department of Fish and Wildlife (“CDFW”) must determine that the impacts of the authorized take will be minimized and fully mitigated and will not cause jeopardy.

On August 2, 2016, DWR and the Bureau of Reclamation requested that USFWS and NMFS reinstate federal ESA consultation on the coordinated operations of the State Water Project and the federal Central Valley Project to update them with the latest best available science and lessons learned operating under the prior 2008 and 2009 biological opinions. In January 2019, the Bureau of Reclamation submitted the initial biological assessment to USFWS and NMFS. The biological assessment contains a description of the Bureau of Reclamation’s and DWR’s proposed long-term coordinated operations plan (the “2019 Long-Term Operations Plan”). On October 22, 2019, USFWS and NMFS issued new federal biological opinions (the “2019 biological opinions”) that provide incidental take coverage for the 2019 Long-Term Operations Plan. On February 18, 2020, the Bureau of Reclamation signed a Record of Decision, pursuant to the National Environmental Policy Act, completing its environmental review and adopting the 2019 Long-Term Operations Plan.

The 2019 Long-Term Operations Plan incorporates and updates many of the requirements contained in the previous 2008 and 2009 biological opinions. It also includes over \$1 billion over a ten-year period in conservation, monitoring and new science, some of which is in the form of commitments carried forward from the previous biological opinions. Those costs are shared by the State Water Project and the federal Central Valley Project. The prior 2008 and 2009 biological opinions resulted in an estimated reduction in State Water Project deliveries of 0.3 million acre-feet during critically dry years to 1.3 million acre-feet in above normal water years as compared to the previous baseline. The 2019 Long-Term Operations Plan and 2019 biological opinions are expected to increase State Water Project deliveries by an annual average of 200,000 acre-feet as compared to the previous biological opinions.

On December 2, 2019, a group of non-governmental organizations, including commercial fishing groups and the Natural Resources Defense Council (the “NGOs”), sued USFWS and NMFS, alleging the 2019 biological opinions were arbitrary and capricious, later amending the lawsuit to include claims under the federal ESA and the National Environmental Policy Act related to decisions made by the Bureau of Reclamation. On February 20, 2020, the California Natural Resources Agency (“Natural Resources”), the California Environmental Protection Agency, and the Attorney General (collectively, the “State Petitioners”) sued the federal agencies, making similar allegations. The State Water Contractors intervened in both cases to defend the 2019 biological opinions. The NGOs filed for a temporary restraining order on April 2, 2020, which the Court overruled. The NGOs and the State Petitioners filed a preliminary injunction seeking a court order imposing interim operations consistent with the prior 2008 and 2009 biological opinions pending rulings on the merits of plaintiffs’ challenges to the two 2019 biological opinions. On May 11, 2020, the court granted, in part, the motions for preliminary injunction, thereby requiring the Central Valley Project to operate to one of the reasonable and prudent alternatives (referred to as the “inflow-to-export ratio”) in the 2009 biological opinion through May 31, 2020. DWR is not a party in this litigation, and other legal requirements governed the operation of the State Water Project during the relevant time period in May, and therefore the State Water Project was not be impacted by this order. USFWS and NMFS have produced their respective administrative records. Once the administrative records are finalized, the parties anticipate stipulating to a briefing schedule to resolve the merits of the cases. Metropolitan is unable to predict the outcome of any litigation relating to the federal 2019 biological opinions or any potential effect on Metropolitan’s State Water Project water supplies.

On January 20, 2021, President Joseph R. Biden Jr. issued an Executive Order on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis directing all executive departments and agencies to immediately review, and, as appropriate and consistent with applicable law, take action to address the promulgation of Federal regulations and other actions during the last four years for consistency with the new administration’s policies. Among numerous actions identified for review, the United States Department of Commerce and United States Department of Interior heads were directed to review the 2019 biological opinions. At this point it is unclear if the review will result in any changes to the 2019 biological opinions.

As described above, operations of the State Water Project require both federal ESA and California ESA authorizations. DWR described and analyzed its proposed State Water Project long-term operations plan for purposes of obtaining a new California ESA permit in its November 2019 Draft EIR under CEQA. Its 2019 Draft EIR proposed essentially the same operations plan as for the federal 2019 biological opinions, with the addition of operations for the State-only listed species, Longfin smelt. In December 2019, DWR submitted its application for an incidental take permit under the California ESA to CDFW, with a modified State operations plan that added new outflow and environmental commitments. On March 27, 2020, DWR released its final EIR and Notice of Determination, describing and adopting a State operations plan with additional operational restrictions and additional conservation commitments. On March 31, 2020, CDFW issued an incidental take permit for the State Water Project that included further operational restrictions and outflow. As issued, the incidental take permit reduces State Water Project deliveries by more than 200,000 acre-feet on average annually, and adds another \$218 million over a ten-year period in environmental commitments for the State Water Project.

On April 28, 2020, Metropolitan and Mojave Water Agency (“Mojave”) jointly sued CDFW and DWR, and Natural Resources, alleging that the new California ESA permit and Final EIR violate CEQA and the California ESA. Metropolitan and Mojave also allege that DWR breached the State Water Contract and the implied covenant of good faith and fair dealing by, among other things, accepting an incidental take permit containing mitigation requirements in excess of that required by law. Subsequently, CVWD, San Geronio Pass Water Agency (both State Water Contractors), and Municipal Water District of Orange County (a Metropolitan member agency) joined with Metropolitan and Mojave in a first amended complaint. The State Water Contractors and the Kern County Water Agency also filed CEQA and CESA actions, in



which the Antelope Valley-East Kern Water Agency, Central Coast Water Authority, Dudley Ridge Water District, County of Kings, Oak Flat Water District, Palmdale Water District, Santa Clarita Valley Water Agency, San Gabriel Valley Municipal Water District, and Tulare Lake Basin Water Storage District subsequently joined in a first amended complaint in which the individual water contractors allege causes of action for breach of contract and the implied covenant of good faith and fair dealing. In addition, another State Water Contractor, the San Bernardino Valley Municipal Water District, filed a complaint alleging violations of CEQA and CESA, as well as breach of contract and the implied covenant of good faith and fair dealing, unconstitutional takings, and anticipatory repudiation of contract. Several federal CVP water contractors also filed a CEQA challenge. Four other lawsuits have been filed by certain commercial fishing groups and a tribe, several environmental groups, and two in-Delta water agencies challenging the Final EIR as inadequate under CEQA and alleging violations of the Delta Reform Act, public trust doctrine and, in one of the cases, certain water right statutes. All eight cases have been coordinated in Sacramento County Superior Court, and a stay on discovery was issued until a coordination trial judge is assigned and addresses the stay. The presiding judge in Sacramento has not yet assigned a coordination trial judge. Metropolitan is unable to assess at this time the likelihood of success of any litigation relating to the California ESA permit, including any future litigation or any future claims that may be filed, or any potential effect on Metropolitan's State Water Project water supplies.

#### **Endangered Species Act Considerations - Colorado River**

Federal and state environmental laws protecting fish species and other wildlife species have the potential to affect Colorado River operations. A number of species that are on either "endangered" or "threatened" lists under the ESAs are present in the area of the Lower Colorado River, including among others, the bonytail chub, razorback sucker, southwestern willow flycatcher and Yuma clapper rail. To address this issue, a broad-based state/federal/tribal/private regional partnership that includes water, hydroelectric power and wildlife management agencies in Arizona, California and Nevada have developed a multi-species conservation program for the main stem of the Lower Colorado River (the Lower Colorado River Multi-Species Conservation Program or "MSCP"). The MSCP allows Metropolitan to obtain federal and state permits for any incidental take of protected species resulting from current and future water and power operations of its Colorado River facilities and to minimize any uncertainty from additional listings of endangered species. The MSCP also covers operations of federal dams and power plants on the river that deliver water and hydroelectric power for use by Metropolitan and other agencies. The MSCP covers 27 species and habitat in the Lower Colorado River from Lake Mead to the Mexican border for a term of 50 years (commencing in 2005). Over the 50-year term of the program, the total cost to Metropolitan will be about \$88.5 million (in 2003 dollars), and annual costs will range between \$0.8 million and \$4.7 million (in 2003 dollars).

#### **Invasive Species - Mussel Control Programs**

Zebra and quagga mussels are established in many regions of the United States. Mussels can reproduce quickly and, if left unmanaged, can reduce flows by clogging intakes and raw water conveyance systems, alter or destroy fish habitats, and affect lakes and beaches. Mussel management activities may require changes in water delivery protocols to reduce risks of spreading mussel populations and increase operation and maintenance costs.

In January 2007, quagga mussels were discovered in Lake Mead. All pipelines and facilities that transport raw Colorado River water are considered to be infested with quagga mussels. Metropolitan has a quagga mussel control plan, approved by the CDFW to address the presence of mussels in the CRA system and limit further spread of mussels. Year-round routine monitoring for mussel larvae has been conducted at Lake Havasu, selected locations in the CRA system, and non-infested areas of Metropolitan's system and some southern locations in the State Water Project. Shutdown inspections have demonstrated that control activities effectively limit mussel infestation in the CRA and prevent the further spread of mussels to other

bodies of water and water systems. Metropolitan's costs for controlling quagga mussels in the CRA system over the past 12 years has been approximately \$5 million per year.

Established mussel populations are located within ten miles of the State Water Project. A limited number of mussels have also been detected in State Water Project supplies but there is currently no evidence of established mussel populations, nor have they impacted Metropolitan's State Water Project deliveries. To prevent the introduction and further spread of mussels into the State Water Project, the Bay-Delta, and other uninfested bodies of water and water systems, DWR has also developed quagga mussel control plans and has partnered with other State and federal agencies on a number of related activities. Metropolitan coordinates mussel monitoring and control activities with these agencies.

## **Water Transfer, Storage and Exchange Programs**

### **General**

To supplement its State Water Project and Colorado River water supplies, Metropolitan has developed and actively manages a portfolio of water supply programs, including water transfer, storage and exchange agreements, the supplies created by which are conveyed through the California Aqueduct of the State Water Project, utilizing Metropolitan's rights under its State Water Contract to use the portion of the State Water Project conveyance system necessary to deliver water to it, or through available CRA capacity. Consistent with its IRP, Metropolitan will continue to pursue voluntary water transfer and exchange programs with State, federal, public and private water districts and individuals to help mitigate supply/demand imbalances and provide additional dry-year supply sources. A summary description of certain of Metropolitan's supply programs are set forth below. In addition to the arrangements described below, Metropolitan is entitled to storage and access to stored water in connection with various other storage programs and facilities. See "--Colorado River Aqueduct" above, as well as the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "--Storage Capacity and Water in Storage" below.

### **State Water Project Agreements and Programs**

In addition to the basic State Water Project contract provisions, Metropolitan has other contract rights that accrue to the overall value of the State Water Project. Because each Contractor is paying for physical facilities, they also have the right to use the facilities to move water supplies associated with agreements, water transfers and water exchanges. Metropolitan has entered into agreements and exchanges that provide additional water supplies.

Existing and potential water transfers and exchanges are an important element for improving the water supply reliability within Metropolitan's service area and accomplishing the reliability goal set by Metropolitan's Board. California's agricultural activities consume approximately 34 million acre-feet of water annually, which is approximately 80 percent of the total water used in the State for agricultural and urban uses and 40 percent of the water used for all consumptive uses, including environmental demands. Voluntary water transfers and exchanges with agricultural users can make a portion of this agricultural water supply available to support the State's urban areas. The portfolio of supplemental supplies that Metropolitan has developed to be conveyed through the California Aqueduct extend from north of the Bay-Delta to Southern California. Certain of these arrangements are also described below.

***Castaic Lake and Lake Perris.*** Metropolitan has contractual rights to withdraw up to 65,000 acre-feet of water in Lake Perris (East Branch terminal reservoir) and 153,940 acre-feet of water in Castaic Lake (West Branch terminal reservoir). This storage provides Metropolitan with additional options for managing State Water Project deliveries to maximize yield from the project. Any water used must be returned to the State Water Project within five years or it is deducted from allocated amounts in the sixth year.

**Metropolitan Article 56 Carryover.** Metropolitan has the right to store its allocated contract amount for delivery in subsequent years. Metropolitan can store between 100,000 and 200,000 acre-feet, depending on the final water supply allocation percentage.

**Yuba River Accord.** Metropolitan entered into an agreement with DWR in December 2007 to purchase a portion of the water released by the Yuba County Water Agency ("YCWA"). YCWA was involved in a SWRCB proceeding in which it was required to increase Yuba River fishery flows. Within the framework of agreements known as the Yuba River Accord, DWR entered into an agreement for the long-term purchase of water from YCWA. The agreement permits YCWA to transfer additional supplies at its discretion. Metropolitan, other State Water Contractors, and the San Luis & Delta-Mendota Water Authority entered into separate agreements with DWR for the purchase of portions of the water made available. Metropolitan's agreement allows Metropolitan to purchase, in dry years through 2025, available water supplies which have ranged from approximately 6,555 acre-feet to 67,068 acre-feet per year.

In addition to water made available under the Yuba River Accord, Metropolitan has developed groundwater storage agreements that allow Metropolitan to store available supplies in the Central Valley for return later. See "METROPOLITAN'S WATER DELIVERY SYSTEM—Water Quality and Treatment" in this Appendix A for information regarding recent water quality regulations and developments that impact or may impact certain of Metropolitan's groundwater storage programs.

Metropolitan has also developed other groundwater storage and exchange programs, certain of which are described below.

**Arvin-Edison/Metropolitan Water Management Program.** In December 1997, Metropolitan entered into an agreement with the Arvin-Edison Water Storage District ("Arvin-Edison"), an irrigation agency located southeast of Bakersfield, California. Under the program, Arvin-Edison stores water on behalf of Metropolitan. In January 2008, Metropolitan and Arvin-Edison amended the agreement to enhance the program's capabilities and to increase the delivery of water to the California Aqueduct. To facilitate the program, new wells, spreading basins and a return conveyance facility connecting Arvin-Edison's existing facilities to the California Aqueduct have been constructed. The agreement also provides Metropolitan priority use of Arvin-Edison's facilities to convey high-quality water available on the east side of the San Joaquin Valley to the California Aqueduct. Up to 350,000 acre-feet of Metropolitan's water may be stored and Arvin-Edison is obligated to return up to 75,000 acre-feet of stored water in any year to Metropolitan, upon request. The agreement will terminate in 2035 unless extended. Metropolitan's estimated storage account balance under the Arvin-Edison/Metropolitan Water Management Program as of January 1, 2021 is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "—Storage Capacity and Water in Storage" below. As a result of detecting 1,2,3-trichloropropane ("TCP") in Arvin-Edison wells, Metropolitan has temporarily suspended operation of the program until the water quality concerns can be further evaluated and managed.

**Semitropic/Metropolitan Groundwater Storage and Exchange Program.** In 1994, Metropolitan entered into an agreement with the Semitropic Water Storage District ("Semitropic"), located adjacent to the California Aqueduct north of Bakersfield, to store water in the groundwater basin underlying land within Semitropic. The minimum annual yield available to Metropolitan from the program is 39,700 acre-feet of water and the maximum annual yield is 231,200 acre-feet of water depending on the available unused capacity and the State Water Project allocation. Metropolitan's estimated storage account balance under the Semitropic program as of January 1, 2021 is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "—Storage Capacity and Water in Storage" below.

**Kern Delta Storage Program.** Metropolitan entered into an agreement with Kern Delta Water District ("Kern Delta") in May 2003, for a groundwater banking and exchange transfer program to allow Metropolitan to store up to 250,000 acre-feet of State Water Contract water in wet years and to permit

Metropolitan, at Metropolitan's option, a return of up to 50,000 acre-feet of water annually during hydrologic and regulatory droughts. Metropolitan's estimated storage account balance under this program as of January 1, 2021 is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "--Storage Capacity and Water in Storage" below.

***Mojave Storage Program.*** Metropolitan entered into a groundwater banking and exchange transfer agreement with Mojave Water Agency ("Mojave") in October 2003. The agreement allows for Metropolitan to store water in an exchange account for later return. The agreement allows Metropolitan to annually withdraw Mojave State Water Project contractual amounts, after accounting for local needs. Under a 100 percent allocation, the State Water Contract provides Mojave 82,800 acre-feet of water. This agreement was amended in 2011 to allow for the cumulative storage of up to 390,000 acre-feet. Metropolitan's estimated storage account balance under this program as of January 1, 2021 is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "--Storage Capacity and Water in Storage" below.

***Antelope Valley-East Kern Storage and Exchange Program.*** In 2016, Metropolitan entered into an agreement with the Antelope Valley-East Kern Water Agency ("AVEK"), the third largest State Water Contractor, to both exchange supplies and store water in the Antelope Valley groundwater basin. Under the exchange, AVEK would provide at least 30,000 acre-feet over ten years of its unused Table A State Water Project water to Metropolitan. For every two acre-feet provided to Metropolitan as part of the exchange, AVEK would receive back one acre-foot in the future. For the one acre-foot that is retained by Metropolitan, Metropolitan would pay AVEK under a set price schedule based on the State Water Project allocation at the time. Under this agreement, AVEK also provides Metropolitan up to 30,000 acre-feet of storage. Metropolitan's estimated storage account balance under this program as of January 1, 2021 is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "--Storage Capacity and Water in Storage" below.

***Antelope Valley-East Kern High Desert Water Bank Program.*** In April 2019, Metropolitan's Board authorized the General Manager to enter into an agreement with AVEK for a groundwater banking program referred to as the High Desert Water Bank Program. The estimated costs of construction of the facilities to implement the program is \$131 million. Following completion of construction, which is expected to take approximately five years, Metropolitan would have the right to store up to 70,000 acre-feet per year of its unused Table A State Water Project water or other supplies in the Antelope Valley groundwater basin for later return. The maximum storage capacity for Metropolitan supplies would be 280,000 acre-feet. At Metropolitan's direction, up to 70,000 acre-feet of stored water annually would be available for return by direct pump back into the East Branch of the California Aqueduct. Upon completion, this program would provide additional flexibility to store and recover water for emergency or water supply needs through 2057.

***San Gabriel Valley Municipal Water District and Other Exchange Programs.*** In 2013, Metropolitan entered into an agreement with the San Gabriel Valley Municipal Water District ("SGVMWD"). Under this agreement, Metropolitan delivers treated water to a SGVMWD subagency in exchange for twice as much untreated water in the groundwater basin. Metropolitan's member agencies can then use the groundwater supplies to meet their needs. Metropolitan can exchange and purchase at least 5,000 acre-feet per year. This program has the potential to increase Metropolitan's reliability by providing 115,000 acre-feet through 2035.

Metropolitan has been negotiating, and will continue to pursue, water purchase, storage and exchange programs with other agencies in the Sacramento and San Joaquin Valleys. These programs involve the storage of both State Water Project supplies and water purchased from other sources to enhance Metropolitan's dry-year supplies and the exchange of normal year supplies to enhance Metropolitan's water reliability and water quality, in view of dry conditions and potential impacts from the ESA considerations

discussed above under the heading “–Endangered Species Act and Other Environmental Considerations – Endangered Species Act Considerations - State Water Project.”

The Sites Reservoir is a proposed reservoir project of approximately 1.3 to 1.5 million acre-feet, being analyzed by the Sites Reservoir Authority, to be located in Colusa County. The water stored in the proposed project would be diverted from the Sacramento River. As currently proposed, the Sites Reservoir project would have dedicated water storage and yield that would be used for fishery enhancement, water quality, and other environmental purposes. The proposed project could also provide additional water supply that could be used for dry-year benefits. Metropolitan is a member of the Sites Reservoir Committee, a group of 30 agencies that are participating in certain planning activities in connection with the proposed development of the project, including the development of environmental planning documents, a federal feasibility report and project permitting. In October 2020, Metropolitan’s Board approved \$5.0 million in funding for Metropolitan’s continued participation in such planning activities through then end of 2021. Metropolitan’s agreement to participate in funding of this phase of project development activities does not commit Metropolitan to participate in any actual reservoir project that may be undertaken in the future.

### **Colorado River Aqueduct Agreements and Programs**

Metropolitan has taken steps to augment its share of Colorado River water through agreements with other agencies that have rights to use such water, including through cooperative programs with other water agencies to conserve and develop supplies and through programs to exchange water with other agencies. These supplies are conveyed through the CRA. Metropolitan determines the delivery schedule of these supplies throughout the year based on changes in the availability of State Water Project and Colorado River water. Under certain of these programs, water may be delivered to Metropolitan’s service area in the year made available or in a subsequent year as ICS water from Lake Mead storage. See “–Colorado River Aqueduct –Colorado River Operations: Surplus and Shortage Guidelines – Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead.”

***IID/Metropolitan Conservation Agreement.*** Under a 1988 water conservation agreement, as amended in 2003 and 2007 (the “1988 Conservation Agreement”) between Metropolitan and IID, Metropolitan provided funding for IID to construct and operate a number of conservation projects that have conserved up to 109,460 acre-feet of water per year that has been provided to Metropolitan. As amended, the agreement’s initial term has been extended to at least 2041 or 270 days after the termination of the QSA. In 2019, 105,000 acre-feet of conserved water was made available by IID to Metropolitan. Under the QSA and related agreements, Metropolitan, at the request of CVWD, forgoes up to 20,000 acre-feet of this water each year for diversion by CVWD from the Coachella Canal. In each of 2018 and 2019, CVWD’s requests were for 0 acre-feet, leaving 105,000 acre-feet in 2018 and 2019 for Metropolitan. In December 2019, Metropolitan signed a revised agreement with CVWD in which CVWD will limit its annual request of water from this program to 15,000 acre-feet through 2026. See “–Colorado River Aqueduct –Quantification Settlement Agreement.”

***Palo Verde Land Management, Crop Rotation and Water Supply Program.*** In August 2004, Metropolitan and PVID signed the program agreement for a Land Management, Crop Rotation and Water Supply Program. Under this program, participating landowners in the PVID service area are compensated for reducing water use by not irrigating a portion of their land. This program provides up to 133,000 acre-feet of water to be available to Metropolitan in certain years. The term of the program is 35 years. Following began on January 1, 2005. The following table shows annual volumes of water saved and made available to Metropolitan during the last 10 calendar years under the Land Management, Crop Rotation and Water Supply Program with PVID:

**WATER AVAILABLE FROM PVID LAND MANAGEMENT,  
CROP ROTATION AND WATER SUPPLY PROGRAM**

Calendar Year	Volume (acre-feet)
2010 <sup>(1)</sup>	148,600
2011	122,200
2012	73,700
2013	32,800
2014	43,000
2015	94,500
2016	125,400
2017	111,800
2018	95,800
2019	44,500

*Source: Metropolitan.*

<sup>(1)</sup> Includes water from a supplemental fallowing program entered into with PVID in March 2009 that provided for fallowing of additional acreage in 2009 and 2010 and resulted in an additional 32,300 acre-feet of water in 2010 made available under the program.

***Bard Water District Seasonal Fallowing Program.*** In January 2020, Metropolitan and Bard Water District signed a seven-year agreement for a seasonal fallowing program. Under this program, each year farmers in Bard Water District have the opportunity to be compensated for reducing water use by not irrigating a portion of their land between April 1 and August 1 each year. During this period, farmers typically plant low-value, high water use crops, and this program incentivizes them to fallow the land instead. This program provides up to 6,000 acre-feet of water per year to be available to Metropolitan. The term of the program is through 2026, and during that time the water can either be delivered to Metropolitan or stored in Lake Mead as described below.

***Lake Mead Storage Program.*** As described under “Colorado River Aqueduct –Colorado River Operations: Surplus and Shortage Guidelines – Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead,” Metropolitan has entered into agreements to set forth the guidelines under which ICS water is developed and stored in and delivered from Lake Mead. The amount of water stored in Lake Mead must be created through extraordinary conservation, system efficiency, tributary, imported, or binational conservation methods. Metropolitan has participated in projects to create ICS as described below:

**Drop 2 (Warren H. Brock) Reservoir.** In May 2008, Metropolitan provided \$28.7 million to join the CAWCD and the Southern Nevada Water Authority (“SNWA”) in funding the Bureau of Reclamation’s construction of an 8,000 acre-foot off-stream regulating reservoir near Drop 2 of the All-American Canal in Imperial County (officially named the Warren H. Brock Reservoir). Construction was completed in October 2010 and the Bureau of Reclamation refunded approximately \$3.71 million in unused contingency funds to Metropolitan. The Warren H. Brock Reservoir conserves about 70,000 acre-feet of water per year by capturing and storing water that would otherwise be lost from the system. In return for its funding, Metropolitan received 100,000 acre-feet of water that was stored in Lake Mead for its future use and has the ability to receive up to 25,000 acre-feet of water in any single year. Besides the additional water supply, the addition of the Warren H. Brock reservoir adds to the flexibility of Colorado River operations by storing underutilized Colorado River water orders caused by unexpected canal outages, changes in weather conditions, and high tributary runoff into the Colorado River. As of January 1, 2021, Metropolitan had taken delivery of 35,000 acre-feet of this water and had 65,000 acre-feet remaining in storage.



International Water Treaty Minutes 319 and 323. In November 2012, as part of the implementation of Minute 319, Metropolitan executed agreements in support of a program to augment Metropolitan's Colorado River supply between 2013 through 2017 through an international pilot project in Mexico. Metropolitan's total share of costs was \$5 million for 47,500 acre-feet of project supplies. In December 2013, Metropolitan and IID executed an agreement under which IID has paid half of Metropolitan's program costs, or \$2.5 million, in return for half of the project supplies, or 23,750 acre-feet. As such, 23,750 acre-feet of Intentionally Created Mexican Allocation was converted to Binational ICS and credited to Metropolitan's binational ICS water account in 2017. See "--Colorado River Aqueduct --Colorado River Operations: Surplus and Shortage Guidelines -- Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead." In September 2017, as part of the implementation of Minute 323, Metropolitan agreed to fund additional water conservation projects in Mexico that will yield approximately 24,000 acre-feet of additional supply for Metropolitan by 2026 at a cost of approximately \$3.3 million.

***Storage and Interstate Release Agreement with Nevada.*** In May 2002, SNWA and Metropolitan entered into an Agreement Relating to Implementation of Interim Colorado River Surplus Guidelines, in which SNWA and Metropolitan agreed to the allocation of unused apportionment as provided in the Interim Surplus Guidelines and on the priority of SNWA for interstate banking of water in Arizona. SNWA and Metropolitan entered into a storage and interstate release agreement on October 21, 2004. Under this agreement, SNWA can request that Metropolitan store unused Nevada apportionment in California. The amount of water stored through 2014 under this agreement was approximately 205,000 acre-feet. In October 2015, SNWA and Metropolitan executed an additional amendment to the agreement under which Metropolitan paid SNWA approximately \$44.4 million and SNWA stored an additional 150,000 acre-feet with Metropolitan during 2015. Of that amount, 125,000 acre-feet has been added to SNWA's storage account with Metropolitan, increasing the total amount of water stored to approximately 330,000 acre-feet. In subsequent years, SNWA may request recovery of the stored water. When SNWA requests the return of any of the stored 125,000 acre-feet, SNWA will reimburse Metropolitan for an equivalent proportion of the \$44.4 million plus inflation based on the amount of water returned. It is expected that SNWA will not request return of any of the water stored with Metropolitan before 2022.

***California ICS Agreement Intrastate Storage Provisions.*** As described under "--Colorado River Aqueduct --Colorado River Operations: Surplus and Shortage Guidelines -- Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead," in 2007, IID, Metropolitan and other Colorado River contractors in California executed the California ICS Agreement, which divided California's ICS storage space in Lake Mead between Metropolitan and IID. It also allowed IID to store up to 50,000 acre-feet of conserved water in Metropolitan's system. In 2015, the California ICS Agreement was amended to allow IID to store additional amounts of water in Metropolitan's system during 2015-2017. Under the 2015 amendment, IID was permitted to store up to 100,000 acre-feet per year of conserved water within Metropolitan's system with a cumulative limit of 200,000 acre-feet, for the three-year term. When requested by IID, Metropolitan has agreed to return to IID the lesser of either 50,000 acre-feet per year, or in a year in which Metropolitan's member agencies are under a shortage allocation, 50 percent of the cumulative amount of water IID has stored with Metropolitan under the 2015 amendment. IID currently has 162,000 acre-feet of water stored with Metropolitan pursuant to the terms of the California ICS Agreement.

In 2018, IID had reached the limit on the amount of water it was able to store in Metropolitan's system under the California ICS Agreement, and entered into discussions with Metropolitan to further amend the Agreement, but no such agreement was reached. On December 4, 2020, IID filed a complaint against Metropolitan alleging that Metropolitan breached the California ICS Agreement, breached the implied covenant of good faith and fair dealing, and that Metropolitan converted IID's intentionally created surplus for its own use. IID's complaint seeks the imposition of a constructive trust over 87,594 acre-feet of water in Lake Mead or Metropolitan's system and a judgment against Metropolitan for \$20,896,640. Metropolitan is unable to assess at this time the likelihood of success of this litigation or any future claims.

## **State Water Project and Colorado River Aqueduct Arrangements**

***Metropolitan/CVWD/Desert Water Agency Exchange and Advance Delivery Agreement.*** Metropolitan has agreements with CVWD and the Desert Water Agency (“DWA”) in which Metropolitan exchanges its Colorado River water for those agencies’ State Water Project contractual water and other State Water Project water acquisitions on an annual basis. Because CVWD and DWA do not have a physical connection to the State Water Project, Metropolitan takes delivery of CVWD’s and DWA’s State Water Project supplies and delivers a like amount of Colorado River water to the agencies. In accordance with an advance delivery agreement executed by Metropolitan, CVWD and DWA, Metropolitan may deliver Colorado River water in advance of receiving State Water Project supplies to these agencies for storage in the Upper Coachella Valley groundwater basin. In years when it is necessary to augment available supplies to meet local demands, Metropolitan may meet the exchange delivery obligation through drawdowns of the advance delivery account, rather than deliver Colorado River water in that year. Metropolitan’s estimated storage account under the CVWD/DWA program as of January 1, 2021 is shown in the table entitled “Metropolitan’s Water Storage Capacity and Water in Storage” under “–Storage Capacity and Water in Storage” below. In addition to the storage benefits of the program, Metropolitan receives water quality benefits with increased deliveries of lower salinity water from the State Water Project in lieu of delivering higher saline Colorado River water. In December 2019, the exchange agreements were amended to provide more flexibility and operational certainty for the parties involved. Additionally, under the amended agreements, CVWD and DWA pay a portion of Metropolitan’s water storage management costs in wet years, up to a combined total of \$4 million per year.

### **Storage Capacity and Water in Storage**

Metropolitan’s storage capacity, which includes reservoirs, conjunctive use and other groundwater storage programs within Metropolitan’s service area and groundwater and surface storage accounts delivered through the State Water Project or CRA, is approximately 6.0 million acre-feet. In 2020, approximately 750,000 acre-feet of total stored water in Metropolitan’s reservoirs and other storage resources was emergency storage that was reserved for use in the event of supply interruptions from earthquakes or similar emergencies (see “METROPOLITAN’S WATER DELIVERY SYSTEM–Seismic Considerations and Emergency Response Measures” in this Appendix A), as well as extended drought. Metropolitan’s emergency storage requirement is established periodically to provide a six-month water supply at 75 percent of member agencies’ retail demand under normal hydrologic conditions. Metropolitan’s ability to replenish water storage, both in the local groundwater basins and in surface storage and banking programs, has been limited by Bay-Delta pumping restrictions under the biological opinions issued for listed species. See “–Endangered Species Act and Other Environmental Considerations –Endangered Species Act Considerations – State Water Project – Delta Smelt and Salmon Federal ESAs Biological Opinions and California ESA Consistency Determinations and Incidental Take Permit.” Metropolitan replenishes its storage accounts when available imported supplies exceed demands. Effective storage management is dependent on having sufficient years of excess supplies to store water so that it can be used during times of shortage. See “CONSERVATION AND WATER SHORTAGE MEASURES–Water Supply Allocation Plan” in this Appendix A. Metropolitan’s storage as of January 1, 2021 is estimated to be 3.95 million acre-feet. As a result of a collaborative process with its member agencies, Metropolitan completed an evaluation of its Emergency Storage Objective in 2019 that resulted in the increase the emergency storage from 626,000 acre-feet to 750,000 acre-feet by January 1, 2020. As a result, the portion of the emergency storage in Metropolitan’s reservoirs was increased from 298,000 acre-feet to 369,000 acre-feet. The following table shows three years of Metropolitan’s water in storage as of January 1, including emergency storage.

**METROPOLITAN'S WATER STORAGE CAPACITY AND WATER IN STORAGE<sup>(1)</sup>**  
(in Acre-Feet)

<u>Water Storage Resource</u>	<u>Storage Capacity</u>	<u>Water in Storage January 1, 2021<sup>(2)</sup></u>	<u>Water in Storage January 1, 2020</u>	<u>Water in Storage January 1, 2019</u>
<b><u>Colorado River Aqueduct</u></b>				
DWA / CVWD Advance Delivery Account	800,000	330,000	296,000	235,000
Lake Mead ICS	<u>1,739,000</u>	<u>1,308,000</u>	<u>980,000</u>	<u>625,000</u>
<b>Subtotal</b>	<b>2,539,000</b>	<b>1,638,000</b>	<b>1,276,000</b>	<b>860,000</b>
<b><u>State Water Project</u></b>				
Arvin-Edison Storage Program <sup>(3)</sup>	350,000	143,000	143,000	154,000
Semitropic Storage Program	350,000	260,000	265,000	187,000
Kern Delta Storage Program	250,000	177,000	189,000	138,000
Mojave Storage Program	330,000 <sup>(6)</sup>	19,000 <sup>(6)</sup>	19,000 <sup>(6)</sup>	19,000 <sup>(6)</sup>
AVEK Storage Program	30,000	27,000	27,000	9,000
Castaic Lake and Lake Perris <sup>(4)</sup>	219,000	219,000	219,000	219,000
State Water Project Carryover <sup>(5)</sup>	350,000 <sup>(7)</sup>	221,000	331,000	93,000
Emergency Storage	<u>381,000</u>	<u>381,000</u>	<u>381,000</u>	<u>328,000</u>
<b>Subtotal</b>	<b>2,260,000</b>	<b>1,447,000</b>	<b>1,574,000</b>	<b>1,147,000</b>
<b><u>Within Metropolitan's Service Area</u></b>				
Diamond Valley Lake	810,000	703,000	796,000	702,000
Lake Mathews	182,000	82,000	152,000	141,000
Lake Skinner	<u>44,000</u>	<u>37,000</u>	<u>38,000</u>	<u>37,000</u>
<b>Subtotal<sup>(8)</sup></b>	<b>1,036,000</b>	<b>822,000</b>	<b>986,000</b>	<b>880,000</b>
<b><u>Member Agency Storage Programs</u></b>				
Conjunctive Use <sup>(9)</sup>	<u>210,000</u>	<u>40,000</u>	<u>59,000</u>	<u>47,000</u>
<b>Total</b>	<b><u>6,045,000</u></b>	<b><u>3,947,000</u></b>	<b><u>3,895,000</u></b>	<b><u>2,934,000</u></b>

Source: Metropolitan

- (1) Water storage capacity and water in storage are measured based on engineering estimates and are subject to change.
- (2) Preliminary estimated January 1, 2021 storage; subject to change.
- (3) Metropolitan has temporarily suspended operation of the Arvin-Edison storage program. See "METROPOLITAN'S WATER SUPPLY—Water Transfer, Storage and Exchange Programs – Arvin-Edison/Metropolitan Water Management Program" and "METROPOLITAN'S WATER DELIVERY SYSTEM—Water Quality and Treatment" in this Appendix A.
- (4) Flexible storage allocated to Metropolitan under its State Water Contract. Withdrawals must be returned within five years.
- (5) Includes Article 56 Carryover of Metropolitan, Coachella Valley Water District, and Desert Water Agency, prior-year carryover, non-project carryover, and carryover of curtailed deliveries pursuant to Article 14(b) and Article 12(e) of Metropolitan's State Water Contract.
- (6) The Mojave Storage agreement was amended in 2011 to allow for cumulative storage of up to 390,000 acre-feet. Since January 1, 2011, Metropolitan has stored 60,000 acre-feet, resulting in a remaining balance of storage capacity of 330,000 acre-feet. 41,000 acre-feet of the 60,000 acre-feet stored has been returned, leaving a remaining balance in storage of 19,000 acre-feet.
- (7) A capacity of 350,000 acre-feet is estimated to be the practical operational limit for carryover storage considering Metropolitan's capacity to take delivery of carryover supplies before San Luis Reservoir fills.
- (8) Includes 298,000 acre-feet of emergency storage in Metropolitan's reservoirs in 2019, and 369,000 acre-feet of emergency storage in Metropolitan's reservoirs in 2020 and 2021.
- (9) Cyclic Storage water removed from this line item and is now categorized a pre-delivery.

## CONSERVATION AND WATER SHORTAGE MEASURES

### General

The central objective of Metropolitan's water conservation program is to help ensure adequate, reliable and affordable water supplies for Southern California by actively promoting efficient water use. The importance of conservation to the region has increased in recent years because of drought conditions in the State Water Project watershed and court-ordered restrictions on Bay-Delta pumping, as described under "METROPOLITAN'S WATER SUPPLY-State Water Project -Bay-Delta Proceedings Affecting State Water Project" and "-Endangered Species Act and Other Environmental Considerations -Endangered Species Act Considerations-State Water Project - Delta Smelt and Salmon Federal ESAs Biological Opinions and California ESA Consistency Determinations and Incidental Take Permit" in this Appendix A. Conservation reduces the need to import water to deliver to member agencies through Metropolitan's system. Water conservation is an integral component of Metropolitan's IRP, WSDM Plan and Water Supply Allocation Plan.

Metropolitan's conservation program has largely been developed to assist its member agencies in meeting the conservation goals of the 2015 IRP Update. See "METROPOLITAN'S WATER SUPPLY-Integrated Water Resources Plan" in this Appendix A. All users of Metropolitan's system benefit from the reduced infrastructure costs and system capacity made available by investments in demand management programs like the Conservation Credits Program. Under the terms of Metropolitan's Conservation Credits Program, Metropolitan administers regional conservation programs and also co-funds member agency conservation programs designed to achieve greater water use efficiency in residential, commercial, industrial, institutional and landscape uses. Direct spending by Metropolitan on active conservation incentives, including rebates for water-saving plumbing fixtures, appliances and equipment totaled about \$18.9 million in fiscal year 2019-20. The 2015 IRP Update estimates that Metropolitan's conservation efforts will result in 1,197,000 acre-feet of water being conserved annually in Southern California by 2025. See also "METROPOLITAN'S WATER SUPPLY-Integrated Water Resources Plan" in this Appendix A and "-Increased Drought Resiliency" below.

Historically, revenues collected by Metropolitan's Water Stewardship Rate and available grant funds have funded conservation incentives, local resource development incentives, and other water demand management programs. The Water Stewardship Rate was charged on every acre-foot of water conveyed by Metropolitan, except on water delivered to SDCWA pursuant to the Exchange Agreement (see "METROPOLITAN REVENUES-Water Rates" and "-Litigation Challenging Rate Structure" in this Appendix A) in calendar years 2018, 2019, and 2020. The Water Stewardship Rate has not been incorporated into Metropolitan's rates and charges for 2021 and 2022. See "METROPOLITAN REVENUES-Rate Structure -Water Stewardship Rate" in this Appendix A.

In addition to ongoing conservation, Metropolitan has developed a WSDM Plan, which splits resource actions into two major categories: Surplus Actions and Shortage Actions. See "-Water Surplus and Drought Management Plan." Conservation and water efficiency programs are part of Metropolitan's resource management strategy which makes up these Surplus and Shortage actions.

Metropolitan's Water Supply Allocation Plan allocates Metropolitan's water supplies among its member agencies, based on the principles contained in the WSDM Plan, to reduce water use and drawdowns from water storage reserves. See "-Water Supply Allocation Plan." Metropolitan's member agencies and retail water suppliers in Metropolitan's service area also have the ability to implement water conservation and allocation programs, and some of the retail suppliers in Metropolitan's service area have initiated conservation measures. The success of conservation measures in conjunction with the implementation of the Water Supply Allocation Plan in fiscal years 2009-10, 2010-11, 2011-12 and 2015-16 is evidenced as a contributing factor in the lower than budgeted water transactions during such drought periods.

Legislation approved in November 2009 set a statewide conservation target for urban per capita potable water use of 20 percent reductions (from a baseline per capita use determined utilizing one of four State-approved methodologies) by 2020 (with credits for existing conservation) at the retail level, providing an additional catalyst for conservation by member agencies and retail suppliers. Metropolitan's water transactions projections incorporate an estimate of conservation savings that will reduce retail demands. Current projections include an estimate of additional water use efficiency savings that would result from Metropolitan's IRP goals that included the reduction of overall regional per capita water use by 20 percent by 2020 from a baseline of average per capita water use from 1996-2005 in Metropolitan's service area. As of calendar year 2019, per capita water use in Metropolitan's service area had reached the 20 percent reduction by 2020 target.

### **Water Surplus and Drought Management Plan**

In addition to the long-term planning guidelines and strategy provided by its IRP, Metropolitan has developed its WSDM Plan for the on-going management of its resources and water supplies in response to hydrologic conditions. The WSDM Plan, which was adopted by Metropolitan's Board in April 1999, evolved from Metropolitan's experiences during the droughts of 1976-77 and 1987-92. The WSDM Plan is a planning document that Metropolitan uses to guide inter-year and intra-year storage operations, and splits resource actions into two major categories: surplus actions and shortage actions. The surplus actions emphasize storage of surplus water inside the region, followed by storage of surplus water outside the region. The shortage actions emphasize critical storage programs and facilities and conservation programs that make up part of Metropolitan's response to shortages. Implementation of the plan is directed by a WSDM team, made up of Metropolitan staff, that meets regularly throughout the year and more frequently between November and April as hydrologic conditions develop. The WSDM team develops and recommends storage actions to senior management on a regular basis and provides updates to the Board on hydrological conditions, storage levels and planned storage actions through detailed reports.

### **Water Supply Allocation Plan**

In times of prolonged or severe water shortages, Metropolitan manages its water supplies through the implementation of its Water Supply Allocation Plan. The Water Supply Allocation Plan was originally approved by Metropolitan's Board in February 2008, and has been implemented three times since its adoption, including most recently in April 2015. The drought of 2012-2016 was one of the driest periods in the hydrological record since 1931-1934. The Board declared a Water Supply Condition 3 on April 14, 2015, and the implementation of the Water Supply Allocation Plan at a Level 3 Regional Shortage Level, effective July 1, 2015 through June 30, 2016. On May 10, 2016, the Board rescinded the implementation of the Water Supply Allocation Plan due to improved hydrological conditions. The Water Supply Allocation Plan provides a formula for equitable distribution of available water supplies in case of extreme water shortages within Metropolitan's service area and if needed is typically approved in the month of April with implementation beginning in the month of July. In December 2014, the Board approved certain adjustments to the formula for calculating member agency supply allocations during subsequent periods of implementation of the Water Supply Allocation Plan. Although the Act gives each of Metropolitan's member agencies a preferential entitlement to purchase a portion of the water served by Metropolitan (see "METROPOLITAN REVENUES-Preferential Rights" in this Appendix A), historically, these rights have not been used in allocating Metropolitan's water. Metropolitan's member agencies and retail water suppliers in Metropolitan's service area also may implement water conservation and allocation programs within their respective service territories in times of shortage. See also "Increased Drought Resiliency." Based upon current hydrologic conditions and current DWR State Water Project allocation estimates, implementation of the Water Supply Allocation Plan for fiscal year 2020-21 is not expected.

### **Increased Drought Resiliency**

Metropolitan has worked proactively with its member agencies to conserve water supplies in its service area, and significantly expanded its water conservation and outreach programs and increased funding

for conservation incentive programs. In May 2017, the Alliance for Water Efficiency presented a peer review report of Metropolitan’s conservation programs. Program modifications were adopted in April 2018 to reflect the peer review recommendations as well as feedback from member agencies. See “CONSERVATION AND WATER SHORTAGE MEASURES–General.” Metropolitan has also taken other actions to improve drought resiliency that include increasing water recycling by providing incentives for on-site recycled water hook-ups, improving return capability of storage programs, and modifying Metropolitan’s distribution system to enhance Colorado River water delivery to mitigate limitations in State Water Project supply.

## REGIONAL WATER RESOURCES

The water supply for Metropolitan’s service area is provided in part by Metropolitan and in part by non-Metropolitan sources available to members. Non-Metropolitan sources include water imported by the City of Los Angeles (the “City”) from the Owens Valley/Mono Basin east of the Sierra Nevada through the City’s Los Angeles Aqueduct to serve customers of the City. See “–Los Angeles Aqueduct.” The balance of water within the region is produced locally, from sources that include groundwater and surface water production, recycled water and recovery of contaminated or degraded groundwater, and seawater desalination. Programs to develop these local resources include projects funded by Metropolitan’s Local Resources Program, as well as local agency funded programs. See “–Local Water Supplies.

Based on a ten-year average from 2010 through 2019, non-Metropolitan sources met about 52 percent of the region’s water needs. These non-Metropolitan sources of supply fluctuate in response to variations in rainfall. During prolonged periods of below normal rainfall, local water supplies decrease. Conversely, prolonged periods of above-normal rainfall increase local supplies. Sources of groundwater basin replenishment include local precipitation, runoff from the coastal ranges, and artificial recharge with imported water supplies. In addition to runoff, recycled water provides an increasingly important source of replenishment water for the region.

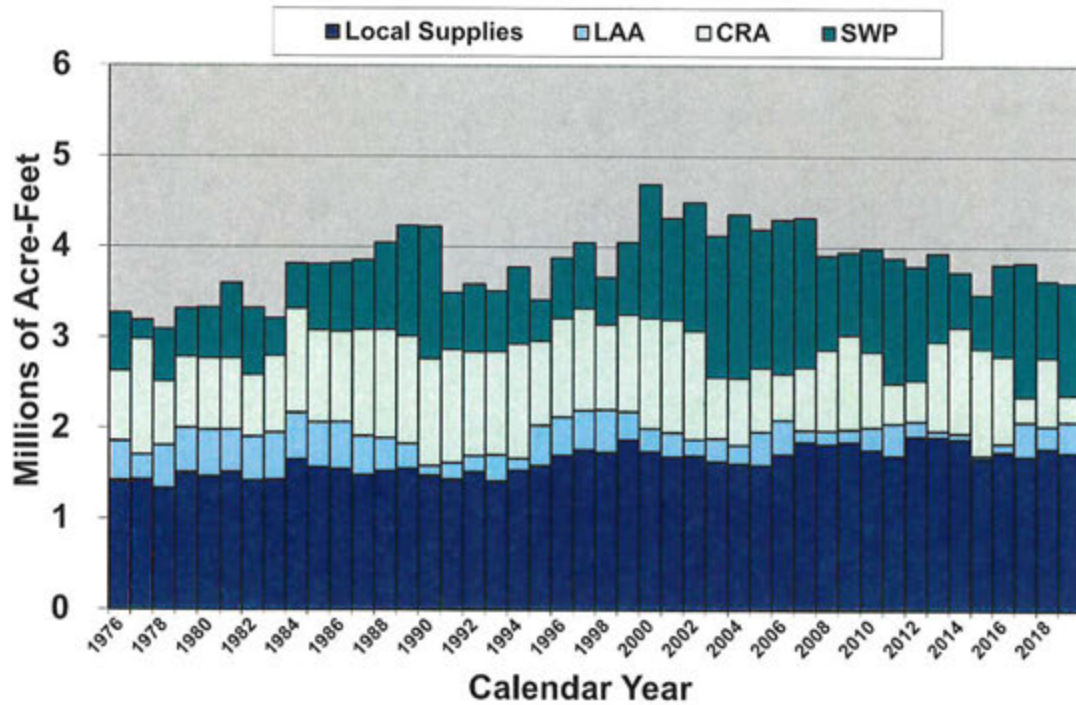
Metropolitan’s member agencies are not required to purchase or use any of the water available from Metropolitan. Some agencies depend on Metropolitan to supply nearly all of their water needs, regardless of the weather. Other agencies, with local surface reservoirs or aqueducts that capture rain or snowfall, rely on Metropolitan more in dry years than in years with heavy rainfall, while others, with ample groundwater supplies, purchase Metropolitan water only to supplement local supplies and to recharge groundwater basins. Consumer demand and locally supplied water vary from year to year, resulting in variability in the volume of Metropolitan’s water transactions.

In recent years, supplies and demands have been affected by drought, water use restrictions, economic conditions, weather conditions and environmental laws, regulations and judicial decisions, as described in this Appendix A under “METROPOLITAN’S WATER SUPPLY.” The demand for supplemental supplies provided by Metropolitan is dependent on water use at the retail consumer level and the amount of locally supplied and conserved water. See “CONSERVATION AND WATER SHORTAGE MEASURES” in this Appendix A and “–Local Water Supplies” below.

Future reliance on Metropolitan supplies will depend on, among other things, current and future local projects that may be developed and the amount of water that may be derived from sources other than Metropolitan. For information on Metropolitan’s water revenues, see “METROPOLITAN REVENUES” and “MANAGEMENT’S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES” in this Appendix A.

The following graph shows a summary of the regional sources of water supply for the years 1976 to 2019.

## Sources of Water Supply in the Metropolitan Service Area (1976-2019)



Source: Metropolitan.

The major sources of water available to some or all of Metropolitan’s member agencies in addition to supplies provided by Metropolitan are described below.

### Los Angeles Aqueduct

The City of Los Angeles, through its Department of Water and Power (“LADWP”), operates its Los Angeles Aqueduct system to import water from the Owens Valley and the Mono Basin on the eastern slopes of the Sierra Nevada in eastern California. Water imported by the City on the Los Angeles Aqueduct system comes primarily from surface water rights of the City in eastern Sierra Nevada watersheds along various streams, creeks and rivers in the Mono Basin, Long Valley and Owens Valley, and groundwater resources in the Owens Valley from the City’s ownership of approximately 330,000 acres of land and associated water rights. This water supply of the City, which serves LADWP’s customers, currently meets about 5.25 percent of the region’s water needs based on a ten-year average from 2010 through 2019.

Surface runoff (snowmelt) is subject to substantial annual variability, which influences the amount of water delivered by the Los Angeles Aqueduct. In addition, the City is subject to several environmental commitments in the Mono Basin and Owens Valley which impact the availability of water to the City for import on the Los Angeles Aqueduct. These include: the SWRCB’s Mono Lake Basin Water Rights Decision 1631, which limits on the City’s water exports from the Mono Basin based on Mono Lake’s surface



elevation; and (ii) the City's legal obligations under a long-term groundwater management plan relating to the City's groundwater resources in the Owens Valley.

Since 1989, Los Angeles Aqueduct water deliveries to the City have varied from as little as 57,716 acre-feet in fiscal year 2014-15 to as much as 467,000 acre-feet of water in fiscal year 1995-96. Average water deliveries to the City from the Los Angeles Aqueduct were approximately 238,960 acre-feet per fiscal year between fiscal years 2015-16 and 2019-20 (approximately 48.0% of the City's annual water supply). However, during fiscal year 2015-16 (one of the worst years of the recent drought), water deliveries to the City from the Los Angeles Aqueduct were only 57,853 acre-feet (approximately 11.8% of the City's water supply for fiscal year 2015-16). Consequently, the amount of water purchased by the City from Metropolitan varies (sometimes substantially) from one year to the next. During the past five fiscal years 2015-16 through 2019-20, the City's water purchases from Metropolitan (billed water transactions) ranged from a low of 141,866 in fiscal year 2018-19 to a high of 332,528 in fiscal year 2015-16.

### **Local Water Supplies**

Local water supplies are made up of groundwater, groundwater recovery, surface runoff, recycled water, and seawater desalination. Metropolitan supports local resources development through its Local Resources Program, which provides financial incentives up to \$340 per acre-foot of water production from local water recycling, groundwater recovery and seawater desalination projects. Metropolitan utilizes conjunctive use of groundwater to encourage storage in groundwater basins. Member agencies and other local agencies have also independently funded and developed additional local supplies, including groundwater clean-up, recycled water and desalination of brackish or high salt content water. See also "METROPOLITAN'S WATER DELIVERY SYSTEM--Water Quality and Treatment" in this Appendix A for information regarding recent water quality regulations and developments that impact or may impact certain local groundwater supplies.

Metropolitan's water transaction projections are based in part on projections of locally-supplied water. Projections of future local supplies are based on estimated yields from sources and projects that are currently producing water or are under construction at the time a water transaction projection is made. Additional reductions in Metropolitan's water transaction projections are made to account for future local supply augmentation projects, based on the IRP Update goals. See "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES--Water Transactions Projections" and "METROPOLITAN'S WATER SUPPLY--Integrated Water Resources Plan" in this Appendix A.

**Groundwater.** Demands for about 1.1 million acre-feet per year, about one-third of the annual water demands for approximately 19 million residents of Metropolitan's service area, are met from groundwater production. Local groundwater supplies are supported by recycled water, which is blended with imported water and recharged into groundwater basins, and also used for creating seawater barriers that protect coastal aquifers from seawater intrusion.

**Member Agency Storage Programs.** Metropolitan has developed a number of local programs to work with its member agencies to increase storage in groundwater basins. Metropolitan has encouraged storage through its cyclic and conjunctive use storage programs. These programs allow Metropolitan to deliver water into a groundwater basin in advance of agency demands. Metropolitan has drawn on dry-year supply from nine contractual conjunctive use storage programs to address shortages from the State Water Project and the CRA.

Cyclic storage agreements allow pre-delivery of imported water for recharge into groundwater basins in excess of an agency's planned and budgeted deliveries making best use of available capacity in conveyance pipelines, use of storm channels for delivery to spreading basins, and use of spreading basins. This water is then purchased at a later time when the agency has a need for groundwater replenishment deliveries.

Conjunctive use agreements provide for storage of imported water that can be called for use by Metropolitan during dry, drought, or emergency conditions. During a dry period, Metropolitan has the option to call water stored in the groundwater basins pursuant to its contractual conjunctive use agreements. At the time of the call, the member agency pays Metropolitan the prevailing rate for that water. Nine conjunctive use projects provide about 210,000 acre-feet of groundwater storage and have a combined extraction capacity of about 70,000 acre-feet per year. See the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "METROPOLITAN'S WATER SUPPLY—Storage Capacity and Water in Storage" in this Appendix A.

**Recovered Groundwater.** Contamination of groundwater supplies is a growing threat to local groundwater production. Metropolitan has been supporting increased groundwater production and improved regional supply reliability by offering financial incentives to agencies for production and treatment of degraded groundwater since 1991. Metropolitan has executed agreements with local agencies to provide financial incentives to 27 projects that recover contaminated groundwater with total contract yields of about 124,000 acre-feet per year. During fiscal year 2019-20, Metropolitan provided incentives for approximately 50,000 acre-feet of recovered water under these agreements. Additionally, 62,000 acre-feet of recovered groundwater was produced by local agencies through other independently funded and developed sources. Total groundwater recovery use under executed agreements with Metropolitan is expected to grow to 58,000 acre-feet in 2021.

**Surface Runoff.** Local surface water resources consist of runoff captured in storage reservoirs and diversions from streams. Since 1980, agencies have used an average of 110,000 acre-feet per calendar year of local surface water. Local surface water supplies are heavily influenced by year to year local weather conditions, varying from a high of 188,000 acre-feet in calendar year 1998 to a low of 37,000 acre-feet in calendar year 2016.

**Recycled Water-Local Agency Projects.** Metropolitan has supported recycled water use to offset water demands and improve regional supply reliability by offering financial incentives to agencies for production and sales of recycled water since 1982. Metropolitan has executed agreements with local agencies to provide financial incentives to 83 recycled water projects with total expected contract yields of about 315,000 acre-feet per year. During fiscal year 2019-20, Metropolitan provided incentives for approximately 71,000 acre-feet of recycled water under these agreements. Additionally, 370,000 acre-feet of recycled water (including wastewater discharged to the Santa Ana River that percolates into downstream groundwater basins) was produced by local agencies through other independently funded and developed sources. Total recycled water use under executed agreements with Metropolitan currently in place is expected to be approximately 56,000 acre-feet annually by 2021. On December 10, 2019, Metropolitan's Board authorized the General Manager to enter into a Local Resources Program agreement with SDCWA and the City of San Diego to provide financial incentives in connection with the first phase of a proposed recycling project (the San Diego Pure Water North City Project Phase 1) being developed by the City of San Diego. Phase 1 of the project, if completed, would provide up to 33,600 acre-feet annually of recycled water for surface water augmentation, and Local Resource Program financial incentives of up to \$285.6 million could be provided by Metropolitan for the project over a 25-year period. As noted above, Local Resources Program agreements provide incentives of up to \$340 per acre-foot of water production (based on actual project unit costs that exceed Metropolitan's water rates) from local water supply projects developed by local and member agencies. Agreement terms are for 25 years and terminate automatically if construction does not commence within two full fiscal years of agreement execution or if recycled water deliveries are not realized within four full fiscal years of agreement execution.

**Recycled Water-Metropolitan Regional Recycled Water Program.** Since 2010, Metropolitan has been evaluating the potential and feasibility of implementing a regional recycled water program (the "RRWP"). Chronic drought conditions have resulted in significant reductions in local surface supplies and groundwater production and have increased the need for recharge supplies to groundwater and surface water

reservoirs to improve their sustainable yields and operating integrity. In 2015, Metropolitan executed an agreement with the Sanitation Districts of Los Angeles County (“LACSD”) to implement a demonstration project and to establish a framework of terms and conditions of the RRWP. The objectives of the RRWP are to enable the potential reuse of up to 150 million gallons per day (“mgd”) of treated effluent from LACSD’s Joint Water Pollution Control Plant (“JWPCP”). Purified water from a new advanced treatment facility could be delivered through pipelines to the region’s groundwater basins, industrial facilities, and two of Metropolitan’s treatment plants. Construction of a 0.5-mgd advanced water treatment demonstration plant was approved in 2017 and was completed in September 2019. Testing and operation of the plant began in October 2019 to confirm treatment costs and provide the basis for regulatory approval of the proposed treatment process. The initial phase of testing is scheduled for completion in 2021 with future testing phases planned that will form the basis for the design, operation, and optimization of, and will inform Metropolitan’s Board decision whether to move forward with, a full-scale advanced water treatment facility. Finally, the RRWP will have the flexibility to be expanded in the future to implement Direct Potable Reuse (“DPR”) through raw water augmentation at two of Metropolitan’s treatment plants. The SWRCB Division of Drinking Water (“DDW”) is in the process of developing regulations for DPR in California, with the current anticipated date for promulgation by the end of 2023. The fiscal year 2020-21 and 2021-22 biennial budget includes \$30 million for the preparation of a programmatic environment impact report for the RRWP. Metropolitan’s financial projections for the fiscal years ending June 30, 2020 through 2024 do not include any future capital costs associated with a potential full-scale RRWP. On November 10, 2020, Metropolitan’s Board voted to begin environmental planning work on the RRWP. In December 2020, Metropolitan and SNWA executed a funding agreement under which SNWA will contribute up to \$6 million for the environmental planning costs for the RRWP. In the event either SNWA or Metropolitan decides not to proceed or participate in the RRWP in the future, SNWA’s financial contribution to the RRWP’s environmental planning would be returned by Metropolitan.

***Seawater Desalination.*** Metropolitan’s IRP embraces seawater desalination as a part of the region’s supply portfolio that could help increase supply reliability in Southern California.

In 2015, Poseidon Resources LLC (“Poseidon”) began operating the 56,000 acre-foot capacity Carlsbad Desalination Project (“Carlsbad Project”) and associated pipeline. The San Diego County Water Authority has a purchase agreement with Poseidon for a minimum of 48,000 acre-feet per year with an option to purchase an additional 8,000 acre-feet per year.

In October 2014, seawater desalination projects became eligible for funding under Metropolitan’s Local Resources Program (LRP). There are three local seawater desalination projects in the permitting stages which could receive LRP incentives. These include South Coast Water District’s proposed 5,000 to 15,000 acre-feet per year Doheny Ocean Desalination project in south Orange County; Orange County Water District’s proposed 56,000 acre-feet per year Huntington Beach Seawater Desalination project in north Orange County; and West Basin Municipal Water District’s proposed 20,000 to 60,000 acre-feet per year project in Los Angeles County. LRP applications for the potential projects could be considered by Metropolitan’s Board after they are permitted, free of litigation, and authorized to proceed by their developing agencies.

Metropolitan had previously maintained Seawater Desalination Program (SDP) agreements with three member agencies for their projects. The agreements were signed in 2006 and included off-ramps triggered by project development milestones. On June 30, 2020, the SDP agreements reached a termination milestone and expired automatically. As a result, the three member agency SDP agreements are no longer in effect.

In 2007, the Board approved Metropolitan’s role as a regional facilitator for seawater desalination. This includes supporting local projects during permitting and providing technical assistance when requested. Metropolitan’s regional facilitation includes active participation in organizations advocating for desalination

and salinity management, including CalDesal within California and the Multi-State Salinity Coalition nationally. Metropolitan also participates in the National Alliance for Water Innovation ("NAWI"). NAWI is a DOE-led, five-year, \$100 million research effort focused on accelerating the commercialization of early-stage desalination technologies. New technologies developed by NAWI could reduce cost and environmental barriers to seawater desalination in California.

## **METROPOLITAN'S WATER DELIVERY SYSTEM**

### **Primary Facilities and Method of Delivery**

Metropolitan's water delivery system is made up of three basic components: the CRA, the California Aqueduct of the State Water Project and Metropolitan's water distribution system. Metropolitan's delivery system is integrated and designed to meet the differing needs of its member agencies. Metropolitan seeks redundancy in its delivery system to assure reliability in the event of an outage. Improvements are designed to increase the flexibility of the system. Since local sources of water are generally used to their maximum each year, growth in the demand for water is partially met by Metropolitan. The operation of Metropolitan's water system is being made more reliable through the rehabilitation of key facilities as needed, improved preventive maintenance programs and the upgrading of Metropolitan's operational control systems. See "CAPITAL INVESTMENT PLAN" in this Appendix A.

*Colorado River Aqueduct.* Work on the CRA commenced in 1933 and water deliveries started in 1941. Additional facilities were completed by 1961 to meet additional requirements of Metropolitan's member agencies. The CRA is 242 miles long, starting at the Lake Havasu intake and ending at the Lake Mathews terminal reservoir. Metropolitan owns all of the components of the CRA, which include five pumping plants, 64 miles of canal, 92 miles of tunnels, 55 miles of concrete conduits, four reservoirs, and 144 underground siphons totaling 29 miles in length. The pumping plants lift the water approximately 1,617 feet over several mountain ranges to Metropolitan's service area. See "METROPOLITAN'S WATER SUPPLY-Colorado River Aqueduct" in this Appendix A.

*State Water Project.* The initial portions of the State Water Project serving Metropolitan were completed in 1973. The State Water Project, managed and operated by DWR, is one of the largest water supply projects undertaken in the history of water development. The State Water Project facilities dedicated to water delivery consist of a complex system of dams, reservoirs, power plants, pumping plants, canals and aqueducts to deliver water. Water from rainfall and snowmelt runoff is captured and stored in State Water Project conservation facilities and then delivered through State Water Project transportation facilities to water agencies and districts located throughout the Upper Feather River, Bay Area, Central Valley, Central Coast, and Southern California. Metropolitan receives water from the State Water Project through the main stem of the aqueduct system, the California Aqueduct, which is 444 miles long and includes 381 miles of canals and siphons, 49 miles of pipelines or tunnels and 13 miles of channels and reservoirs.

As described herein, Metropolitan is the largest (in terms of number of people it serves, share of State Water Project water it has contracted to receive, and percentage of total annual payments made to DWR therefor) of twenty-nine agencies and districts that have entered into contracts with DWR to receive water from the State Water Project. Contractors pay all costs of the facilities in exchange for participation rights in the system. Thus, Contractors also have the right to use the portion of the State Water Project conveyance system necessary to deliver water to them at no additional cost as long as capacity exists. See "METROPOLITAN'S WATER SUPPLY-State Water Project" in this Appendix A.

*Distribution System.* Metropolitan's distribution system is a complex network of facilities which routes water from the CRA and State Water Project to Metropolitan's member agencies. The water distribution system includes components that were built beginning in the 1930s and through the present. Metropolitan owns all of these components, including 16 reservoirs, five regional treatment plants, over 800

miles of transmission pipelines, feeders and canals, and 16 hydroelectric plants with an aggregate capacity of 130 megawatts.

***Diamond Valley Lake.*** Diamond Valley Lake, a man-made reservoir, built, owned and operated by Metropolitan, is located southwest of the city of Hemet, California. It covers approximately 4,410 acres and has capacity to hold approximately 810,000 acre-feet or 265 billion gallons of water. Diamond Valley Lake was constructed to serve approximately 90 percent of Metropolitan's service area by gravity flow. Imported water is delivered to Diamond Valley Lake during surplus periods. The reservoir provides more reliable delivery of imported water from the State Water Project during summer months, droughts and emergencies. In addition, Diamond Valley Lake is capable of providing more than one-third of Southern California's water needs from storage for approximately six months after a major emergency (assuming that there has been no impairment of Metropolitan's internal distribution network). See the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "METROPOLITAN'S WATER SUPPLY-Storage Capacity and Water in Storage" in this Appendix A for the amount of water in storage at Diamond Valley Lake. Excavation at the project site began in May 1995. Diamond Valley Lake was completed in March 2000, at a total cost of \$2 billion, and was in full operation in December 2001.

***Inland Feeder.*** Metropolitan's Inland Feeder is a 44-mile-long conveyance system that connects the State Water Project to Diamond Valley Lake and the CRA. The Inland Feeder provides greater flexibility in managing Metropolitan's major water supplies and allows greater amounts of State Water Project water to be accepted during wet seasons for storage in Diamond Valley Lake. In addition, the Inland Feeder increases the conveyance capacity from the East Branch of the State Water Project by 1,000 cfs, allowing the East Branch to operate up to its full capacity. Construction of the Inland Feeder was completed in September 2009 at a total cost of \$1.14 billion.

***Operations Control Center.*** Metropolitan's water conveyance and distribution system operations are coordinated from the Operations Control Center ("OCC") centrally located in Los Angeles County. The OCC plans, balances and schedules daily water and power operations to meet member agencies' demands, taking into consideration the operational limits of the entire system.

## **Water Quality and Treatment**

Metropolitan filters and disinfects water at five water treatment plants: the F.E. Weymouth Treatment Plant, the Joseph Jensen Treatment Plant, the Henry J. Mills Treatment Plant, the Robert B. Diemer Treatment Plant, and the Robert A. Skinner Treatment Plant. In recent years, the plants typically treat between 0.8 billion and 1.0 billion gallons of water per day and have a maximum capacity of approximately 2.4 billion gallons per day. Approximately 50 percent of Metropolitan's water deliveries are treated water.

Federal and state regulatory agencies continually identify potential contaminants and establish new water quality standards. New water quality standards could affect availability of water and impose significant compliance costs on Metropolitan. The federal Safe Drinking Water Act ("SDWA") establishes drinking water quality standards, monitoring, and public notification and enforcement requirements for public water systems. To achieve these objectives, the U.S. Environmental Protection Agency (the "USEPA"), as the lead regulatory authority, promulgates national drinking water regulations and develops the mechanism for individual states to assume primary enforcement responsibilities. The SWRCB DDW, formerly the Drinking Water Program under the California Department of Public Health, has primary responsibility for the regulation of public water systems in the State. Drinking water delivered to customers must comply with statutory and regulatory water quality standards designed to protect public health and safety. Metropolitan operates its five water treatment plants under a domestic water supply permit issued by DDW, which is amended, as necessary, such as when significant facility modifications occur. Metropolitan operates and maintains water storage, treatment and conveyance facilities, implements watershed management and protection activities, performs inspections, monitors drinking water quality, and submits monthly and annual compliance reports. In addition, public water system discharges to state and federal waters are regulated

under general National Pollutant Discharge Elimination System (“NPDES”) permits. These NPDES permits, which the SWRCB issued to Metropolitan, contain numerical effluent limitations, monitoring, reporting, and notification requirements for water discharges from the facilities and pipelines of Metropolitan’s water supply and distribution system.

As described herein, Metropolitan has established five groundwater storage programs with other water agencies that allow Metropolitan to store available supplies in the Central Valley for return later. These programs help manage supplies by putting into storage surplus water in years when it is available and converting that to dry year supplies to be returned when needed. These programs can also provide emergency supplies. See “METROPOLITAN’S WATER SUPPLY–Water Transfer, Storage and Exchange Programs – State Water Project Agreements and Programs” and “–Storage Capacity and Water in Storage” in this Appendix A. Generally, water returned to Metropolitan under these groundwater storage programs (“return water”) may be made available in one of two ways: by direct pump back from a groundwater well to the California Aqueduct or, when available, by an exchange with a supply already in the aqueduct. Water quality issues can arise in water returned by direct pumping as a result of the presence of a water quality contaminant in the groundwater storage basin and due to the imposition of stricter water quality standards by federal or State regulation.

In 2017, the SWRCB adopted a regulation setting a Maximum Contaminant Level (“MCL”) for TCP of five parts per trillion or 5 ppt based upon a running annual average. TCP is a manufactured chemical used as a cleaning and degreasing solvent and has been found at industrial and hazardous waste sites. It is also associated with pesticide products used in agricultural practices. In January 2018, the new regulation went into effect. Under the new regulation, drinking water agencies are required to perform quarterly monitoring of TCP. There have been no detections of this chemical in Metropolitan’s system. However, TCP has been detected above the new MCL in groundwater wells of three of Metropolitan’s groundwater storage program partners through monitoring performed by these agencies. Levels detected in groundwater wells of the Arvin-Edison Water Storage District are the highest and will impact the ability of Metropolitan to take return water under that program. As noted under “METROPOLITAN’S WATER SUPPLY–Water Transfer, Storage and Exchange Programs” in this Appendix A, Metropolitan has temporarily suspended operation of this program until the water quality concerns can be further evaluated and managed. The levels of TCP detected at Metropolitan’s other groundwater storage programs are much lower and impact fewer groundwater wells. Metropolitan is evaluating the effects of TCP on the return capability of those programs.

Possible remediation measures include, for example, return water with other surface water supplies, removal of wells from service, return water by exchange, or treatment. Additional capital and/or operation and maintenance costs could be incurred by Metropolitan in connection with remediation options, but the magnitude of such costs is not known at this time. To the extent return water under one or more groundwater storage programs could not be utilized due to groundwater quality, the available supply of stored water during extended drought or emergency periods would be reduced.

Metropolitan continually monitors new water quality laws and regulations and frequently comments on new legislative proposals and regulatory rules. For example, on June 26, 2019, the USEPA proposed setting the MCL for perchlorate at 56 micrograms per liter ( $\mu\text{g}/\text{L}$ ). Perchlorate is both a naturally occurring and man-made chemical used in the production of rocket fuel, missiles, fireworks, flares and explosives. It is also sometimes present in bleach and in some fertilizers. Groundwater in the Henderson, Nevada area has been contaminated with perchlorate as a result of two former chemical manufacturing facilities, and there are ongoing remediation programs to mitigate its release into the Las Vegas Wash and the downstream Colorado River. In addition to its proposed setting of a perchlorate MCL of 56  $\mu\text{g}/\text{L}$ , the USEPA sought comment on three alternative regulatory options: (1) setting an MCL for perchlorate at 18  $\mu\text{g}/\text{L}$ ; (2) setting an MCL for perchlorate at 90  $\mu\text{g}/\text{L}$ ; or (3) withdrawing EPA’s 2011 determination to regulate perchlorate in drinking water. On August 23, 2019, Metropolitan submitted a comment letter on the USEPA’s proposed regulation, recommending that the USEPA consider the health effects data used by several states for setting MCLs and

Advisory Levels for perchlorate, as well as the monitoring and compliance guidance provided by California and Massachusetts in developing their perchlorate MCLs. Also, Metropolitan expressed its concern that the USEPA does not have an up-to-date accounting of perchlorate contamination and that the USEPA excluded perchlorate data from California and Massachusetts. As it has in the past, Metropolitan continued to urge the USEPA to establish a drinking water regulation for perchlorate that is protective of human health and prevents any adverse impact to the Colorado River and the millions of users that rely upon it as a source of drinking water supply. Lastly, Metropolitan asked the USEPA not to withdraw its 2011 determination to regulate perchlorate in drinking water; otherwise, drinking water utilities in Nevada and Arizona which rely on Colorado River water could then have higher levels of perchlorate in their source water, and California drinking water utilities, including some of Metropolitan's member agencies, would be challenged to comply with California's MCL for perchlorate of 6 µg/L if remediation efforts in the Henderson area were slowed down in the absence of a federal regulation. On June 18, 2020, the USEPA withdrew its 2011 determination to regulate perchlorate under the SDWA and issued a new determination that perchlorate does not meet the statutory criteria for regulation. Whether the USEPA should issue a national drinking water standard for perchlorate is the subject of ongoing litigation by the Natural Resources Defense Council, Inc. California is also reviewing its MCL for perchlorate in light of a revised Public Health Goal ("PHG") of 1 µg/L adopted in February 2015. PHGs are established by the California Office of Environmental Health Hazard Assessment ("OEHHA") and used as the basis for the development of a State regulation setting an MCL. The SWRCB is required to set an MCL for a chemical as close to the PHG as is technologically and economically feasible, placing primary emphasis on the protection of public health. As part of this process, on March 6, 2020, the SWRCB proposed lowering the detection limit for purposes of reporting ("DLR") for perchlorate from 4 µg/L to 2 µg/L. Data collected from monitoring using the lower DLR will allow the SWRCB to evaluate the technological and economic feasibility of water treatment to reduce perchlorate levels to concentrations less than the current DLR. On April 30, 2020, Metropolitan submitted a comment letter to the SWRCB supporting the lower perchlorate DLR which is consistent with laboratory capabilities and will allow for a more accurate and complete assessment of perchlorate occurrence across the State. In July 2020, due to improved analytical methods, and in order to evaluate a lower MCL, DDW modified its proposal to lowering the DLR for perchlorate initially to 2 µg/L, and subsequently to the PHG of 1 µg/L in a second phase effective January 1, 2024. On October 6, 2020, the SWRCB approved the modified proposal. Metropolitan will continue to participate in federal and state rulemaking proceedings.

Metropolitan is monitoring and commenting on the development of legislation, laws, and regulations regarding per- and poly-fluoroalkyl substances ("PFAS"). PFAS are substances widely used in consumer and industrial products such as fabrics, carpets, firefighting foams, food packaging and nonstick cookware and are known for their nonstick, waterproof, and heat and stain resistant properties. Perfluorooctane sulfonate ("PFOS") and perfluorooctanoic acid ("PFOA") are the two most common synthetic organic chemicals in the group of compounds referred to as PFAS. In August 2019, DDW lowered the notification levels for PFOS from 13 ppt to 6.5 ppt and for PFOA from 14 ppt to 5.1 ppt. Notification levels are non-regulatory, precautionary health-based measures for concentrations of chemicals in drinking water that warrant notification and further monitoring and assessment. If a chemical concentration is greater than its notification level in drinking water that is provided to consumers, DDW recommends that the utility inform its customers and consumers about the presence of the chemical, and about health concerns associated with exposure to it. In February 2020, DDW lowered response levels for PFOA and PFOS from 70 ppt for individual or combined concentrations to 10 ppt for PFOA and 40 ppt for PFOS. A response level is set higher than a notification level and represents a chemical concentration level at which DDW recommends a water system consider taking a water source out of service or providing treatment if that option is available to them. Legislation which took effect on January 1, 2020 (California Assembly Bill 756), requires that water systems that receive a monitoring order from the SWRCB and detect levels of PFAS that exceed their respective response level must either take a drinking water source out of use or provide specified public notification if they continue to supply water above the response level. PFOA and PFOS have not been detected in Metropolitan's imported or treated water supplies. In 2019, Metropolitan detected in its supplies low levels of perfluorohexanoic acid (PFHxA), which is not acutely toxic or carcinogenic and is not currently regulated



in California or at the federal level. No other PFAS have been detected in Metropolitan imported or treated supplies. However, PFOA and PFOS have been detected in groundwater wells in the region, including those of certain member agencies. Metropolitan may experience increased demands for its imported water to help offset the potential loss of any affected local supplies. On January 19, 2021, the USEPA announced its final determination to regulate PFOA and PFOS in drinking water, as well as that it is considering whether to designate PFOA and PFOS as hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and/or hazardous waste under the Resource Conservation and Recovery Act. The same day, the USEPA announced its proposed revisions to the Unregulated Contaminant Monitoring Rule (UCMR 5) for public water systems which includes monitoring for 29 PFAS in drinking water. The proposal would require pre-sampling preparations in 2022, sample collection from 2023-2025, and reporting of final results through 2026. Comments on the USEPA's proposal will be due within 60 days after it is published in the Federal Register. The USEPA also released its final toxicity assessment for perfluorobutane sulfonic acid ("PFBS"), a replacement for PFOS. The toxicity assessment will be a part of the USEPA's risk assessment decision-making process. OEHHA recently recommended a notification level for PFBS at 0.5 ppb (or 500 ppt). In addition, the SWRCB has initiated a process to establish regulatory standards for PFOA and PFOS by requesting the OEHHA to establish PHGs for these two chemicals. Metropolitan will continue to monitor and participate in federal and state rulemaking proceedings.

Metropolitan is currently operating in compliance with all state and federal drinking water regulations and permit requirements.

#### **Seismic Considerations and Emergency Response Measures**

*General.* Although the magnitude of damages resulting from a significant seismic event are impossible to predict, Metropolitan's water conveyance and distribution facilities are designed either to withstand a maximum probable seismic event or to minimize the potential repair time in the event of damage. The five pumping plants on the CRA have been buttressed to better withstand seismic events. Other components of the CRA are monitored for any necessary rehabilitation and repair. Metropolitan personnel and independent consultants periodically reevaluate the internal water distribution system's vulnerability to earthquakes. As facilities are evaluated and identified for seismic retrofitting, they are prioritized, with those facilities necessary for delivering or treating water scheduled for upgrade before non-critical facilities. However, major portions of the California Aqueduct and the CRA are located near major earthquake faults, including the San Andreas Fault. A significant earthquake could damage structures and interrupt the supply of water, adversely affecting Metropolitan's revenues and its ability to pay its obligations. Therefore, emergency supplies are stored for use throughout Metropolitan's service area, and a six-month reserve supply of water normally held in local storage (including emergency storage in Diamond Valley Lake) provides reasonable assurance of continuing water supplies during and after such events (assuming there has been no impairment of Metropolitan's internal distribution network).

Metropolitan has an ongoing surveillance program that monitors the safety and structural performance of its 20 dams and reservoirs permitted by DWR's Division of Safety of Dams. Operating personnel perform regular inspections that include monitoring and analyzing seepage flows and pressures. Engineers responsible for dam safety review the inspection data and monitor the horizontal and vertical movements for each dam. Major on-site inspections are performed at least twice each year. Instruments that transmit seismic acceleration time histories for analysis any time a dam is subjected to strong motion during an earthquake are located at a number of selected sites.

Metropolitan has developed an emergency plan that calls for specific levels of response appropriate to an earthquake's magnitude and location. Included in this plan are various communication tools, as well as a structured plan of management that varies with the severity of the event. Pre-designated personnel follow detailed steps for field facility inspection and distribution system patrol. Approximately 40 employees are designated to respond immediately under certain identifiable seismic events. An emergency operations center is maintained at the OCC. The OCC, which is specifically designed to be earthquake resistant, contains

communication equipment, including a radio transmitter, microwave capability and a response line linking Metropolitan with its member agencies, DWR, other utilities and the State's Office of Emergency Services.

Metropolitan, in conjunction with DWR and LADWP, has formed the Seismic Resilience Water Supply Task Force for the purpose of collaborating on studies and mitigation measures aimed at improving the reliability of imported water supplies to Southern California. Specific task force goals included revisiting historical assumptions regarding potential aqueduct outages after a seismic event; establishing a common understanding about individual agency aqueduct vulnerability assessments, projected damage scenarios, and planning assumptions; and discussing ideas for improving the resiliency of Southern California's imported water supplies through multi-agency cooperation. The task force has established multi-year goals and will continue to meet on these issues and develop firm plans for mitigating seismic vulnerabilities.

Metropolitan's resiliency efforts include manufacturing, pipe fabrication and coating capabilities in La Verne, California. Over \$47 million has been invested to enhance and expand Metropolitan's capacity to provide fabrication, manufacturing, and coating services for rehabilitation work, maintenance activities, and capital projects. Upon request, Metropolitan is also able to provide manufacturing, coating and fabrication services through reimbursable agreements to member agencies, and DWR. These agreements have enhanced timely and cost-effective emergency response capabilities. Materials to fabricate pipe and other appurtenant fittings are kept on site. In the event of earthquake damage, Metropolitan has taken measures to provide the design and fabrication capacity to fabricate pipe and manufacture fittings. Metropolitan is also staffed to perform emergency repairs and has pre-qualified contractors for emergency repair needs at various locations throughout Metropolitan's service area.

***State Water Project Facilities-California Aqueduct.*** The California Aqueduct crosses all major faults either by canal at ground level or by pipeline at very shallow depths to ease repair in case of damage from movement along a fault. State Water Project facilities are designed to withstand major earthquakes along a local fault or the San Andreas Fault without major damage. Dams, for example, are designed to accommodate movement along their foundations and to resist earthquake forces on their embankments. Earthquake loads have been taken into consideration in the design of project structures such as pumping and power plants. The location of check structures on the canal allows for hydraulic isolation of the fault-crossing repair. While the dams, canals, pump stations and other constructed State Water Project facilities have been designed to withstand earthquake forces, the critical supply of water from Northern California must traverse the Bay-Delta through hundreds of miles of varying levels of engineered levees that are susceptible to major failures due to flood and seismic risk. In the event of a failure of the Bay-Delta levees, the quality of the Bay-Delta's water could be severely compromised as saltwater comes in from the San Francisco Bay. Metropolitan's supply of State Water Project water would be adversely impacted if pumps that move Bay-Delta water southward to the Central Valley and Southern California are shut down to contain the saltwater intrusion. Metropolitan estimates that stored water supplies, CRA supplies and local water resources that would be available in case of a levee breach or other interruption in State Water Project supplies would meet demands in Metropolitan's service area for approximately twelve months. See "METROPOLITAN'S WATER SUPPLY—Storage Capacity and Water in Storage" in this Appendix A.

Metropolitan, in cooperation with the other State Water Contractors, developed recommendations to DWR for emergency preparedness measures to maintain continuity in export water supplies and water quality during seismic and other emergency events. These measures include improvements to emergency construction materials stockpiles in the Bay-Delta, improved emergency contracting capabilities, strategic levee improvements and other structural measures of importance to Bay-Delta water export interests, including development of an emergency freshwater pathway to export facilities in a severe earthquake. DWR utilized \$12 million in fiscal year 2007-08 for initial stockpiling of rock for emergency levee repairs and development of Bay-Delta land and marine loading facilities and has identified future funding for expanded stockpiles.

**State Water Project-Perris Dam.** DWR's Perris Dam forms Lake Perris, the southernmost terminal reservoir for the State Water Project in Riverside County, with maximum capacity of approximately 130,000 acre-feet of water. Metropolitan uses water from Lake Perris for delivery to customers in Riverside and San Diego counties. Deliveries from the lake are used as a redundant source for the Mills Water Treatment Plant, drought supply from a flexible storage account, and for consumptive use by Metropolitan's customers. After seismic studies concluded in 2005 that DWR's Perris Dam facility could experience damage from moderate earthquakes along the San Jacinto or San Andreas faults due to potential weaknesses in the dam's foundation, DWR lowered the water level in the reservoir by about 25 feet and reduced the amount of water stored in the reservoir to about 75,000 acre-feet as DWR evaluated alternatives for repair of the dam. Following completion of environmental review and design work in 2011, DWR undertook a major retrofit to Perris Dam to improve its seismic stability and designed to restore the reservoir to its historical level. Repair work was completed in April 2018. Upgrades included strengthening the foundation and adding 1.4 million cubic yards of embankment at the 130-foot tall, earthen dam. DWR's current estimate for repair costs, inclusive of environmental and right-of-way work is \$139.5 million. Following completion of the work, DWR began to refill Lake Perris in March 2018 to allow the dam to be tested and certified to again store 130,000 acre-feet of water. Under the original allocation of joint costs for this facility, the State would have paid approximately six percent of the repair costs. However, because of the recreational benefit this facility provides to the public, the Legislature has approved a recommendation from DWR that the State assume 32.2 percent of these repair costs. The remaining 67.8 percent of repairs costs are being paid for by the three agencies that use the water stored in Lake Perris: Metropolitan (42.9 percent), DWA (3.0 percent) and CVWD (21.9 percent). DWR recovers the cost of repairs through its annual statement of charges sent to each agency. See "METROPOLITAN EXPENSES—State Water Contract Obligations" in this Appendix A.

The dam remediation is one of three major projects to improve seismic stability and enhance public safety in the Perris Dam Remediation Program. The other two projects include the Outlet Tower Improvements project and the Emergency Release Facility ("ERF") project. Construction on the Outlet Tower Improvements project began October 2, 2019. Work on the outlet tower bridge, with modifications to bridge support, bridge seat, end diaphragm, and installation of stiffener plates, is planned for completion in early 2022. The final EIR for the ERF project was certified and approved by DWR in May 2018. Since then, modifications to the ERF project have been identified and the Addendum No. 1 to the EIR was published in September 2020. The ERF project includes improvements downstream of the reservoir that would direct the flow of water in an emergency requiring the dewatering of the reservoir. Flows would be directed through a series of berms and lined and unlined channels that would ultimately terminate at the Riverside County Flood Control and Water Conservation District's Perris Valley Channel. The ERF project is planned to be completed in 2023. The Outlet Tower Improvements and ERF projects enhance the safety of the dam for other risks in addition to that posed by earthquakes. It is anticipated that costs will be shared in the same manner as for the Lake Perris dam remediation project. DWR's current estimate for repair costs (including the share of costs to be assumed by the State) is \$27.1 million for the Outlet Tower Improvements project and \$62.3 million for the ERF project (of which Metropolitan's anticipated share would be 42.9 percent).

### **Security Measures**

Metropolitan conducts ground and air patrols of the CRA and monitoring and testing at all treatment plants and along the CRA. Similarly, DWR has in place security measures reasonably designed to protect critical facilities of the State Water Project, including both ground and air patrols of the State Water Project.

Although Metropolitan has constructed redundant systems and other safeguards to ensure its ability to continually deliver water to its customers, and DWR has made similar efforts, a terrorist attack or other security breach against water facilities could materially impair Metropolitan's ability to deliver water to its customers, its operations, and revenues and its ability to pay its obligations.

## CAPITAL INVESTMENT PLAN

### General Description

Metropolitan's current Capital Investment Plan (the "Capital Investment Plan" or "CIP") involves infrastructure and system reliability projects, either as upgrades to existing capital assets or replacements and refurbishments of existing facilities, to ensure reliability as well as enhance operational efficiency and flexibility, and comply with water quality regulations. Metropolitan's CIP is regularly reviewed and updated. Metropolitan's biennial budget process includes a review of the projected long-term capital needs and the development of a capital expenditure forecast for the ten-year financial forecast, as well as the identification of the capital priorities of Metropolitan over the biennial budget term. While the award of major contracts and professional services agreements are subject to approval by Metropolitan's Board, in October 2018 the Board amended the Administrative Code to update the process for appropriating funds and authorizing work to proceed for capital projects. Under the revised process, following the adoption of the biennial budget, a Board action is presented to (1) appropriate the total amount of approved biennial CIP expenditures and (2) authorize the General Manager to initiate and proceed with all work on projects that have been included in the CIP for such biennial period. The new appropriation process has resulted in faster implementation of capital projects. The amount and timing of borrowings to fund capital expenditures will depend upon, among other factors, status of construction activity and water demands within Metropolitan's service area. From time to time, projects that have been undertaken are delayed, redesigned or deferred by Metropolitan for various reasons, and no assurance can be given that a project in the CIP will be completed in accordance with its original schedule or that any project will be completed as currently planned. In addition, from time to time, when circumstances warrant, Metropolitan's Board may approve capital expenditures other than or in addition to those contemplated by the CIP at the time of the then current biennial budget.

### Projection of Capital Investment Plan Expenditures

The table below sets forth the projected CIP expenditures by project type for the fiscal years ending June 30, 2021 through 2025, as currently projected for fiscal years 2020-21 and 2021-22, and as reflected in the biennial budget for fiscal years 2020-21 and 2021-22 for fiscal years 2022-2023 through 2024-25. The projection for the current biennium, which covers fiscal years 2020-21 and 2021-22, is updated every month to reflect the most current changes to planned expenditures. The biennial budget is updated every two years as a result of the periodic review and adoption of the capital budget by Metropolitan's Board. See "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A.

#### CAPITAL INVESTMENT PLAN PROJECTION OF EXPENDITURES<sup>(1)</sup> (Fiscal Years Ended June 30 - Dollars in Thousands)

	2021	2022	2023	2024	2025	Total
Infrastructure R&R	\$135,500	\$ 94,000	\$124,500	\$147,700	\$147,900	\$ 649,600
Infrastructure Upgrade	138,400	76,200	127,300	127,200	135,700	604,800
Regulatory Compliance	1,200	500	1,000	500	400	3,600
Stewardship	4,900	3,600	7,600	10,000	8,000	34,100
Supply Reliability	300	0	200	100	3,400	4,000
System Flexibility	16,300	18,900	34,700	0	0	69,900
Water Quality	8,000	2,200	4,700	14,500	4,600	34,000
<b>Total</b>	<b>\$304,600<sup>(2)</sup></b>	<b>\$195,400<sup>(2)</sup></b>	<b>\$300,000</b>	<b>\$300,000</b>	<b>\$300,000</b>	<b>\$1,400,000</b>

Source: Metropolitan.

<sup>(1)</sup> Fiscal years 2020-21 and 2021-22 are based on current projections. Fiscal years 2022-23 through 2024-25 are based on the ten-year financial forecast provided in the biennial budget for fiscal years 2020-21 and 2021-22.

<sup>(2)</sup> Planned capital expenditures of \$250 million per year were appropriated for fiscal years 2020-21 and 2021-22. Projected capital expenditures for fiscal years 2020-21 and 2021-22 in the table above reflect current projections as to the timing of expenditure of the \$500 million of appropriated funds.

In developing the CIP, projects are reviewed, scored and prioritized towards the objectives of ensuring the sustainable delivery of reliable, high-quality water, while meeting all regulatory requirements and maintaining affordability. Additional capital costs may arise in the future as a result of, among other things, federal and State water quality regulations, project changes and mitigation measures necessary to satisfy environmental and regulatory requirements, and additional facilities' needs. See "METROPOLITAN'S WATER DELIVERY SYSTEM—Water Quality and Treatment" in this Appendix A.

Construction projects included in the CIP are subject to ordinary construction risks and delays, including but not limited to: inclement weather or natural hazards affecting work and timeliness of completion; contractor claims or nonperformance; work stoppages or slowdowns; unanticipated project site conditions encountered during construction; errors or omissions in contract documents requiring change orders; and/or higher than anticipated construction bids or costs, any of which could affect the costs and availability of, or delivery schedule for, equipment, components, materials, labor or subcontractors, and result in increased CIP costs. The construction schedules for certain Metropolitan projects were initially delayed as a result of the COVID-19 outbreak and additional delays in the future are possible. See "INTRODUCTION—COVID-19 Pandemic."

### **Capital Investment Plan Financing**

The CIP requires funding from debt financing (see "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A) as well as from pay-as-you-go funding. In connection with the biennial budget process and the development of the ten-year financial forecast provided therein, an internal funding objective is established for the funding of capital program expenditures from current revenues. An internal funding objective to fund 55 to 60 percent of capital program expenditures from current revenues was established in connection with the adoption of the biennial budget for fiscal years 2020-21 and 2021-22. This objective is updated every two years as a result of the periodic review and adoption of the capital budget by Metropolitan's Board. The remainder of capital program expenditures are expected to be funded through the issuance from time to time of water revenue bonds, which are payable from Net Operating Revenues. However, as in prior years, pay-as-you-go or debt funding may be reduced or increased by the Board during the fiscal year.

Projections for fiscal years 2020-21 through 2024-25 assume the issuance of approximately \$585 million (including Metropolitan's 2021 Series A Bonds) in additional water revenue bonds over such period to finance the CIP. These revenue bonds may be issued either as Senior Revenue Bonds under the Senior Debt Resolutions or as Subordinate Revenue Bonds under the Subordinate Debt Resolutions (each as defined under "METROPOLITAN EXPENSES—Limitations on Additional Revenue Bonds" in this Appendix A). The cost of these projected bond issues is reflected in the financial projections under "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A.

### **Major Projects of Metropolitan's Capital Investment Plan**

*Colorado River Aqueduct Facilities.* As previously noted, deliveries through the CRA began in 1941. Through annual inspections and maintenance activities, the performance and reliability of the various components of the CRA are regularly evaluated. Projects under the CRA facilities program are designed to replace or refurbish facilities and components on the CRA system in order to reliably convey water from the Colorado River to Southern California. A variety of projects have been completed over the past 10 years, including, among other things, replacement of the uninterruptible power supply system at each of the five pumping plants, replacement of high voltage circuit breakers and transformers at the five pumping plant switchyards, refurbishment of operators and power centers on the head gates downstream of the pumping plants, replacement of several miles of deteriorated concrete canal liner, new wastewater systems at the Hinds and Eagle Mountain Pumping Plants, replacement of the sand trap facilities upstream of the Hinds, Eagle Mountain, and Iron Mountain pumping plants, and replacement of the outlet gates and appurtenant electrical, mechanical, and control systems at the Copper Basin Reservoir. Projects currently underway

include radial gates replacement along the CRA, rehabilitation of the Gene Wash Reservoir discharge structure, and projects to refurbish or replace electrical and mechanical system components at each of the five pumping plants, including power cables, overhead cranes, and sump systems. Additionally, many of the mechanical and electrical components, including the nine main pumps and motors at each of the five pumping plants will be evaluated and replaced or refurbished over the next several years. The current projected cost estimate for all prior and planned refurbishment or replacement projects under the CRA facilities program is \$762.8 million. Costs through October 2020 were \$349.4 million. Budgeted aggregate capital expenditures for improvements on the CRA for fiscal years 2020-21 and 2021-22 are \$107.4 million.

***Distribution System – Prestressed Concrete Cylinder Pipe.*** Metropolitan's distribution system is comprised of approximately 830 miles of pipelines ranging in diameter from 30 inches to over 200 inches. (See "METROPOLITAN'S WATER DELIVERY SYSTEM" in this Appendix A.) 163 miles of the distribution system is made up of prestressed concrete cylinder pipe ("PCCP"). In response to PCCP failures experienced by several water agencies, Metropolitan initiated the PCCP Assessment Program in December 1996 to evaluate the condition of Metropolitan's PCCP lines and investigate inspection and refurbishment methods. As a result, Metropolitan has identified and made improvements to several sections of PCCP. The costs for these improvements through February 2020 were \$99.2 million. Rather than continue to make spot repairs to pipe segments, Metropolitan has initiated a long-term capital program to rehabilitate approximately 100 miles of PCCP in five pipelines by relining with a welded steel liner. The first two major contracts to reline approximately 6.4 miles of PCCP on the Second Lower Feeder have been completed. The third major contract to reline an additional approximately 4.5 miles of PCCP on the Second Lower Feeder was awarded in May 2019 and is estimated to be completed by the end of 2020. As a change order to the same contract, an additional approximately 2,900 feet of re-lining of PCCP on the Second Lower Feeder was completed in late 2020. Subsequent contracts are planned to be awarded annually depending on shutdown scheduling. In order to meet the critical timing of the relining projects, the steel pipe lining sections for the next contract are being purchased in advance. Costs through October 2020 for all PCCP work (including the \$99.3 million of repairs costs noted above) were \$280.1 million. The estimated cost to reline all 100 miles of PCCP is approximately \$2.2 billion and is expected to be undertaken over a period of approximately 20 years. Budgeted aggregate capital expenditures for PCCP rehabilitation for fiscal years 2020-21 and 2021-22 are \$53.9 million.

***Distribution System – Refurbishments and Improvements.*** In addition to the long-term program to rehabilitate Metropolitan's PCCP lines, several other components of the distribution system including dams and reservoirs are being refurbished and/or improved. Major projects completed to date include the \$70 million replacement of the outlet facilities at Lake Mathews, the first two phases of the Orange County Feeder and Etiwanda Pipeline relining projects for a total of \$34 million, and various other facility refurbishment and replacement projects ranging in cost from approximately \$500,000 to over \$10 million. Ongoing projects to ensure the reliability of the distribution system, primarily due to age, include multiple replacements or refurbishments of isolation and control valves and gates, lining replacement of remaining portions of the Etiwanda Pipeline and Orange County Feeder, refurbishment to pressure control and hydroelectric power facilities, system improvements to provide drought relief, replacement of finished water reservoir covers and liners, upgrading dam monitoring systems, and various other upgrades totaling approximately \$450.1 million through October 2020. The current projected cost estimate for the prior and planned refurbishment or replacement projects, other than the PCCP relining, is \$1.4 billion. For fiscal years 2020-21 and 2021-22, budgeted aggregate capital expenditures for refurbishing and improvements on the distribution system, other than PCCP rehabilitation, are \$123.7 million.

***System Reliability.*** System Reliability projects are implemented at facilities throughout Metropolitan's system to utilize new processes or technologies, to improve safety, or to increase overall reliability. Significant projects in this category include seismic strengthening of Metropolitan's headquarters building, construction or improvement of operations support facilities such as the La Verne machine and fabrication shops, security system enhancements, and information technology infrastructure projects. The total estimated cost for all prior and projected system reliability improvements under this program is

approximately \$544.8 million, with \$237.8 million spent through October 2020. Budgeted aggregate capital expenditures for improvements on system reliability projects for fiscal years 2020-21 and 2021-22 are \$97.4 million.

**F.E. Weymouth Treatment Plant Improvements.** The Weymouth Treatment Plant, built in 1938, is Metropolitan's oldest water treatment facility. It has been subsequently expanded several times since its original construction. Metropolitan has completed several upgrades and refurbishment/replacement projects to maintain the plant's reliability and improve its efficiency. These include power systems upgrades, residual solids dewatering facility, refurbishment/replacement of the mechanical equipment in two of the eight flocculation and settling basins, a new plant maintenance facility, new chemical feed systems and storage tanks, replacement of the plant domestic/fire water system, seismic upgrades to the plant inlet structure and filter buildings, upgrades to the plants filters, and a new chlorine handling and containment facility. Significant projects over the next several years include refurbishment of four of the plant's settling basins and strengthening inlet channels to the basins, seismic retrofits to the administration building, and replacement of the valves used to control filter operation. The cost estimate for all prior and projected improvements at the Weymouth plant, not including the ozone facilities, is approximately \$453.8 million, with \$300.8 million spent through October 2020. Budgeted aggregate capital expenditures for improvements at the Weymouth plant for fiscal years 2020-21 and 2021-22 are \$18.7 million.

**Robert B. Diemer Treatment Plant Improvements.** The Diemer Treatment Plant, built in 1963 and subsequently expanded in 1968, is Metropolitan's second oldest water treatment facility. Several upgrades and refurbishment/replacement projects have been completed at the Diemer plant, including power system upgrades, a new residual solids dewatering facility, new vehicle and plant maintenance facilities, new chemical feed systems and storage tanks, a new chlorine handling and containment facility, construction of a roller-compacted concrete slope stabilization system, a new secondary access road, and upgrades to half of the plant's settling basins and filter valves. Significant projects over the next several years include the completion of refurbishment of the plant's settling basins and replacement of the valves used to control filter operation, and seismic retrofits to the filter buildings. The current cost estimate for all prior and projected improvements at the Diemer plant, not including the ozone facilities, is approximately \$432.1 million, with \$315.2 million spent through October 2020. Budgeted aggregate capital expenditures for improvements at the Diemer plant for fiscal years 2020-21 and 2021-22 are \$22.9 million.

## METROPOLITAN REVENUES

### General

Until water deliveries began in 1941, Metropolitan's activities were, by necessity, supported entirely through the collection of *ad valorem* property taxes. Since the mid-1980s, water revenues, which includes revenues from water sales, wheeling and exchanges, have provided approximately 80 percent of total revenues annually. In that time period, *ad valorem* property taxes have accounted for about 10 percent of total revenues, and in fiscal year 2019-20, *ad valorem* property taxes accounted for approximately 10 percent of total revenues. See "--Revenue Allocation Policy and Tax Revenues." The remaining revenues have been derived principally from the sale of hydroelectric power, interest on investments and additional revenue sources (water standby charges and availability of service charges) beginning in 1992. *Ad valorem* taxes do not constitute a part of Operating Revenues and are not available to make payments with respect to the water revenue bonds issued by Metropolitan.

The basic rate for untreated water service for domestic and municipal uses is \$777 per acre-foot at the Tier 1 level, which became effective January 1, 2021. See "--Rate Structure" and "--Water Rates." The *ad valorem* tax rate for Metropolitan purposes has gradually been reduced from a peak equivalent rate of 0.1250 percent of full assessed valuation in fiscal year 1945-46 to 0.0035 percent of full assessed valuation for fiscal year 2020-21. The rates charged by Metropolitan represent the cost of Metropolitan's wholesale



water service to its member agencies, and not the cost of water to the ultimate consumer. Metropolitan does not exercise control over the rates charged by its member agencies or their subagencies to their customers.

### Summary of Revenues by Source

The following table sets forth Metropolitan's sources of revenues for the five fiscal years ended June 30, 2020, on a modified accrual basis. All information is unaudited. Audited financial statements for the fiscal years ended June 30, 2020 and June 30, 2019 are included in APPENDIX B—"THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA INDEPENDENT AUDITORS' REPORT AND BASIC FINANCIAL STATEMENTS FOR FISCAL YEARS ENDED JUNE 30, 2020 AND JUNE 30, 2019 AND BASIC FINANCIAL STATEMENTS FOR THE THREE MONTHS ENDED SEPTEMBER 30, 2020 AND 2019 (UNAUDITED)."

#### SUMMARY OF REVENUES BY SOURCE<sup>(1)</sup> Fiscal Years Ended June 30 (Dollars in Millions)

	2016	2017	2018	2019	2020
Water Revenues <sup>(2)</sup>	\$1,166	\$1,151	\$1,285	\$1,149	\$1,188
Taxes, Net <sup>(3)</sup>	108	116	131	145	147
Additional Revenue Sources <sup>(4)</sup>	200	184	172	170	165
Interest on Investments	18	4	8	34	20
Hydroelectric Power Sales	7	21	24	18	16
Other Revenues <sup>(5)</sup>	245	51	28	22	14
Total Revenues	<u>\$1,744</u>	<u>\$1,527</u>	<u>\$1,648</u>	<u>\$1,538</u>	<u>\$1,550</u>

Source: Metropolitan.

(1) Does not include any proceeds from the sale of bonded indebtedness.

(2) Water revenues include revenues from water sales, exchanges, and wheeling.

(3) *Ad valorem* taxes levied by Metropolitan are applied solely to the payment of outstanding general obligation bonds of Metropolitan and to State Water Contract obligations.

(4) Includes revenues derived from water standby charges, readiness-to-serve, and capacity charges.

(5) Includes miscellaneous revenues and Build America Bonds (BABs) subsidy payment of \$12.3 million, \$9.8 million, \$15.0 million, \$12.5 million, and \$2.9 in fiscal years 2015-16 through 2019-20, respectively. Fiscal years 2015-16, 2016-17, and 2017-18, include \$222 million, \$33 million, and \$1 million, respectively, of water conservation and supply program expenses, funded from a like amount of funds transferred from the Water Management Fund.

### Revenue Allocation Policy and Tax Revenues

The Board determines the water revenue requirement for each fiscal year after first projecting the *ad valorem* tax levy for that year. The tax levy for any year is subject to limits imposed by the State Constitution, the Act and Board policy and to the requirement under the State Water Contract that in the event that Metropolitan fails or is unable to raise sufficient funds by other means, Metropolitan must levy upon all property within its boundaries not exempt from taxation a tax or assessment sufficient to provide for all payments under the State Water Contract. See "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A. Beginning with fiscal year 1990-91, the Act limits Metropolitan's tax levy to the amount needed to pay debt service on Metropolitan's general obligation bonds and to satisfy a portion of Metropolitan's State Water Contract obligation. However, Metropolitan has authority to impose a greater tax levy if, following a public hearing, the Board finds that such revenue is essential to Metropolitan's fiscal integrity. For each fiscal year since 2013-14, the Board has exercised that authority and voted to suspend the tax limit clause in the Act, maintaining the fiscal year 2012-13 *ad valorem* tax rate to pay for a greater portion of Metropolitan's State Water Contract obligations. Any deficiency between tax levy receipts and Metropolitan's State Water Contract obligations is expected to be paid from Operating Revenues, as defined

in the Senior Debt Resolutions (defined in this Appendix A under “METROPOLITAN EXPENSES—Limitations on Additional Revenue Bonds”).

The COVID-19 pandemic has negatively affected economic activity throughout the U.S., including within the Southern California region. These negative impacts may reduce or otherwise negatively affect future property tax values within Metropolitan’s service area and/or Metropolitan’s tax levy receipts. The assumptions underlying Metropolitan’s financial projections for fiscal years 2020-21 through 2024-25 include modest annual increases in assessed valuation over the five-year projection period that are significantly below the average annual assessed valuation increases actually observed, and property tax delinquency rates that are significantly in excess of the property tax delinquency rate actually experienced, over the five fiscal years 2014-15 through 2018-19, which is expected to help abate the financial effects of such COVID-19 impacts if they occur. See “INTRODUCTION—COVID-19 Pandemic.”

### **Water Revenues**

**General; Authority.** Water rates are established by the Board and are not subject to regulation or approval by the California Public Utilities Commission or by any other local, State or federal agency. In accordance with the Act, water rates must be uniform for like classes of service. Metropolitan, a wholesaler, provides two types of services: full-service water service (treated or untreated) and wheeling service. See “—Classes of Water Service.”

No member agency of Metropolitan is obligated to purchase water from Metropolitan. However, 21 of Metropolitan’s 26-member agencies have entered into 10-year voluntary water supply purchase orders (“Purchase Orders”) effective through December 31, 2024. See “—Member Agency Purchase Orders.” Consumer demand and locally supplied water vary from year to year, resulting in variability in water revenues. See “REGIONAL WATER RESOURCES” in this Appendix A. Metropolitan uses its financial reserves and budgetary tools to manage the financial impact of the variability in revenues due to fluctuations in annual water transactions. See “MANAGEMENT’S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES” in this Appendix A.

**Payment Procedure.** Water is delivered to the member agencies on demand and is metered at the point of delivery. Member agencies are billed monthly and a late charge of one percent of the delinquent payment is assessed for a payment that is delinquent for no more than five business days. A late charge of two percent of the amount of the delinquent payment is charged for a payment that is delinquent for more than five business days for each month or portion of a month that the payment remains delinquent. Metropolitan has the authority to suspend service to any member agency delinquent for more than 30 days. Delinquencies have been rare; in such instances late charges have been collected. No service has been suspended because of delinquencies.

**Water Revenues.** The following table sets forth water transactions (which includes water sales, exchanges, and wheeling) in acre-feet and water revenues (which includes revenues from water sales, exchanges, and wheeling) for the five fiscal years ended June 30, 2020, on a modified accrual basis. As reflected in the table below, water revenues for the fiscal year ended June 30, 2020 aggregated \$1,188.0 million, of which \$1,047.9 million was generated from water sales and \$140.1 million was generated from exchanges and wheeling. Water revenues of Metropolitan for the fiscal years ended June 30, 2020 and June 30, 2019, on an accrual basis, are shown in Metropolitan’s audited financial statements included in Appendix B.

**SUMMARY OF WATER TRANSACTIONS AND REVENUES**  
**Fiscal Years Ended June 30**

Year	Water Transactions in Acre-Feet <sup>(1)</sup>	Water Revenues <sup>(2)</sup> (in millions)	Dollars Per Acre-Foot	Average Dollars Per 1,000 Gallons
2016	1,623,052	\$1,166.0	\$718	\$2.20
2017	1,540,915	1,150.5	747	2.29
2018	1,610,969	1,285.2	798	2.45
2019	1,418,324	1,148.7	810	2.49
2020	1,419,156	1,188.0	837	2.57

Source: Metropolitan.

<sup>(1)</sup> Water Transactions include water sales, exchanges, and wheeling with member agencies and third parties.

<sup>(2)</sup> Water Revenues include revenues from water sales, exchanges, and wheeling. Water Revenues from wheeling and exchange transactions were \$84.3 million, \$87.4 million, \$96.1 million, \$102.2 million and \$140.1 million in the fiscal years ended June 30, 2016 through 2020, respectively.

**Principal Customers**

Total water transactions accrued for the fiscal year ended June 30, 2020, were 1.42 million acre-feet, generating \$1.19 billion in water revenues for such period. Metropolitan's ten largest water customers for the year ended June 30, 2020 are shown in the following table, on an accrual basis. The SDCWA has filed litigation challenging Metropolitan's rates. See "--Litigation Challenging Rate Structure."

**TEN LARGEST WATER CUSTOMERS**  
**Year Ended June 30, 2020**  
**Accrual Basis**

Agency	Water Revenues <sup>(1)</sup> (in Millions)	Percent of Total	Water Transactions in Acre-Feet <sup>(2)</sup>	Percent of Total
San Diego CWA	\$ 187.3	15.8%	324,660	22.9%
MWD of Orange County	152.6	12.8	157,346	11.1
City of Los Angeles	129.0	10.9	148,022	10.4
West Basin MWD	119.7	10.1	112,636	7.9
Calleguas MWD	99.6	8.4	93,802	6.6
Eastern MWD	93.9	7.9	105,215	7.4
Three Valleys MWD	65.4	5.5	73,239	5.2
Western MWD of Riverside County	59.8	5.0	64,811	4.6
Inland Empire Utilities Agency	47.0	4.0	64,538	4.5
City of Long Beach	30.2	2.5	28,332	2.0
<b>Total</b>	<b>\$ 984.5</b>	<b>82.9%</b>	<b>1,172,602</b>	<b>82.6%</b>
<b>Total Water Revenues<sup>(1)</sup></b>	<b>\$1,188.0</b>	<b>Total Acre-Fcet<sup>(2)</sup></b>	<b>1,419,156</b>	

Source: Metropolitan.

<sup>(1)</sup> Water Revenues include revenues from water sales, exchanges, and wheeling.

<sup>(2)</sup> Water Transactions include water sales, exchanges, and wheeling with member agencies and third parties.

**Rate Structure**

The following rates and charges are elements of Metropolitan's unbundled rate structure:

**Tier 1 and Tier 2 Water Supply Rates.** The rate structure recovers supply costs through a two-tiered price structure. The Tier 1 Supply Rate supports a regional approach through the uniform, postage stamp

rate. The Tier 1 Supply Rate is calculated as the amount of the total supply revenue requirement that is not covered by the Tier 2 Supply Rate divided by the estimated amount of Tier 1 water sales. The Tier 2 Supply Rate is a volumetric rate that reflects Metropolitan's cost of purchasing water transfers north of the Delta. The Tier 2 Supply Rate encourages the member agencies and their customers to maintain existing local supplies and develop cost-effective local supply resources and conservation. Member agencies are charged the Tier 1 or Tier 2 Water Supply Rate for water purchases, as described under "Member Agency Purchase Orders" below.

**System Access Rate.** The System Access Rate recovers the cost of the conveyance and distribution system that is used on an average annual basis through a uniform, volumetric rate. The System Access Rate is charged for each acre-foot of water transported by Metropolitan, regardless of the ownership of the water being transported. All users (including member agencies and third-party wheelers) using Metropolitan's water system to transport water pay the same System Access Rate for the use of the system conveyance and distribution capacity to meet average annual demands.

**Water Stewardship Rate.** The Water Stewardship Rate was designed to provide a dedicated source of funding for conservation and local resources development through a uniform, volumetric rate. The Water Stewardship Rate was charged on each acre-foot of water delivered by Metropolitan through December 31, 2020, except SDCWA Exchange Agreement deliveries as explained below, and is allocated to Metropolitan's transportation rates. All users (including member agencies and third-party wheelers) benefit from avoided system infrastructure costs through conservation and local resources development, and from the system capacity made available by investments in demand management programs like Metropolitan's Conservation Credits Program and Local Resources Program. Therefore, all users paid the Water Stewardship Rate, except on water delivered to SDCWA pursuant to the Exchange Agreement (see "METROPOLITAN REVENUES—Water Rates" and "Litigation Challenging Rate Structure" in this Appendix A) in calendar years 2018, 2019, and 2020. The Water Stewardship Rate was not incorporated into Metropolitan's rates and charges for calendar years 2021 and 2022 and therefore has not been collected on water transactions after December 31, 2020. See also "CONSERVATION AND WATER SHORTAGE MEASURES—General."

In *San Diego County Water Authority v. Metropolitan Water District of Southern California, et al.* (see "Litigation Challenging Rate Structure" below), the Court of Appeal held that the administrative record before it for the rates in calendar years 2011 through 2014 did not support Metropolitan's Water Stewardship Rate allocation to transportation rates, but the court did not address the allocation in subsequent years based on a different record. On April 10, 2018, the Board suspended the billing and collection of the Water Stewardship Rate on Exchange Agreement deliveries to SDCWA in calendar years 2018, 2019, and 2020, pending Metropolitan's completion of a cost allocation study of its demand management costs recovered through the Water Stewardship Rate. For calendar year 2018, the suspension was retroactive to January 1, 2018. The total effect of the suspension, taking into consideration the lower revenues over the three calendar years, is estimated to be up to approximately \$46 million.

Having completed a demand management cost allocation process, on December 10, 2019, Metropolitan's Board directed staff to incorporate the use of the 2019-20 fiscal year-end balance of the Water Stewardship Fund to fund demand management costs in the proposed biennial budget for fiscal years 2020-21 and 2021-22 and to not incorporate the Water Stewardship Rate (or any other rates or charges to recover demand management costs), with the proposed rates and charges for calendar years 2021 and 2022, to allow the Board to consider demand management funding in relation to the 2020 Integrated Resources Plan update and to undergo a rate structure refinement process. The balance of the Water Stewardship Fund as of June 30, 2020 was \$133 million, which based on the biennial budget for fiscal years 2020-21 and 2021-22, is expected to be sufficient to fund the demand management costs during the biennial budget period.

**System Power Rate.** The System Power Rate recovers the cost of energy required to pump water to Southern California through the State Water Project and CRA. The cost of power is recovered through a

uniform, volumetric rate. The System Power Rate is applied to all deliveries of Metropolitan water to member agencies. Wheeling parties pay for actual cost (not system average) of power needed to move the water. Member agencies engaging in wheeling transactions of up to one year pay the wheeling rate (consisting of the actual cost of power, the System Access Rate, the Water Stewardship Rate, and an administrative fee). Other wheeling transactions are pursuant to individual contracts. For example, a party wheeling water through the California Aqueduct would pay the variable power cost associated with using the State Water Project transportation facilities.

**Treatment Surcharge.** The Treatment Surcharge recovers all of the costs of providing treatment capacity and operations through a uniform, volumetric rate per acre-foot of treated water transactions. The Treatment Surcharge is charged to all treated water transactions.

The amount of each of these rates since January 1, 2016, is shown in the table entitled "SUMMARY OF WATER RATES" under "-Water Rates" below.

### **Member Agency Purchase Orders**

The current rate structure allows member agencies to choose to purchase water from Metropolitan by means of a Purchase Order. Purchase Orders are voluntary agreements that determine the amount of water that a member agency can purchase at the Tier 1 Supply Rate. Under the Purchase Orders, member agencies have the option to purchase a greater amount of water (based on past purchase levels) over the term of the Purchase Order. Such agreements allow member agencies to manage costs and provide Metropolitan with a measure of secure revenue.

In November 2014, the Metropolitan Board approved new Purchase Orders effective January 1, 2015 through December 31, 2024 (the "Purchase Order Term"). Twenty-one of Metropolitan's 26-member agencies have Purchase Orders, which commit the member agencies to purchase a minimum amount of supply from Metropolitan (the "Purchase Order Commitment").

The key terms of the Purchase Orders include:

- A ten-year term, effective January 1, 2015 through December 31, 2024;
- A higher Tier 1 limit based on the Base Period Demand, determined by the member agency's choice between (1) the Revised Base Firm Demand, which is the highest fiscal year purchases during the 13-year period of fiscal year 1989-90 through fiscal year 2001-02, or (2) the highest year purchases in the most recent 12-year period of fiscal year 2002-03 through 2013-14. The demand base is unique for each member agency, reflecting the use of Metropolitan's system water over time;
- An overall purchase commitment by the member agency based on the Demand Base period chosen, times ten to reflect the ten-year Purchase Order term. Those agencies choosing the more recent 12-year period may have a higher Tier 1 Maximum and commitment. The commitment is also unique for each member agency;
- The opportunity to reset the Base Period Demand using a five-year rolling average;
- Any obligation to pay the Tier 2 Supply Rate will be calculated over the ten-year period, consistent with the calculation of any Purchase Order commitment obligation; and
- An appeals process for agencies with unmet purchase commitments that will allow each acre-foot of unmet commitment to be reduced by the amount of production from a local resource project that commences operation on or after January 1, 2014.

Member agencies that do not have Purchase Orders in effect are subject to Tier 2 Supply Rates for amounts exceeding 60 percent of their base amount (equal to the member agency's highest fiscal year demand between 1989-90 and 2001-02) annually.

### **Other Charges**

The following paragraphs describe the additional charges for the use of Metropolitan's distribution system:

***Readiness-to-Serve Charge.*** The Readiness-to-Serve Charge ("RTS") recovers the cost of the portion of the system that is available to provide emergency service and available capacity during outages and hydrologic variability. The RTS is a fixed charge that is allocated among the member agencies based on a ten-fiscal year rolling average of firm demands. Water transfers and exchanges, except SDCWA Exchange Agreement transactions, are included for purposes of calculating the ten-fiscal year rolling average. The Standby Charge, described below, will continue to be collected at the request of a member agency and applied as a direct offset to the member agency's RTS obligation. The RTS (including RTS charge amounts collected through the Standby Charge described below) generated \$137.5 million in fiscal year 2017-18, \$136.5 million in fiscal year 2018-19, and \$134.5 million in fiscal year 2019-20. Based on the adopted rates and charges, the RTS (including RTS charge amounts expected to be collected through the Standby Charge described below) is projected to generate \$133.0 million in fiscal year 2020-21 and \$135.0 million in fiscal year 2021-22.

***Water Standby Charges.*** The Standby Charge is authorized by the State Legislature and has been levied by Metropolitan since fiscal year 1992-93. Metropolitan will continue to levy the Standby Charge only within the service areas of the member agencies that request that the Standby Charge be utilized to help fund a member agency's RTS obligation. See "-- Readiness-to-Serve Charge" above. The Standby Charge for each acre or parcel of less than an acre will vary from member agency to member agency, reflecting current rates, which have not exceeded the rates set in fiscal year 1993-94, and range from \$5 to \$15 for each acre or parcel less than an acre within Metropolitan's service area, subject to specified exempt categories. Standby charges are assessments under the terms of Proposition 218, a State constitutional ballot initiative approved by the voters on November 5, 1996, but Metropolitan's current standby charges are exempt from Proposition 218's procedural requirements. See "--California Ballot Initiatives."

Twenty-two of Metropolitan's member agencies collect their RTS charges through Standby Charges. RTS charges collected by means of such Standby Charges were \$41.6 million in fiscal year 2017-18, \$41.7 million in fiscal year 2018-19, and \$41.7 million in fiscal year 2019-20.

***Capacity Charge.*** The Capacity Charge recovers costs incurred to provide peak capacity within Metropolitan's distribution system. The Capacity Charge provides a price signal to encourage agencies to reduce peak demands on the distribution system and to shift demands that occur during the May 1 through September 30 period into the October 1 through April 30 period. This results in more efficient utilization of Metropolitan's existing infrastructure and deferring capacity expansion costs. Each member agency will pay the Capacity Charge per cfs based on a three-year trailing peak (maximum) day demand, measured in cfs. Each member agency's peak day is likely to occur on different days; therefore, this measure approximates peak week demands on Metropolitan. The Capacity Charge was \$8,800 per cfs effective as of January 1, 2020 and was \$10,700 per cfs effective as of January 1, 2021. The Capacity Charge will be \$12,200 per cfs effective as of January 1, 2022. The Capacity Charge generated \$34.6 million in fiscal year 2017-18, \$33.0 million in fiscal year 2018-19, and \$30.5 million in fiscal year 2019-20. Based on the adopted rates and charges, the Capacity Charge is projected to generate \$32.3 million in fiscal year 2020-21 and \$40.5 million in fiscal year 2021-22.

**Classes of Water Service**

Metropolitan, a wholesaler, provides two types of services: full-service water service (treated or untreated) and wheeling service. Metropolitan has one class of customers: its member agencies. The level of rate unbundling in Metropolitan’s rate structure provides transparency to show that rates and charges recover only those functions involved in the applicable service, and that no cross-subsidy of costs exists. Metropolitan’s cost of service process and resulting unbundled rate structure ensures that its wholesale customers pay for only those services they elect to receive.

The applicable rate components and fixed charges for each class of water service are shown in the chart below.

**Current Services and Rate Components**

Service	Rates & Charges That Apply						
	System Access	Water Stewardship <sup>(1)</sup>	System Power	Tier 1/ Tier 2	Readiness to Serve	Capacity Charge	Treatment Surcharge
Full Service Untreated	Yes	No	Yes	Yes	Yes	Yes	No
Full Service Treated	Yes	No	Yes	Yes	Yes	Yes	Yes
Wheeling Service <sup>(2)</sup>	Yes	No	No <sup>(3)</sup>	No	Yes	Yes	Yes <sup>(4)</sup>

<sup>(1)</sup> As described under “–Rate Structure –Water Stewardship Rate,” the Water Stewardship Rate has not been incorporated into Metropolitan’s rates and charges for calendar years 2021 and 2022 and therefore has not been collected on water transactions after December 31, 2020.

<sup>(2)</sup> Metropolitan’s rate for wheeling service applies to wheeling to member agencies in transactions of up to one year.

<sup>(3)</sup> Under Metropolitan’s rate for wheeling service, wheeling parties must pay for their own cost for power (if such power can be scheduled by Metropolitan) or pay Metropolitan for the actual cost (not system average) of power service utilized for delivery of the wheeled water. In addition, wheeling parties shall be assessed an administration fee of not less than \$5,000 per transaction.

<sup>(4)</sup> If applicable.

Metropolitan offers three programs that encourage the member agencies to increase groundwater and emergency storage and for which certain Metropolitan charges are inapplicable.

*(1) Conjunctive Use Program.* The Conjunctive Use Program is operated through individual agreements with member and retail agencies for groundwater storage within Metropolitan’s service area. Wet-year imported supplies are stored to enhance reliability during dry, drought, and emergency conditions. Metropolitan has the option to call water stored in the groundwater basins for the participating member agency pursuant to its contractual conjunctive use agreement. At the time of the call, the member agency pays the prevailing rate for that water, but the deliveries are excluded from the calculation of the Capacity Charge because Conjunctive Use Program deliveries are made at Metropolitan’s discretion. Conjunctive use programs may also contain cost-sharing terms related to operational costs. See “REGIONAL WATER RESOURCES–Local Water Supplies” in this Appendix A.

*(2) Cyclic Storage Program.* The Cyclic Storage Program refers collectively to the existing Cyclic Storage Program agreements and the Pre-Deliveries Program approved in 2019. The Program is operated through individual agreements with member agencies for groundwater or surface water storage or pre-deliveries within Metropolitan’s service area. Wet-year imported supplies are stored to enhance reliability during dry, drought, and emergency conditions. Deliveries to the cyclic storage accounts are at Metropolitan’s discretion while member agencies have discretion on whether they want to accept the water. At the time the water is delivered from the cyclic storage account, the prevailing full-service rate applies, but deliveries are excluded from the calculation of the Capacity Charge because Cyclic Storage Program deliveries are made at Metropolitan’s discretion. Cyclic agreements may also contain a credit payable to the member agencies under terms approved by the Board in April 2019. See “REGIONAL WATER RESOURCES–Local Water Supplies” in this Appendix A.



(3) *Emergency Storage Program.* The Emergency Storage Program is used for delivering water for emergency storage in surface water reservoirs and storage tanks. Emergency Storage Program purposes include initially filling a newly constructed reservoir or storage tank and replacing water used during an emergency. Because Metropolitan could interrupt delivery of this water, Emergency Storage Program Deliveries are excluded from the calculation of the RTS Charge, the Capacity Charge, and the Tier 1 maximum.

The applicable rate components and fixed charges applicable for each such program are shown in the following chart.

**Current Programs and Rate Components**

Program	Supply	System Access	Rates & Charges That Apply					Tier 1 Maximum
			Water Stewardship <sup>(1)</sup>	System Power	Readiness to Serve	Capacity Charge		
Full Service	Yes	Yes	No	Yes	Yes	Yes	Yes	
Conjunctive Use	Yes	Yes	No	Yes	Yes	No	Yes	
Cyclic	Yes	Yes	No	Yes	Yes	No	Yes	
Emergency Storage	Yes	Yes	No	Yes	No	No	No <sup>(2)</sup>	

<sup>(1)</sup> As described under “Rate Structure –Water Stewardship Rate,” the Water Stewardship Rate has not been incorporated into Metropolitan’s rates and charges for calendar years 2021 and 2022 and therefore has not been collected on water transactions after December 31, 2020.

<sup>(2)</sup> Emergency Storage Program pays the Tier 1 Supply Rate; purchases under Emergency Storage program do not count towards a member agency’s Tier 1 Maximum.

**Water Rates**

The following table sets forth Metropolitan’s water rates by category beginning January 1, 2016. See also “MANAGEMENT’S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES–Water Revenues” in this Appendix A. In addition to the base rates for untreated water sold in the different classes of service, the columns labeled “Treated” include the surcharge that Metropolitan charges for water treated at its water treatment plants. See “Rate Structure” and “Classes of Water Service” for descriptions of current rates. See also “Litigation Challenging Rate Structure” for a description of litigation challenging Metropolitan’s water rates.

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**SUMMARY OF WATER RATES  
(Dollars Per Acre-Foot)**

	SUPPLY RATE		SYSTEM ACCESS RATE	WATER STEWARDSHIP RATE <sup>(1)</sup>	SYSTEM POWER RATE	TREATMENT SURCHARGE
	Tier 1	Tier 2				
January 1, 2016	\$156	\$290	\$259	\$41	\$138	\$348
January 1, 2017	\$201	\$295	\$289	\$52	\$124	\$313
January 1, 2018	\$209	\$295	\$299	\$55	\$132	\$320
January 1, 2019	\$209	\$295	\$326	\$69	\$127	\$319
January 1, 2020	\$208	\$295	\$346	\$65	\$136	\$323
January 1, 2021*	\$243	\$285	\$373	\$--	\$161	\$327
January 1, 2022*	\$243	\$285	\$389	\$--	\$167	\$344

	FULL SERVICE TREATED <sup>(2)</sup>		FULL SERVICE UNTREATED <sup>(3)</sup>	
	Tier 1	Tier 2	Tier 1	Tier 2
January 1, 2016	\$942	\$1,076	\$594	\$728
January 1, 2017	\$979	\$1,073	\$666	\$760
January 1, 2018	\$1,015	\$1,101	\$695	\$781
January 1, 2019	\$1,050	\$1,136	\$731	\$817
January 1, 2020	\$1,078	\$1,165	\$755	\$842
January 1, 2021*	\$1,104	\$1,146	\$777	\$819
January 1, 2022*	\$1,143	\$1,185	\$799	\$841

Source: Metropolitan.

\* Rates effective January 1, 2021 and January 1, 2022 were adopted by Metropolitan's Board on April 14, 2020.

(1) As described under "Rate Structure -Water Stewardship Rate," the Water Stewardship Rate has not been incorporated into Metropolitan's rates and charges for calendar years 2021 and 2022 and therefore has not been collected on water transactions after December 31, 2020.

(2) Full service treated water rates are the sum of the applicable Supply Rate, System Access Rate, Water Stewardship Rate, System Power Rate and Treatment Surcharge.

(3) Full service untreated water rates are the sum of the applicable Supply Rate, System Access Rate, Water Stewardship Rate and System Power Rate.

**Financial Reserve Policy**

Metropolitan's reserve policy provides for a minimum reserve requirement and target amount of unrestricted reserves at June 30 of each year. The minimum reserve requirement at June 30 of each year is equal to the portion of fixed costs estimated to be recovered by water revenues for the 18 months beginning with the immediately succeeding July. Funds representing the minimum reserve requirement are held in the Revenue Remainder Fund. Any funds in excess of the minimum reserve requirement are held in the Water Rate Stabilization Fund. The target amount of unrestricted reserves is equal to the portion of the fixed costs estimated to be recovered by water revenues during the two years immediately following the 18-month period used to calculate the minimum reserve requirement. Funds in excess of the target amount are to be utilized for capital expenditures in lieu of the issuance of additional debt, or for the redemption, defeasance or purchase of outstanding bonds or commercial paper as determined by the Board. Provided that the fixed charge coverage ratio is at or above 1.2, amounts in the Water Rate Stabilization Fund may be expended for

any lawful purpose of Metropolitan, as determined by the Board. See “CAPITAL INVESTMENT PLAN–Capital Investment Plan Financing” in this Appendix A.

At June 30, 2020, unrestricted reserves, which consist of the Water Rate Stabilization Fund and the Revenue Remainder Fund, totaled \$448 million on a modified accrual basis. As of June 30, 2020, the minimum reserve requirement was \$269.5 million, and the target reserve level was \$654.4 million.

Due to SDCWA’s litigation challenging Metropolitan’s rates and pursuant to the Exchange Agreement between Metropolitan and SDCWA, Metropolitan is required to set aside funds based on the quantities of exchange water that Metropolitan provides to SDCWA and the amount of charges disputed by SDCWA. In April 2016, Metropolitan transferred these funds from unrestricted financial reserves to a new designated fund, the Exchange Agreement Set-Aside Fund. As of November 30, 2020, Metropolitan held \$57.90 million in the Exchange Agreement Set-Aside Fund. This amount contains the disputed Water Stewardship Rate payments and interest earned thereon based on the rate earned by Metropolitan’s investment portfolio. The amounts held do not include the statutory prejudgment interest, post-judgment interest, attorneys’ fees, or costs awards, none of which the Exchange Agreement requires to be held. Amounts held pursuant to the Exchange Agreement will continue to accumulate based on the quantities of exchange water that Metropolitan provides to SDCWA and the payments disputed by SDCWA, until the litigation, including all appeals, is concluded. See “METROPOLITAN’S WATER SUPPLY–Colorado River Aqueduct –Metropolitan and San Diego County Water Authority Exchange Agreement” in this Appendix A. See also “–Litigation Challenging Rate Structure” below.

Metropolitan projects that its unrestricted reserves as of June 30, 2021 will be approximately \$429 million. This amount does not include funds held in the Exchange Agreement Set-Aside Fund. This projection is based on the assumptions set forth in the table entitled “HISTORICAL AND PROJECTED REVENUES AND EXPENSES” under “HISTORICAL AND PROJECTED REVENUES AND EXPENSES” in this Appendix A. In addition, this projection is based on the assumption that Metropolitan’s Board will not authorize the use of any additional amounts in the unrestricted reserves.

### **California Ballot Initiatives**

Proposition 218, a State ballot initiative known as the “Right to Vote on Taxes Act,” was approved by the voters on November 5, 1996 adding Articles XIIC and XIID to the California Constitution. Article XIID provides substantive and procedural requirements on the imposition, extension or increase of any “fee” or “charge” levied by a local government upon a parcel of real property or upon a person as an incident of property ownership. As a wholesaler, Metropolitan serves water to its member agencies, not to persons or properties as an incident of property ownership. Thus, water rates charged by Metropolitan to its member agencies are not property related fees and charges and therefore are exempt from the requirements of Article XIID. Fees for retail water service by Metropolitan’s member agencies or their agencies are subject to the requirements of Article XIID.

Article XIID also imposes certain procedures with respect to assessments. Under Article XIID, “standby charges” are considered “assessments” and must follow the procedures required for “assessments,” unless they were in existence on the effective date of Article XIID. Metropolitan has imposed its water standby charges since 1992 and therefore its current standby charges are exempt from the Article XIID procedures. Changes to Metropolitan’s current standby charges could require notice to property owners and approval by a majority of such owners returning mail-in ballots approving or rejecting any imposition or increase of such standby charge. Twenty-two of Metropolitan’s member agencies have elected to collect all or a portion of their readiness-to-serve charges through standby charges. See “–Other Charges – Readiness-to-Serve Charge” and “– Water Standby Charges” above. Even if Article XIID is construed to limit the ability of Metropolitan and its member agencies to impose or collect standby charges, the member agencies will continue to be obligated to pay the readiness-to-serve charges.

Article XIIC makes all taxes either general or special taxes and imposes voting requirements for each kind of tax. It also extends the people's initiative power to reduce or repeal previously authorized local taxes, assessments, fees and charges. This extension of the initiative power is not limited by the terms of Article XIIC to fees imposed after November 6, 1996 or to property-related fees and charges and absent other authority could result in retroactive reduction in existing taxes, assessments or fees and charges.

Proposition 26, a State ballot initiative aimed at restricting regulatory fees and charges, was approved by the California voters on November 2, 2010. Proposition 26 broadens the definition of "tax" in Article XIIC of the California Constitution to include: levies, charges and exactions imposed by local governments, except for charges imposed for benefits or privileges or for services or products granted to the payor (and not provided to those not charged) that do not exceed their reasonable cost; regulatory fees that do not exceed the cost of regulation and are allocated in a fair or reasonable manner; fees for the use of local governmental property; fines and penalties imposed for violations of law; real property development fees; and assessments and property-related fees imposed under Article XIID of the California Constitution. Special taxes imposed by local governments including special districts are subject to approval by two-thirds of the electorate. Proposition 26 applies to charges imposed or increased by local governments after the date of its approval. Metropolitan believes its water rates and charges are not taxes under Proposition 26. SDCWA's lawsuit challenging the rates adopted by Metropolitan in April 2012 (part of which became effective January 1, 2013 and part of which became effective January 1, 2014) alleged that such rates violate Proposition 26. On June 21, 2017, the California Court of Appeal ruled that whether or not Proposition 26 applies to Metropolitan's rates, the System Access Rate and System Power Rate challenged by SDCWA in such lawsuit comply with Proposition 26. See "--Litigation Challenging Rate Structure."

Propositions 218 and 26 were adopted as measures that qualified for the ballot pursuant to the State's initiative process. Other initiative measures have been proposed from time to time, including presently, or could be proposed in the future, which if qualified for the ballot, could be adopted, or legislative measures could be approved by the Legislature, which may place limitations on the ability of Metropolitan or its member agencies to increase revenues or to increase appropriations. Such measures may further affect Metropolitan's ability to collect taxes, assessments or fees and charges, which could have an effect on Metropolitan's revenues.

### **Preferential Rights**

Section 135 of the Act gives each of Metropolitan's member agencies a preferential right to purchase for domestic and municipal uses within the agency a portion of the water served by Metropolitan, based upon a ratio of all payments on tax assessments and otherwise, except purchases of water, made to Metropolitan by the member agency compared to total payments made by all member agencies on tax assessments and otherwise since Metropolitan was formed, except purchases of water. Historically, these rights have not been used in allocating Metropolitan's water. In 2004, the California Court of Appeal upheld Metropolitan's methodology for calculation of the respective member agencies' preferential rights under Section 135 of the Act. SDCWA's litigation challenging Metropolitan's rate structure also challenged Metropolitan's exclusion of payments for Exchange Agreement deliveries from the calculation of SDCWA's preferential right. On June 21, 2017, the California Court of Appeal held that SDCWA's payments under the Exchange Agreement must be included in the preferential rights calculation. See "--Litigation Challenging Rate Structure."

### **Litigation Challenging Rate Structure**

SDCWA filed *San Diego County Water Authority v. Metropolitan Water District of Southern California, et al.* on June 11, 2010. The complaint alleges that the rates adopted by the Board on April 13, 2010, which became effective January 1, 2011 and January 1, 2012, misallocate certain State Water Contract costs to the System Access Rate and the System Power Rate, and thus affect charges for transportation of water, resulting in an overcharge to SDCWA by at least \$24.5 million per year. The complaint alleges that all State Water Project costs should be allocated instead to Metropolitan's Supply Rate, even though under the

State Water Contract Metropolitan is billed separately for transportation, power and supply costs. It states additionally that Metropolitan will overcharge SDCWA by another \$5.4 million per year by including the Water Stewardship Rate in transportation charges.

The complaint requested a court order invalidating the rates adopted April 13, 2010, and that Metropolitan be mandated to allocate costs associated with the State Water Contract and the Water Stewardship Rate to water supply rates and not to transportation rates. Rates in effect in prior years are not challenged in this lawsuit.

SDCWA filed its First Amended Petition for Writ of Mandate and Complaint on October 27, 2011, adding five new claims to this litigation, two of which were eliminated from the case on January 4, 2012. The three remaining new claims were for breach of the water Exchange Agreement between Metropolitan and SDCWA (described herein under “METROPOLITAN’S WATER SUPPLY–Colorado River Aqueduct – Metropolitan and San Diego County Water Authority Exchange Agreement”) due to a price based on allegedly illegal rates; improper exclusion of SDCWA’s payments under such Exchange Agreement from calculation of SDCWA’s preferential rights to purchase Metropolitan supplies (see “–Preferential Rights” above); and illegality of the rate structure integrity provision in conservation and local resources incentive agreements between Metropolitan and SDCWA. The rate structure integrity provision permitted the Board to terminate incentives payable under conservation and local resources incentive agreements between Metropolitan and a member agency due to certain actions by the member agency to challenge the rates that are the source of incentive payments. In June 2011, Metropolitan’s Board authorized termination of two incentive agreements with SDCWA under the rate structure integrity provision in such agreements after SDCWA filed its initial complaint challenging Metropolitan’s rates. SDCWA filed a Second Amended Petition for Writ of Mandate and Complaint on April 17, 2012, which contained additional allegations but no new causes of action.

On June 8, 2012, SDCWA filed a new lawsuit challenging the rates adopted by Metropolitan on April 10, 2012 and effective on January 1, 2013 and January 1, 2014. The complaint contained allegations similar to those in the Second Amended Petition for Writ of Mandate and Complaint and new allegations asserting that Metropolitan’s rates, adopted in April 2012, violate Proposition 26. See “–California Ballot Initiatives” for a description of Proposition 26.

SDCWA filed a Third Amended Petition for Writ of Mandate and Complaint on January 23, 2013, to add new allegations that Metropolitan’s rates adopted in April 2010 did not meet the requirements of Proposition 26. The court granted Metropolitan’s motion to strike allegations relating to Proposition 26 on March 29, 2013, expressly ruling that SDCWA may not allege a violation of Proposition 26 in its challenge to the rates adopted in April 2010. This ruling did not affect SDCWA’s separate challenge to Metropolitan’s rates adopted in April 2012, which also includes Proposition 26 allegations.

Following trial of both lawsuits in two phases, concluding on January 23, 2014 and April 30, 2015, respectively, the Superior Court of the State of California, County of San Francisco (the “Superior Court”), issued its Final Judgment and a Peremptory Writ of Mandate in the 2010 and 2012 SDCWA v. Metropolitan cases. Metropolitan appealed the trial court’s decision in each case, and SDCWA filed a cross-appeal of the court’s ruling on the rate structure integrity claim and an attorneys’ fees order.

On June 21, 2017, the California Court of Appeal released its decision in the appeals and cross-appeal filed by Metropolitan and SDCWA, respectively. The Court of Appeal ruled that Metropolitan may lawfully include its State Water Project transportation costs in the System Access Rate and System Power Rate that are part of the Exchange Agreement’s price term, and that Metropolitan may also lawfully include the System Access Rate in its wheeling rate, reversing the trial court decision on this issue. The Court held Metropolitan’s allocation of the State Water Project transportation costs as its own transportation costs is proper and does not violate the wheeling statutes (Water Code, § 1810, *et seq.*), Proposition 26 (Cal. Const.,

Article XIII C, §1, subd.(e)), whether or not that Proposition applies to Metropolitan's rates, California Government Code section 54999.7, the common law, or the terms of the parties' Exchange Agreement.

The Court of Appeal also ruled that the administrative record before it for the rates in calendar years 2011 through 2014 did not support Metropolitan's inclusion of its Water Stewardship Rate as a transportation cost in the Exchange Agreement price or the wheeling rate, under the common law and wheeling statutes. Having made that determination, the Court of Appeal stated it need not evaluate the issue under any other law. The court did not address the allocation of the Water Stewardship Rate in subsequent years based on a different record. The court noted, and in a subsequent modification confirmed, that its holding does not preclude Metropolitan from including the Water Stewardship Rate in Metropolitan's full-service rate.

The Court of Appeal held that because the Water Stewardship Rate was included in the Exchange Agreement price, there was a breach by Metropolitan of the Exchange Agreement in 2011 through 2014. The court remanded the case to the trial court for a redetermination of damages in light of its ruling concerning the Water Stewardship Rate. The Court of Appeal agreed with the trial court that statutory prejudgment interest applies with respect to any damages award, not a lesser contractual interest. The Court of Appeal reversed the trial court by finding that the Exchange Agreement may entitle SDCWA to attorneys' fees for the second phase of the case concerning breach of contract; but directed the trial court on remand to make a new determination of the prevailing party, if any. The cases were therefore remanded to the trial court for a review of both damages and attorneys' fees.

With respect to other issues considered on appeal, the Court of Appeal upheld the trial court's ruling that Metropolitan improperly excludes SDCWA's payments under the Exchange Agreement in Metropolitan's calculation of SDCWA's preferential rights. The court also ruled that SDCWA had the constitutional right to challenge the rate structure integrity provision in Metropolitan's conservation and local resources incentive agreements and found that the rate structure integrity provision was invalid and unenforceable as an unconstitutional condition on the provision of a public benefit.

On September 27, 2017, the California Supreme Court denied SDCWA's petition for review, declining to consider the Court of Appeal's decision. The Court of Appeal's decision is therefore final.

On July 25, 2018, the Superior Court issued an order regarding the scope of the matters to be reconsidered by the Superior Court on remand pursuant to the Court of Appeal decision. With respect to the Superior Court's re-determination of damages in light of the Court of Appeal's ruling that the administrative record for calendar years 2011 through 2014 did not support Metropolitan's inclusion of its demand management costs in the Exchange Agreement price, the Superior Court ruled that it will award SDCWA \$28,678,190.90 in contract damages for breach of the Exchange Agreement, plus prejudgment interest at 10 percent per annum. The Superior Court determined that Metropolitan is not entitled in the remand proceedings to show what it could have lawfully charged SDCWA for demand management costs and to deduct that from SDCWA's damages.

The Superior Court further ruled that SDCWA is not entitled in the remand proceedings to litigate the issue of "offsetting benefits" under the wheeling statutes for the parties' Exchange Agreement. The Superior Court found that such claim is both outside the scope of remand and waived.

The Superior Court also ruled that SDCWA is entitled to judgment on its declaratory relief cause of action declaring the rate structure integrity provision in Metropolitan's conservation and local resources incentive agreements invalid and unenforceable, SDCWA is entitled to further proceedings to litigate the issue of an entitlement to monetary restitution for 2011 through 2014, and the parties shall also litigate in further proceedings the issue of what prospective relief SDCWA may be entitled to in connection with this cause of action.

Finally, the Superior Court confirmed, as the parties agreed, that it will conduct further proceedings for a redetermination of the prevailing party and attorneys' fees in this matter.

On September 14, 2018, Metropolitan filed a Petition for Writ of Mandate with the California Court of Appeal, requesting the court to require the Superior Court to recalculate contract damages for breach of the Exchange Agreement from years 2011 through 2014, to include a set-off for the additional sums SDCWA would have paid had Metropolitan collected the Water Stewardship Rate through its full service sales as SDCWA argued was correct. On November 1, 2018, the Court of Appeal determined that it would not review the issue at this stage of the cases. Metropolitan may raise this issue again on any later appeal from the cases' final judgment.

Due to SDCWA's litigation challenging Metropolitan's rates, and pursuant to the Exchange Agreement between Metropolitan and SDCWA, as of November 30, 2020, Metropolitan held \$57.90 million in a designated fund, the Exchange Agreement Set-Aside Fund. See "Financial Reserve Policy." This amount includes the disputed Water Stewardship Rate payments for calendar years 2011 through 2017, and interest earned by Metropolitan thereon. The amount held does not include statutory prejudgment interest or any post-judgment interest, attorneys' fees, or costs the Court may award.

On February 14, 2019, Metropolitan tendered to SDCWA payment of \$44.4 million for the San Francisco Superior Court's contract damages award for Water Stewardship Rate payments from 2011 through 2014, plus statutory interest through February 15, 2019, with a reservation of appeal rights, in the 2010 and 2012 SDCWA v. Metropolitan actions. This tender was made under compulsion to cease accrual of statutory interest in excess of market rates, but did not affect Metropolitan's rights to appeal, including its right to challenge the amount of the damages award. The tendered payment included \$31.6 million of amounts withdrawn from the Exchange Agreement Set-Aside Fund, and \$12.8 million withdrawn from reserves (representing statutory interest). On March 7, 2019, SDCWA rejected the tendered payment and returned the uncashed check for the tendered payment. The returned funds were credited back to the Exchange Agreement Set-Aside Fund and Metropolitan reserves in the amounts drawn. The balance in the Exchange Agreement Set-Aside Fund set forth above includes the returned funds. In the 2010-2012 Judgment (discussed below), the Superior Court confirmed that Metropolitan's tender was effective and stopped the accrual of interest in February 2019. On August 29, 2019, as a result of changes in reorganization of assignments at the San Francisco Superior Court, the 2010, 2012, 2016, and 2017 SDCWA v. Metropolitan cases were reassigned to a different department of the Court. SDCWA filed a motion for peremptory disqualification of the new judge and on September 6, 2019, the motion was sustained. On September 27, 2019, the 2010, 2012, 2016, and 2017 cases were assigned to Department 304, a different complex department in which the 2014 case is already pending.

The Superior Court had scheduled an evidentiary hearing for June 16 to June 18, 2020 on SDCWA's requested relief based on its rate structure integrity provision claim. Following action of the SDCWA Board of Directors on February 27, 2020 (discussed below), SDCWA informed Metropolitan and the court that it was no longer seeking this relief. Accordingly, the evidentiary hearing was canceled.

On August 13, 2020, the Superior Court entered a final judgment in the 2010 and 2012 SDCWA v. Metropolitan cases (the "2010-2012 Judgment"). On August 14, 2020, SDCWA served notice of entry of judgment and notice of the court's peremptory writ of mandate in the cases.

In the 2010-2012 Judgment, the Court entered judgment: (1) on the first three causes of action – for writ of mandate, declaratory relief, and invalidation (the rate challenges) – in SDCWA's favor, because the Court of Appeal found Metropolitan's inclusion of the Water Stewardship Rate as a component of the transportation rates charged under the Exchange Agreement and wheeling rate was unlawful, and ordered issuance of a writ of mandate as described below; (2) on the fourth cause of action – breach of contract – in favor of SDCWA but only with respect to its challenge to Metropolitan's inclusion of the Water Stewardship Rate in the Exchange Agreement price for deliveries in 2011-2014, the Court awarded SDCWA a total of



\$44,373,872.29, comprised of: (A) \$28,678,190.90 in damages; (B) prejudgment interest at the rate of 10 percent per annum through November 18, 2015 in the amount of \$7,484,315.54; and (C) post-judgment interest at the rate of 7 percent per annum from November 19, 2015 until February 15, 2019 (the date of Metropolitan's tender of \$44,373,872.29 to SDCWA), in the amount of \$8,211,365.85; (3) on the fifth cause of action – declaratory relief regarding the rate structure integrity (RSI) provision – in favor of SDCWA as the RSI provision is invalid and unenforceable; (4) on the sixth cause of action – declaratory relief regarding preferential rights calculation – in favor of SDCWA that Metropolitan's previous methodology for calculating preferential rights violates § 135 of the Metropolitan Water District Act; (5) on the previously-dismissed cause of action for breach of fiduciary duty – in favor of Metropolitan; and (6) on the previously dismissed cause of action for breach of the covenant of good faith and fair dealing – in favor of Metropolitan.

The peremptory writ of mandate commands Metropolitan to “enact only legal wheeling and transportation rates in the future and, specifically, not to do the things that [the Court of Appeal] held were unlawful,” and incorporates by reference the Court of Appeal decision; and to “exclude the costs of conservation programs and other demand management programs, enacted in [the 2010 and 2012] cases as the Water Stewardship Rate, from Metropolitan's wheeling rate published in Section 4405 of Metropolitan's Administrative Code and from the transportation rates charged under the [Exchange Agreement].” Metropolitan filed a notice of appeal of the 2010-2012 Judgment and the writ on September 11, 2020.

The court requested the parties' briefing as to whether it has jurisdiction to determine the prevailing party, if any, in the 2010 and 2012 cases, after the appeal was filed. The parties filed a joint submission that the court has jurisdiction and the court agreed. On December 16, 2020, the court heard the parties' cross-motions on the determination of a prevailing party, if any, under the Exchange Agreement's attorneys' fees and costs provision. On January 13, 2021, the court issued an order finding SDCWA is the prevailing party on the contract, entitled to its attorneys' fees and costs under the contract. The court will schedule further proceedings to determine fees. On January 12, 2021, the court heard the parties' motions to strike or tax each's memorandum of statutory costs, which involves a determination of prevailing party as to all claims. The court has not yet ruled on the costs motions. For both sets of motions, Metropolitan contended that it is the prevailing party entitled to attorneys' fees and costs, or else there is not a prevailing party in these mixed-result cases. The determinations as to prevailing party, attorneys' fees, and costs are subject to appeal after entry of the final order.

In May 2014, SDCWA filed a new lawsuit asserting essentially the same rate claims and breach of contract claim in connection with the Board's April 2014 rate adoption. Metropolitan filed its answer on June 30, 2014. On February 9, 2015, pursuant to stipulation by the parties, the San Francisco Superior Court ordered that the case be stayed.

On April 13, 2016, SDCWA filed a new lawsuit that alleged all rates and charges for 2017 and 2018 adopted by Metropolitan's Board on April 12, 2016 violate the California Constitution, statutes, and common law. The Petition for Writ of Mandate and Complaint asserted misallocation of costs as alleged in the previous cases listed above and additional claims of over-collection and misallocation of costs and procedural violations. Following a stipulated order issued by the court on November 10, 2016, SDCWA filed a First Amended Petition for Writ of Mandate and Complaint and the court ordered the case stayed pending final resolution of the 2010 and 2012 SDCWA v. Metropolitan cases' appeals. The amended petition/complaint added allegations of the same Exchange Agreement breach as in the previous cases listed above and breach of a provision that requires Metropolitan to set aside disputed amounts, relating to the manner in which Metropolitan has set aside the amounts; requested a judicial declaration that, if a judgment is owed to SDCWA under the Exchange Agreement, SDCWA will not be required to pay any portion of that judgment; and requests a refund to SDCWA of any amount Metropolitan has collected in excess of the reasonable costs of the services provided or, alternatively, a reduction in SDCWA's future fees.

On August 27, 2020, the court granted SDCWA's motion to lift the stays in the 2014 and 2016 SDCWA v. Metropolitan cases and to file a further amended petition/complaint. On August 28, 2020,

SDCWA filed the amended petitions/complaints, which included claims for offsetting benefits. On September 28, 2020, Metropolitan filed demurrers to, or in the alternative motions to strike, portions of the amended petitions/complaints, which are set for hearing on February 10, 2021. The pleadings seek to remove offsetting benefits claims in both cases as to alleged breach of contract and Metropolitan's wheeling rate, and the declaratory relief claim in the 2016 case as to how Metropolitan may satisfy a judgment.

On June 9, 2017, SDCWA filed a new Petition for Writ of Mandate and Complaint challenging the Readiness-to-Serve Charge and Capacity Charge for 2018 adopted by Metropolitan's Board on April 11, 2017. These two charges are set annually, and SDCWA's 2016 lawsuit included a challenge to these two charges for 2017. The new lawsuit similarly alleged the 2018 Readiness-to-Serve Charge and Capacity Charge violated the California Constitution, statutes, and common law. The petition/complaint asserts misallocation of costs. Metropolitan was served with the petition/complaint on June 20, 2017. On July 18, 2017, SDCWA filed a first amended petition/complaint to add Metropolitan's Board action of July 11, 2017 to make minor corrections to the Readiness-to-Serve Charge. On July 31, 2018, pursuant to stipulation by the parties, the San Francisco Superior Court ordered that the case be stayed. On July 23, 2020, the court entered SDCWA's requested dismissal of the 2017 case. The dismissal is without prejudice, which means SDCWA would not be precluded from re-initiating the case in the future.

On June 8, 2018, SDCWA filed a new lawsuit that alleges all rates and charges for 2019 and 2020 adopted by Metropolitan's Board on April 10, 2018 violate the California Constitution, statutes, and common law. The Petition for Writ of Mandate and Complaint asserts the Water Stewardship Rate is unlawful per se and its collection in transportation charges is also unlawful; failure to provide wheelers a reasonable credit for "offsetting benefits" pursuant to Water Code Section 1810, *et seq.*, which SDCWA contends (and Metropolitan disputes) applies to the parties' Exchange Agreement; over-collection and misallocation of costs, including misallocation of Metropolitan's California WaterFix costs as its transportation costs; and specified procedural violations. SDCWA states in the Petition and Complaint that it intends to amend its complaint to allege additional claims against Metropolitan, including but not limited to a claim for breach of contract. Following a stipulated order issued by the San Francisco Superior Court on January 10, 2019, SDCWA filed a First Amended Petition for Writ of Mandate and Complaint and the court ordered the case stayed pending final resolution of the 2010 and 2012 SDCWA v. Metropolitan cases. The amended petition/complaint adds a cause of action for breach of the Exchange Agreement alleging Metropolitan charged an unlawful price that includes the Water Stewardship Rate (despite suspension of this charge), failing to provide credit for offsetting benefits, charging transportation rates that are not based on costs of service, including California WaterFix costs, and not following procedural requirements; and requests a refund to SDCWA of any amount Metropolitan has collected in excess of the reasonable costs of the services provided or, alternatively, a reduction in SDCWA's future fees. On July 28, 2020, the parties filed a stipulation and application to designate the case complex and related to the 2010-2017 cases. Metropolitan is unable to assess at this time the likelihood of success of this case, any possible appeal or any future claims.

On November 15, 2019, Metropolitan provided a statutory Offer to Compromise to SDCWA to resolve all pending litigation filed by SDCWA. The offer, which was not confidential, was made under California Code of Civil Procedure Section 998 and was deemed withdrawn if not accepted by December 30, 2019. By letter dated December 19, 2019, SDCWA notified Metropolitan that it had determined not to act upon Metropolitan's Section 998 Offer to Compromise. Metropolitan's statutory Offer to Compromise was deemed withdrawn. SDCWA made its own settlement offer, which is public but non-statutory. SDCWA's settlement offer was made subject to acceptance by Metropolitan no later than the close of business on January 31, 2020. The Metropolitan Board reviewed SDCWA's proposal at its January 14, 2020 Board meeting and took no action.

On February 27, 2020, the SDCWA Board of Directors authorized its attorneys to dismiss, without prejudice, claims related to payments of the Water Stewardship Rate on supply purchases only and the unquantified claims in the stayed cases relating to cost-of-service grounds and the rate model. The above-

mentioned amended petitions/complaints in the 2014 and 2016 cases added, removed, and retained certain claims. Retained claims include SDCWA's challenge to Metropolitan's Water Stewardship Rate for calendar years 2015 through 2018 based on its allocation to transportation, with a request for the court to invalidate the transportation rates and the wheeling rate and award damages for breach of the parties' Exchange Agreement as a result. Added claims include a challenge to the wheeling rate and alleged breach of the Exchange Agreement for failure to provide offsetting benefits (only the stayed 2018 case had previously included an offsetting benefits claim). SDCWA has not yet dismissed claims in the 2018 case. Metropolitan has not yet assessed the impact of the authorized dismissals. Metropolitan is unable to assess at this time the likelihood of success of these cases, any possible appeals or any future claims.

#### **Other Revenue Sources**

**Hydroelectric Power Recovery Revenues.** Metropolitan has constructed 16 small hydroelectric plants on its distribution system. The combined generating capacity of these plants is approximately 130 megawatts. The plants are located in Los Angeles, Orange, Riverside, and San Diego Counties at existing pressure control structures and other locations. The total capital cost of the 16 facilities is approximately \$176.1 million. Since 2000, annual energy generation sales revenues have ranged between \$7.3 million and nearly \$29.6 million. Including the sale of excess energy generation from Hoover and Parker dams, the total energy sales revenues were \$18.3 million in fiscal year 2018-19 and \$15.9 million in fiscal year 2019-20.

**Investment Income.** In fiscal years 2017-18, 2018-19 and 2019-20, Metropolitan's earnings on investments, including adjustments for gains and losses and premiums and discounts, including construction account and trust fund earnings, excluding gains and losses on swap terminations, on a cash basis (unaudited) were \$15.5 million, \$31.3 million, and \$18.1 million, respectively.

#### **Investment of Moneys in Funds and Accounts**

The Board has delegated to the Treasurer the authority to invest funds. All moneys in any of the funds and accounts established pursuant to Metropolitan's water revenue or general obligation bond resolutions are managed by the Treasurer in accordance with Metropolitan's Statement of Investment Policy. All Metropolitan funds available for investment are currently invested in United States Treasury and agency securities, supranationals, commercial paper, negotiable certificates of deposit, banker's acceptances, corporate notes, municipal bonds, government-sponsored enterprise, money market funds, California Asset Management Program ("CAMP") and the California Local Agency Investment Fund ("LAIF"). CAMP is a program created through a joint powers agency as a pooled short-term portfolio and cash management vehicle for California public agencies. CAMP is a permitted investment for all local agencies under California Government Code Section 53601(p). LAIF is a voluntary program created by statute as an investment alternative for California's local governments and special districts. LAIF permits such local agencies to participate in an investment portfolio, which invests billions of dollars, managed by the State Treasurer's Office.

The Statement of Investment Policy provides that in managing Metropolitan's investments, the primary objective shall be to safeguard the principal of the invested funds. The secondary objective shall be to meet all liquidity requirements and the third objective shall be to achieve a return on the invested funds. Although the Statement of Investment Policy permits investments in some government-sponsored enterprise, the portfolio does not include any of the special investment vehicles related to sub-prime mortgages. The Statement of Investment Policy allows Metropolitan to exceed the portfolio and single issuer limits for purchases of California local agency securities when purchasing Metropolitan tendered bonds in conjunction with its self-liquidity program. Metropolitan's current investments comply with the Statement of Investment Policy.

As of November 30, 2020, the total market value (cash-basis) of all Metropolitan invested funds was \$1.0 billion, including bond reserves of \$1.7 million. The market value of Metropolitan's investment

portfolio is subject to market fluctuation and volatility and general economic conditions. Over the three years ended November 30, 2020 the market value of the month-end balance of Metropolitan's investment portfolio (excluding bond reserve funds) averaged approximately \$1.0 billion. The minimum month-end balance of Metropolitan's investment portfolio (excluding bond reserve funds) during such period was approximately \$831.9 million on July 31, 2019. See Note 3 to Metropolitan's audited financial statements in Appendix B for additional information on the investment portfolio.

Metropolitan's administrative code requires that (1) the Treasurer provide an annual Statement of Investment Policy for approval by Metropolitan's Board, (2) the Treasurer provide a monthly investment report to the Board and the General Manager showing by fund the description, maturity date, yield, par, cost and current market value of each security, and (3) the General Counsel review as to eligibility the securities invested in by the Treasurer for that month and report his or her determinations to the Board. The Board approved the Statement of Investment Policy for fiscal year 2020-21 on June 9, 2020.

Subject to the provisions of Metropolitan's water revenue or general obligation bond resolutions, obligations purchased by the investment of bond proceeds in the various funds and accounts established pursuant to a bond resolution are deemed at all times to be a part of such funds and accounts and any income realized from investment of amounts on deposit in any fund or account therein will be credited to such fund or account. The Treasurer is required to sell or present for redemption any investments whenever it may be necessary to do so in order to provide moneys to meet required payments or transfers from such funds and accounts. For the purpose of determining at any given time the balance in any such funds, any such investments constituting a part of such funds and accounts will be valued at the then estimated or appraised market value of such investments.

All investments, including those authorized by law from time to time for investments by public agencies, contain certain risks. Such risks include, but are not limited to, a lower rate of return than expected and loss or delayed receipt of principal. The occurrence of these events with respect to amounts held under Metropolitan's water revenue or general obligation revenue bond resolutions, or other amounts held by Metropolitan, could have a material adverse effect on Metropolitan's finances. These risks may be mitigated, but are not eliminated, by limitations imposed on the portfolio management process by Metropolitan's Statement of Investment Policy.

The Statement of Investment Policy requires that investments have a minimum credit rating of "A-1/P-1/F1" for short-term securities and "A" for longer-term securities, without regard to modifiers, at the time of purchase. If a security is downgraded below the minimum rating criteria specified in the Statement of Investment Policy, the Treasurer shall determine a course of action to be taken on a case-by-case basis considering such factors as the reason for the downgrade, prognosis for recovery or further rating downgrades, and the market price of the security. The Treasurer is required to note in the Treasurer's monthly report any securities which have been downgraded below Policy requirements and the recommended course of action.

The Statement of Investment Policy also limits the amount of securities that can be purchased by category, as well as by issuer, and prohibits investments that can result in zero interest income. Metropolitan's securities are settled on a delivery versus payment basis and are held by an independent third-party custodian. See Metropolitan's financial statements included in APPENDIX B—"THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA INDEPENDENT AUDITORS' REPORT AND BASIC FINANCIAL STATEMENTS FOR FISCAL YEARS ENDED JUNE 30, 2020 AND JUNE 30, 2019 AND BASIC FINANCIAL STATEMENTS FOR THE THREE MONTHS ENDED SEPTEMBER 30, 2020 AND 2019 (UNAUDITED)" for a description of Metropolitan's investments at June 30, 2020 and September 30, 2020.

Since July 2019, Metropolitan has retained one outside investment firm to manage the portion of Metropolitan's portfolio not needed to provide liquidity for expenditures over the next six months. As of November 30, 2020, this manager was managing approximately \$196.4 million in investments on behalf of Metropolitan. Since December 2018, Metropolitan has retained an outside investment firm to manage a portion of the liquidity portfolio and certain trust funds. As of November 30, 2020, this firm managed approximately \$529.5 million. The outside managers are required to adhere to Metropolitan's Statement of Investment Policy.

Metropolitan's Statement of Investment Policy may be changed at any time by the Board (subject to State law provisions relating to authorized investments). There can be no assurance that the State law and/or the Statement of Investment Policy will not be amended in the future to allow for investments that are currently not permitted under State law or the Statement of Investment Policy, or that the objectives of Metropolitan with respect to investments or its investment holdings at any point in time will not change.

### METROPOLITAN EXPENSES

#### General

The following table sets forth a summary of Metropolitan's expenses, by major function, for the five years ended June 30, 2020, on a modified accrual basis. All information is unaudited. Expenses of Metropolitan for the fiscal years ended June 30, 2020 and June 30, 2019, on an accrual basis, are shown in Metropolitan's audited financial statements included in Appendix B.

#### SUMMARY OF EXPENSES Fiscal Years Ended June 30 (Dollars in Millions)

	2016	2017	2018	2019	2020
Operation and Maintenance Costs <sup>(1)</sup>	\$ 799	\$ 559	\$ 568	\$ 569	\$ 641
Total State Water Project <sup>(2)</sup>	512	506	527	482	519
Total Debt Service	332	330	360	347	285
Construction Expenses from Revenues <sup>(3)</sup>	273	132	98	128	39
Other <sup>(4)</sup>	6	4	5	6	6
Total Expenses (net of reimbursements)	<u>\$1,922</u>	<u>\$1,531</u>	<u>\$1,558</u>	<u>\$1,532</u>	<u>\$1,490</u>

Source: Metropolitan.

<sup>(1)</sup> Includes operation and maintenance, debt administration, conservation and local resource programs, CRA power, and water supply expenses. Fiscal years 2015-16, 2016-17, and 2017-18 include \$222 million, \$33 million, and \$1 million, respectively, of conservation and supply program expenses funded from transfers from the Water Management Fund.

<sup>(2)</sup> Includes both operating and capital expense portions.

<sup>(3)</sup> At the discretion of the Board, in any given year, Metropolitan may increase or decrease funding available for construction disbursements to be paid from revenues. Includes \$160 million for acquiring properties in Riverside and Imperial Counties, funded by \$160 million from the Replacement and Refurbishment Fund Reserves in fiscal year 2015-16. Does not include expenditures of bond proceeds.

<sup>(4)</sup> Includes operating equipment.

#### Revenue Bond Indebtedness and Other Obligations

As of December 1, 2020, Metropolitan had total outstanding indebtedness secured by a lien on Net Operating Revenues of \$3.81 billion. This indebtedness was comprised of \$2.40 billion of Senior Revenue Bonds issued under the Senior Debt Resolutions (each as defined below), which includes \$2.07 billion of fixed rate Senior Revenue Bonds, and \$331.9 million of variable rate Senior Revenue Bonds; \$1.36 billion of Subordinate Revenue Bonds issued under the Subordinate Debt Resolutions (each as defined below), which includes \$915.87 million of fixed rate Subordinate Revenue Bonds, and \$446.3 million of variable rate Subordinate Revenue Bonds; and \$46.8 million of subordinate lien short-term certificates, which bear a

variable rate, and are on parity with the Subordinate Revenue Bonds. In addition, Metropolitan has \$438.7 million of fixed-payor interest rate swaps which provides a fixed interest rate hedge to an equivalent amount of variable rate debt. Metropolitan's revenue bonds and other revenue obligations are more fully described below.

**REVENUE BOND INDEBTEDNESS AND OTHER OBLIGATIONS**

	Variable Rate	Fixed Rate	Total
Senior Lien Revenue Bonds	\$ 331,875,000	\$2,068,605,000	\$2,400,480,000
Subordinate Lien Revenue Bonds	446,255,000	915,865,000	1,362,120,000
Subordinate Lien Short-Term Certificates	46,800,000	--	46,800,000
<b>Total</b>	<b>\$ 824,930,000</b>	<b>\$2,984,470,000</b>	<b>\$3,809,400,000</b>
Fixed-Payor Interest Rate Swaps	(438,665,000)	438,665,000	--
<b>Net Amount (after giving effect to Swaps)</b>	<b>\$ 386,265,600</b>	<b>\$3,423,135,000</b>	<b>\$3,809,400,000</b>

*Source: Metropolitan.*

**Limitations on Additional Revenue Bonds**

Resolution 8329, adopted by Metropolitan's Board on July 9, 1991, as amended and supplemented (the "Master Senior Resolution," and collectively with all such supplemental resolutions, the "Senior Debt Resolutions"), provides for the issuance of Metropolitan's senior lien water revenue bonds. The Senior Debt Resolutions establish limitations on the issuance of additional obligations payable from Net Operating Revenues. Under the Senior Debt Resolutions, no additional bonds, notes or other evidences of indebtedness payable out of Operating Revenues may be issued having any priority in payment of principal, redemption premium, if any, or interest over any water revenue bonds authorized by the Senior Debt Resolutions ("Senior Revenue Bonds") or other obligations of Metropolitan having a lien and charge upon, or being payable from, the Net Operating Revenues on parity with such Senior Revenue Bonds ("Senior Parity Obligations"). No additional Senior Revenue Bonds or Senior Parity Obligations may be issued or incurred unless the conditions of the Senior Debt Resolutions have been satisfied.

Resolution 9199, adopted by Metropolitan's Board on March 8, 2016, as amended and supplemented (the "Master Subordinate Resolution," and collectively with all such supplemental resolutions, the "Subordinate Debt Resolutions," and together with the Senior Debt Resolutions, the "Revenue Bond Resolutions"), provides for the issuance of Metropolitan's subordinate lien water revenue bonds and other obligations secured by a pledge of Net Operating Revenues that is subordinate to the pledge securing Senior Revenue Bonds and Senior Parity Obligations. The Subordinate Debt Resolutions establish limitations on the issuance of additional obligations payable from Net Operating Revenues. Under the Subordinate Debt Resolutions, with the exception of Senior Revenue Bonds and Senior Parity Obligations, no additional bonds, notes or other evidences of indebtedness payable out of Operating Revenues may be issued having any priority in payment of principal, redemption premium, if any, or interest over any subordinate water revenue bonds authorized by the Subordinate Debt Resolutions ("Subordinate Revenue Bonds" and, together with Senior Revenue Bonds, "Revenue Bonds") or other obligations of Metropolitan having a lien and charge upon, or being payable from, the Net Operating Revenues on parity with the Subordinate Revenue Bonds ("Subordinate Parity Obligations"). No additional Subordinate Revenue Bonds or Subordinate Parity Obligations may be issued or incurred unless the conditions of the Subordinate Debt Resolutions have been satisfied.

The laws governing Metropolitan's ability to issue water revenue bonds currently provide two additional limitations on indebtedness that may be incurred by Metropolitan. The Act provides for a limit on general obligation bonds, water revenue bonds and other evidences of indebtedness of 15 percent of the assessed value of all taxable property within Metropolitan's service area. As of December 1, 2020, outstanding general obligation bonds, water revenue bonds and other evidences of indebtedness in the

amount of \$3.84 billion represented approximately 0.12 percent of the fiscal year 2020-21 taxable assessed valuation of \$3,263.4 billion. The second limitation under the Act specifies that no revenue bonds may be issued, except for the purpose of refunding, unless the amount of net assets of Metropolitan as shown on its balance sheet as of the end of the last fiscal year prior to the issuance of such bonds, equals at least 100 percent of the aggregate amount of revenue bonds outstanding following the issuance of such bonds. The net assets of Metropolitan at June 30, 2020 were \$6.94 billion. The aggregate amount of revenue bonds outstanding as of December 1, 2020 was \$3.76 billion. The limitation does not apply to other forms of financing available to Metropolitan. Audited financial statements including the net assets of Metropolitan as of June 30, 2020 and June 30, 2019 are shown in Metropolitan's audited financial statements included in APPENDIX B—"THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA INDEPENDENT AUDITORS' REPORT AND BASIC FINANCIAL STATEMENTS FOR FISCAL YEARS ENDED JUNE 30, 2020 AND JUNE 30, 2019 AND BASIC FINANCIAL STATEMENTS FOR THE THREE MONTHS ENDED SEPTEMBER 30, 2020 AND 2019 (UNAUDITED)."

Metropolitan provides no assurance that the Act's limitations on indebtedness will not be revised or removed by future legislation. Limitations under the Revenue Bond Resolutions respecting the issuance of additional obligations payable from Net Operating Revenues on parity with the Senior Revenue Bonds and Subordinate Revenue Bonds of Metropolitan will remain in effect so long as any Senior Revenue Bonds and Subordinate Revenue Bonds authorized pursuant to the applicable Revenue Bond Resolutions are outstanding, provided however, that the Revenue Bond Resolutions are subject to amendment and supplement in accordance with their terms.

#### **Variable Rate Exposure Policy**

As of December 1, 2020, Metropolitan had outstanding \$331.9 million of variable rate obligations issued as Senior Revenue Bonds under the Senior Debt Resolutions (described under "–Outstanding Senior Revenue Bonds and Senior Parity Obligations –Variable Rate and Swap Obligations" below). In addition, as of December 1, 2020, \$493.1 million of Metropolitan's \$1.41 billion of outstanding Subordinate Revenue Bonds issued under the Subordinate Debt Resolutions and other Subordinate Parity Obligations were variable rate obligations (described under "–Outstanding Subordinate Revenue Bonds and Subordinate Parity Obligations" below).

As of December 1, 2020, of Metropolitan's \$824.9 million of variable rate obligations, \$438.7 million of such variable rate demand obligations are treated by Metropolitan as fixed rate debt, by virtue of interest rate swap agreements (described under "–Outstanding Senior Revenue Bonds and Senior Parity Obligations –Variable Rate and Swap Obligations – Interest Rate Swap Transactions" below), for the purpose of calculating debt service requirements. The remaining \$386.3 million of variable rate obligations represent approximately 10.1 percent of total outstanding water revenue secured indebtedness (including Senior Revenue Bonds and Senior Parity Obligations and Subordinate Revenue Bonds and Subordinate Parity Obligations), as of December 1, 2020.

Metropolitan's variable rate exposure policy requires that variable rate debt be managed to limit net interest cost increases within a fiscal year as a result of interest rate changes to no more than \$5 million. In addition, the maximum amount of variable interest rate exposure (excluding variable rate bonds associated with interest rate swap agreements) is limited to 40 percent of total outstanding water revenue bond debt. Variable rate debt capacity will be reevaluated as interest rates change and managed within these parameters.

The periodic payments due to Metropolitan from counterparties under its outstanding interest rate swap agreements and the interest payments to be payable by Metropolitan under certain of its outstanding variable rate obligations (including some of Metropolitan's Subordinate Revenue Bonds and certain notes issued pursuant to its short-term revolving credit agreement and subordinate note purchase agreements as hereinafter described) are calculated by reference to the London interbank offering rate ("LIBOR"). On July 27, 2017, the Financial Conduct Authority (the "FCA"), the U.K. regulatory body currently responsible



for the regulation and supervision of LIBOR, announced that it will no longer persuade or compel banks to submit rates for the calculation of the LIBOR rates after 2021 (the “FCA Announcement”). On November 30, 2020, Intercontinental Exchange Benchmark Administration (“IBA”), the administrator of LIBOR authorized and regulated by the FCA, announced, with the support of the Federal Reserve Board and the FCA, that it is commencing a consultation on its intention to cease publication of (1) only the one-week and two-month USD LIBOR on December 31, 2021, and (2) all other tenors of USD LIBOR, including the one-month LIBOR and three-month LIBOR, the most widely used tenors of USD LIBOR and which are used to determine the periodic payments due to Metropolitan from swap counterparties and the interest payments to be payable by Metropolitan under certain of its outstanding variable rate obligations, on June 30, 2023. The IBA proposal isn’t final and is subject to feedback on the consultation. IBA has indicated that it expects to complete the consultation process by the end of January 2021. Metropolitan staff is monitoring alternate benchmark rates. Metropolitan is unable to predict the outcome of the IBA’s ongoing consultation as to the specific timing for the cessation of publication of USD LIBOR, or how the prospective phasing out of LIBOR as a reference rate and transition to an alternate benchmark rate will ultimately be implemented, but increased volatility in the reported LIBOR rates may occur and the level of Metropolitan’s LIBOR-based swap and interest payments may be affected by the transition to an alternate benchmark rate when it occurs.

### Outstanding Senior Revenue Bonds and Senior Parity Obligations

#### Senior Revenue Bonds

The water revenue bonds issued under the Senior Debt Resolutions outstanding as of December 1, 2020, are set forth below:

Name of Issue	Principal Outstanding
Water Revenue Refunding Bonds, 1993 Series A	\$ 2,040,000
Water Revenue Bonds, 2000 Authorization, Series B-3 <sup>(1)</sup>	78,900,000
Water Revenue Refunding Bonds, 2011 Series C	118,700,000
Water Revenue Refunding Bonds, 2012 Series A	181,180,000
Water Revenue Refunding Bonds, 2012 Series C	5,635,000
Water Revenue Refunding Bonds, 2012 Series F	37,735,000
Water Revenue Refunding Bonds, 2012 Series G	89,820,000
Water Revenue Refunding Bonds, 2014 Series A	4,870,000
Water Revenue Refunding Bonds, 2014 Series C-3	2,810,000
Water Revenue Refunding Bonds, 2014 Series E	86,060,000
Water Revenue Bonds, 2015 Authorization, Series A	201,535,000
Water Revenue Refunding Bonds, 2016 Series A	239,455,000
Special Variable Rate Water Revenue Refunding Bonds, 2016 Series B-1 and B-2 <sup>(1)</sup>	82,905,000
Water Revenue Bonds, 2017, Authorization, Series A <sup>(1)</sup>	80,000,000
Special Variable Water Revenue Refunding Bonds, 2018 Series A-1 and A-2 <sup>(1)</sup>	90,070,000
Water Revenue Refunding Bonds, 2018 Series B	133,510,000
Water Revenue Refunding Bonds, 2019 Series A	218,090,000
Water Revenue Bonds, 2020 Series A	207,355,000
Special Variable Rate Water Revenue Refunding Bonds, 2020 Series B <sup>(2)</sup>	271,815,000
Water Revenue Refunding Bonds, 2020 Series C	267,995,000
<b>Total</b>	<b>\$2,400,480,000</b>

Source: Metropolitan.

<sup>(1)</sup> Outstanding variable rate obligation.

<sup>(2)</sup> Initially delivered in a long mode at a fixed interest rate to April 2, 2021.

#### Variable Rate and Swap Obligations

As of December 1, 2020, Metropolitan had outstanding \$331.9 million of senior lien variable rate obligations. The outstanding variable rate obligations consist of Senior Revenue Bonds issued under the Senior Debt Resolutions (described under this caption “Variable Rate and Swap Obligations”) as variable rate demand obligations in a daily mode supported by standby bond purchase agreements between

Metropolitan and various liquidity providers (the “Liquidity Supported Bonds”). Metropolitan also has an outstanding Short-Term Revolving Credit Facility under which it may incur variable rate Senior Parity Obligations (described under “—Senior Parity Obligations – Short-Term Revolving Credit Facility” below).

**Liquidity Supported Bonds.** The interest rates for Metropolitan’s variable rate demand obligations issued under the Senior Debt Resolutions, totaling \$331.9 million as of December 1, 2020, are currently reset on a daily basis. While bearing interest at a daily rate, such variable rate demand obligations are subject to optional tender on any business day with same day notice by the owners thereof and mandatory tender upon specified events. Such variable rate demand obligations are supported by standby bond purchase agreements between Metropolitan and liquidity providers that provide for purchase of variable rate bonds by the applicable liquidity provider upon tender of such variable rate bonds and a failed remarketing. Metropolitan has secured its obligation to repay principal and interest advanced under the standby bond purchase agreements as Senior Parity Obligations. A decline in the creditworthiness of a liquidity provider will likely result in an increase in the interest rate of the applicable variable rate bonds, as well as an increase in the risk of a failed remarketing of such tendered variable rate bonds. Variable rate bonds purchased by a liquidity provider (“bank bonds”) would initially bear interest at a per annum interest rate equal to, depending on the liquidity facility, either: (a) the highest of (i) the Prime Rate, (ii) the Federal Funds Rate plus one-half of a percent, or (iii) seven and one-half percent (with the spread or rate increasing in the case of each of (i), (ii) and (iii) of this clause (a) by one percent after 60 days); or (b) the highest of (i) the Prime Rate plus one percent, (ii) Federal Funds Rate plus two percent, and (iii) seven percent (with the spread or rate increasing in the case of each of (i), (ii) and (iii) of this clause (b) by one percent after 90 days). To the extent such bank bonds have not been remarketed or otherwise retired as of the earlier of the 60<sup>th</sup> day following the date such bonds were purchased by the liquidity provider or the stated expiration date of the related liquidity facility, Metropolitan’s obligation to reimburse the liquidity provider may convert the term of the variable rate bonds purchased by the liquidity provider into a term loan payable under the terms of the current liquidity facilities in semi-annual installments over a period ending on either the third anniversary or fifth anniversary, depending on the applicable liquidity facility, of the date on which the variable rate bonds were purchased by the liquidity provider. In addition, upon an event of default under any such liquidity facility, including a failure by Metropolitan to perform or observe its covenants under the applicable standby bond purchase agreement, a default in other specified indebtedness of Metropolitan, or other specified events of default (including a reduction in the credit rating assigned to Senior Revenue Bonds issued under the Senior Debt Resolutions by any of Fitch, S&P or Moody’s below “A-” or “A3”), the liquidity provider could require all bank bonds to be subject to immediate mandatory redemption by Metropolitan.

The following table lists the liquidity providers, the expiration date of each facility and the principal amount of outstanding variable rate demand obligations covered under each facility as of December 1, 2020.

**Liquidity Facilities and Expiration Dates**

<b>Liquidity Provider</b>	<b>Bond Issue</b>	<b>Principal Outstanding</b>	<b>Facility Expiration</b>
The Toronto-Dominion Bank, New York Branch	2018 Series A-1 and Series A-2	\$ 90,070,000	June 2021 <sup>(1)</sup>
Bank of America, N.A.	2016 Series B-1 and Series B-2	\$ 82,905,000	July 2021 <sup>(1)</sup>
PNC Bank, N.A.	2017 Authorization Series A	\$ 80,000,000	March 2023
PNC Bank, N.A.	2000 Authorization Series B-3	<u>\$ 78,900,000</u>	March 2023
<b>Total</b>		<b>\$331,875,000</b>	

Source: Metropolitan.

<sup>(1)</sup> Metropolitan expects to renew or replace such liquidity facilities prior to their expiration date.

**Interest Rate Swap Transactions.** By resolution adopted on September 11, 2001, Metropolitan's Board authorized the execution of interest rate swap transactions and related agreements in accordance with a master swap policy, which was subsequently amended by resolutions adopted on July 14, 2009 and May 11, 2010. Metropolitan may execute interest rate swaps if the transaction can be expected to reduce exposure to changes in interest rates on a particular financial transaction or in the management of interest rate risk derived from Metropolitan's overall asset/liability balance, result in a lower net cost of borrowing or achieve a higher net rate of return on investments made in connection with or incidental to the issuance, incurring or carrying of Metropolitan's obligations or investments, or manage variable interest rate exposure consistent with prudent debt practices and Board-approved guidelines. The Chief Financial Officer reports to the Finance and Insurance Committee of Metropolitan's Board each quarter on outstanding swap transactions, including notional amounts outstanding, counterparty exposures and termination values based on then-existing market conditions.

Metropolitan currently has one type of interest rate swap, referred to in the table below as "Fixed Payor Swaps." Under this type of swap, Metropolitan receives payments that are calculated by reference to a floating interest rate and makes payments that are calculated by reference to a fixed interest rate.

Metropolitan's obligations to make regularly scheduled net payments under the terms of the interest rate swap agreements are payable on a parity with the Senior Parity Obligations. Termination payments under the 2002A and 2002B interest rate swap agreements would be payable on a parity with the Senior Parity Obligations. Termination payments under all other interest rate swap agreements would be on parity with the Subordinate Parity Obligations.

The following swap transactions were outstanding as of December 1, 2020:

**FIXED PAYOR SWAPS:**

<u>Designation</u>	<u>Notional Amount Outstanding</u>	<u>Swap Counterparty</u>	<u>Fixed Payor Rate</u>	<u>Metropolitan Receives</u>	<u>Maturity Date</u>
2002 A	\$ 48,282,000	Morgan Stanley Capital Services, Inc.	3.300%	57.74% of one-month LIBOR	7/1/2025
2002 B	18,063,000	JPMorgan Chase Bank	3.300	57.74% of one-month LIBOR	7/1/2025
2003	150,047,500	Wells Fargo Bank	3.257	61.20% of one-month LIBOR	7/1/2030
2003	150,047,500	JPMorgan Chase Bank	3.257	61.20% of one-month LIBOR	7/1/2030
2004 C	7,760,500	Morgan Stanley Capital Services, Inc.	2.980	61.55% of one-month LIBOR	10/1/2029
2004 C	6,349,500	Citigroup Financial Products, Inc.	2.980	61.55% of one-month LIBOR	10/1/2029
2005	29,057,500	JPMorgan Chase Bank	3.360	70% of 3-month LIBOR	7/1/2030
2005	<u>29,057,500</u>	Citigroup Financial Products, Inc.	3.360	70% of 3-month LIBOR	7/1/2030
<b>Total</b>	<b>\$438,665,000</b>				

*Source: Metropolitan.*

These interest rate swap agreements entail risk to Metropolitan. The counterparty may fail or be unable to perform, interest rates may vary from assumptions, Metropolitan may be required to post collateral in favor of its counterparties and Metropolitan may be required to make significant payments in the event of

an early termination of an interest rate swap. Metropolitan believes that if such an event were to occur, it would not have a material adverse impact on its financial position. Metropolitan seeks to manage counterparty risk by diversifying its swap counterparties, limiting exposure to any one counterparty, requiring collateralization or other credit enhancement to secure swap payment obligations, and by requiring minimum credit rating levels. Initially, swap counterparties must be rated at least “Aa3” or “AA-”, or equivalent by any two of the nationally recognized credit rating agencies; or use a “AAA” subsidiary as rated by at least one nationally recognized credit rating agency. Should the credit rating of an existing swap counterparty drop below the required levels, Metropolitan may enter into additional swaps if those swaps are “offsetting” and risk-reducing swaps. Each counterparty is initially required to have minimum capitalization of at least \$150 million. See Note 5(e) in Metropolitan’s audited financial statements in Appendix B.

Early termination of an interest rate swap agreement could occur due to a default by either party or the occurrence of a termination event (including defaults under other specified swaps and indebtedness, certain acts of insolvency, if a party may not legally perform its swap obligations, or, with respect to Metropolitan, if its credit rating is reduced below “BBB-” by Moody’s or “Baa3” by S&P (under most of the interest rate swap agreements) or below “BBB” by Moody’s or “Baa2” by S&P (under one of the interest rate swap agreements)). As of September 30, 2020, Metropolitan would have been required to pay to some of its counterparties termination payments if its swaps were terminated on that date. Metropolitan’s net exposure to its counterparties for all such termination payments on that date was approximately \$68.1 million. Metropolitan does not presently anticipate early termination of any of its interest rate swap agreements due to default by either party or the occurrence of a termination event. However, Metropolitan has previously exercised, and may in the future exercise, from time to time, optional early termination provisions to terminate all or a portion of certain interest rate swap agreements.

Metropolitan is required to post collateral in favor of a counterparty to the extent that Metropolitan’s total exposure for termination payments to that counterparty exceeds the threshold specified in the applicable swap agreement. Conversely, the counterparties are required to release collateral to Metropolitan or post collateral for the benefit of Metropolitan as market conditions become favorable to Metropolitan. As of September 30, 2020, Metropolitan had no collateral posted with any counterparty. The highest, month-end, amount of collateral posted was \$36.8 million, on June 30, 2012, which was based on an outstanding swap notional amount of \$1.4 billion at that time. The amount of required collateral varies from time to time due primarily to interest rate movements and can change significantly over a short period of time. See “METROPOLITAN REVENUES—Financial Reserve Policy” in this Appendix A. In the future, Metropolitan may be required to post additional collateral, or may be entitled to a reduction or return of the required collateral amount. Collateral deposited by Metropolitan is held by the counterparties; a bankruptcy of any counterparty holding collateral posted by Metropolitan could adversely affect the return of the collateral to Metropolitan. Moreover, posting collateral limits Metropolitan’s liquidity. If collateral requirements increase significantly, Metropolitan’s liquidity may be materially adversely affected. See “METROPOLITAN REVENUES—Financial Reserve Policy” in this Appendix A.

#### **Direct Purchase Long Mode Bonds**

In April 2020, Metropolitan entered into a Bond Purchase Agreement, dated as of April 1, 2020 (the “2020 Direct Purchase Agreement”) with Wells Fargo Municipal Capital Strategies, LLC (“WFMCS”), for the purchase by WFMCS and sale by Metropolitan of Metropolitan’s \$271.8 million Special Variable Rate Water Revenue Refunding Bonds 2020 Series B (the “2020B Senior Revenue Bonds”). The 2020B Senior Revenue Bonds were issued for the purpose of refunding all of Metropolitan’s then outstanding variable rate Senior Revenue Bonds that were designated as self-liquidity bonds as part of Metropolitan’s self-liquidity program (“Self-Liquidity Bonds”).

The 2020B Senior Revenue Bonds were issued under the Senior Debt Resolutions and are further described in a related paying agent agreement, dated as of April 1, 2020 (the “2020B Paying Agent Agreement”), by and between Metropolitan and Wells Fargo Bank, N.A., as paying agent. Pursuant to the

2020B Paying Agent Agreement, the 2020B Senior Revenue Bonds may bear interest from time to time in any one of several interest rate modes at the election of Metropolitan. The 2020B Senior Revenue Bonds were initially issued in a Long Mode under the 2020B Paying Agent Agreement and initially bear interest at a Long Rate equal to 1.04 percent per annum for the initial Long Period ending on April 2, 2021. The 2020B Senior Revenue Bonds are subject to mandatory tender for purchase on April 2, 2021 (the "Mandatory Tender Date"), the last day of the Long Period. The 2020B Senior Revenue Bonds were initially designated as Self-Liquidity Bonds pursuant to the 2020B Paying Agent Agreement and no standby bond purchase agreement or other liquidity facility is in effect for the purchase of such bonds.

On or before the date 120 days prior to the end of the Long Period, Metropolitan may request WFMCS to purchase the 2020B Senior Revenue Bonds for another Long Period, or Metropolitan may seek to remarket the 2020B Senior Revenue Bonds to another bank or in the public debt markets in a new interest rate mode or at a fixed interest rate. In the event the 2020B Bonds are not purchased by WFMCS for a subsequent Long Period, Metropolitan is obligated under the 2020 Direct Purchase Agreement to cause 2020B Senior Revenue Bonds that have not been converted to another interest rate mode or remarketed to a purchaser or purchasers other than WFMCS ("Unremarketed 2020B Bonds") to be redeemed on the Mandatory Tender Date; provided, that if no default or event of default under the 2020 Direct Purchase Agreement shall have occurred and be continuing and the representations and warranties of Metropolitan shall be true and correct on the Mandatory Tender Date, then the principal amount of the Unremarketed 2020B Senior Revenue Bonds shall be due and payable on the date that is 30 days following the Mandatory Tender Date and shall accrue interest at the Purchaser Rate, a fluctuating interest per annum equal to, the greatest of the (i) the Prime Rate, (ii) Federal Funds Rate plus one-half of one percent, and (iii) five percent, as specified in the 2020 Direct Purchase Agreement. If no default or event of default under the 2020 Direct Purchase Agreement shall have occurred and be continuing and the representations and warranties of Metropolitan shall be true and correct at the end of such 30-day period, the Unremarketed 2020B Senior Revenue Bonds will continue to bear interest at the Purchaser Rate plus, after 180 days from the Mandatory Tender Date, a spread of one percent, and the principal amount of such Unremarketed 2020B Senior Revenue Bonds may, at Metropolitan's request, instead be subject to mandatory redemption in substantially equal installments payable every six months over an amortization period commencing six months after the Mandatory Tender Date and ending on the third anniversary of the Mandatory Tender Date.

Under the 2020 Direct Purchase Agreement, upon a failure by Metropolitan to pay principal or interest of any 2020B Senior Revenue Bonds, a failure by Metropolitan to perform or observe its covenants, a default in other specified indebtedness of Metropolitan, certain acts of bankruptcy or insolvency, or other specified events of default (including if S&P shall have assigned a credit rating below "BBB-", or if any of Fitch, S&P or Moody's shall have assigned a credit rating below "A-" or "A3," to Senior Revenue Bonds issued under the Senior Debt Resolutions), WFMCS has the right to cause a mandatory tender of the 2020B Senior Revenue Bonds and accelerate (depending on the event, seven days after the occurrence, or for certain events, only after 180 days' notice) Metropolitan's obligation to repay the 2020B Senior Revenue Bonds.

In connection with the execution of the 2020 Direct Purchase Agreement, Metropolitan designated the principal payable on the 2020B Senior Revenue Bonds on the Mandatory Tender Date as Excluded Principal Payments under the Senior Debt Resolutions and thus, for purposes of calculating Maximum Annual Debt Service, included the amount of principal and interest due and payable in connection therewith on a schedule of Assumed Debt Service. This schedule of Assumed Debt Service assumes that Metropolitan will pay the principal of the 2020B Senior Revenue Bonds over a period of 30 years at a fixed interest rate of approximately 5.00 percent.

Metropolitan has previously, and may in the future, enter into one or more self-liquidity revolving credit agreements which may be drawn upon for the purpose of paying the purchase price of any Self-Liquidity Bonds issued by Metropolitan, the repayment obligations of Metropolitan under which may be secured as either Senior Parity Obligations or Subordinate Parity Obligations.

### **Term Mode Bonds**

As of December 1, 2020, Metropolitan had outstanding \$2.8 million of Senior Revenue Bonds bearing interest in a term mode, comprised of its 2014 Series C-3 Bonds (the "Term Mode Bonds"). The Term Mode Bonds initially bear interest at a fixed rate for a specified period from their date of issuance, after which there shall be determined a new interest mode for such Term Mode Bonds (which may be another term mode, a daily mode, a weekly mode, a short-term mode or an index mode) or the Term Mode Bonds may be converted to bear fixed interest rates through the maturity date thereof. The owners of the Term Mode Bonds must tender for purchase, and Metropolitan must purchase, all of the Term Mode Bonds on the specified scheduled mandatory tender date of each term period for such Term Mode Bonds. The Term Mode Bonds outstanding as of December 1, 2020, are summarized in the following table:

<b>Term Mode Bonds</b>		
<b>Series</b>	<b>Original Principal Amount Issued</b>	<b>Next Scheduled Mandatory Tender Date</b>
2014 C-3	\$ 2,810,000	October 1, 2021 <sup>(1)</sup>

*Source: Metropolitan.*

<sup>(1)</sup> Metropolitan expects to refund or remarket the Term Mode Bonds prior to their next scheduled mandatory tender date.

Metropolitan will pay the principal of, and interest on, the Term Mode Bonds on parity with its other Senior Revenue Bonds. Metropolitan anticipates that it will pay the purchase price of tendered Term Mode Bonds from the proceeds of remarketing such Term Mode Bonds or from other available funds. Metropolitan's obligation to pay the purchase price of any tendered Term Mode Bonds is an unsecured, special limited obligation of Metropolitan payable from Net Operating Revenues. Purchase price payments of Term Mode Bonds are subordinate to both the Senior Revenue Bonds and Senior Parity Obligations and to the Subordinate Revenue Bonds and Subordinate Parity Obligations. Metropolitan has not secured any liquidity facility or letter of credit to support the payment of the purchase price of Term Mode Bonds in connection with any scheduled mandatory tender. If the purchase price of the Term Mode Bonds is not paid from the proceeds of remarketing or other funds following a scheduled mandatory tender, such Term Mode Bonds will then bear interest at a default rate of up to 12 percent per annum until purchased by Metropolitan or redeemed. Failure to pay the purchase price of Term Mode Bonds on a scheduled mandatory tender date is a default under the related paying agent agreement, upon the occurrence and continuance of which a majority in aggregate principal amount of the owners of such Term Mode Bonds may elect a bondholders' committee to exercise rights and powers of such owners under such paying agent agreement. Failure to pay the purchase price of Term Mode Bonds on a scheduled mandatory tender date is not a default under the Senior Debt Resolutions. If the purchase price of the Term Mode Bonds is not paid on a scheduled mandatory tender date, such Term Mode Bonds will also be subject to special mandatory redemption, in part, 18, 36 and 54 months following the purchase default. Any such special mandatory redemption payment will constitute an obligation payable on parity with the Senior Revenue Bonds and Senior Parity Obligations.

### **Senior Parity Obligations**

**Short-Term Revolving Credit Facility.** In April 2016, Metropolitan entered into a noteholder's agreement (such agreement as subsequently amended, the "RBC Short-Term Revolving Credit Facility") with RBC Municipal Products, LLC ("RBC") and a related note purchase agreement with RBC Capital Products, LLC, as the underwriter, for the issuance and sale by Metropolitan and the purchase by RBC of Metropolitan's short-term Index Notes. Pursuant to the RBC Short-Term Revolving Credit Facility, Metropolitan may borrow, pay down and re-borrow amounts, through the issuance and sale from time to time of up to \$200 million of notes (including, subject to certain terms and conditions, notes to refund maturing notes) to be purchased by RBC during the term of RBC's commitment thereunder (which commitment currently extends to April 5, 2022). As of December 1, 2020, Metropolitan had outstanding \$0 of short-term notes under the RBC Short-Term Revolving Credit Facility. Any unpaid principal remaining outstanding at

the April 5, 2022 commitment end date of the RBC Short-Term Revolving Credit Facility is required to be paid by Metropolitan in quarterly installments over a period of approximately one year.

Notes under the RBC Short-Term Revolving Credit Facility bear interest at a variable rate of interest: for taxable borrowings, at a spread of 0.54 percent (so long as the current credit rating on Metropolitan's Senior Revenue Bonds issued under the Senior Debt Resolutions is maintained) to the one-month LIBOR; and for tax-exempt borrowings, at a spread of 0.38 percent (so long as the current credit rating on Metropolitan's Senior Revenue Bonds issued under the Senior Debt Resolutions is maintained) to the SIFMA Municipal Swap Index. Under the RBC Short-Term Revolving Credit Facility, upon a failure by Metropolitan to pay principal or interest of any note thereunder, a failure by Metropolitan to perform or observe its covenants, a default in other specified indebtedness of Metropolitan, certain acts of insolvency, or other specified events of default (including a reduction in the credit rating assigned to Senior Revenue Bonds issued under the Senior Debt Resolutions by Fitch, S&P or Moody's below "A-" or "A3"), the bank has the right to terminate its commitments and may accelerate (depending on the event, seven days after the occurrence, or for certain events, only after 180 days' notice) Metropolitan's obligation to repay its borrowings. Metropolitan has secured its obligation to pay principal and interest on notes evidencing borrowings under the RBC Short-Term Credit Facility as Senior Parity Obligations.

In connection with the execution of the RBC Short-Term Revolving Credit Facility, Metropolitan designated the principal and interest payable on the notes thereunder as Excluded Principal Payments under the Senior Debt Resolutions and thus, for purposes of calculating Maximum Annual Debt Service, included the amount of principal and interest due and payable under the RBC Short-Term Revolving Credit Facility on a schedule of Assumed Debt Service. This schedule of Assumed Debt Service assumes that Metropolitan will pay the principal under the RBC Short-Term Revolving Credit Facility over a period of 30 years at a fixed interest rate of approximately 3.3 percent.

Metropolitan has previously, and may in the future, enter into one or more other or alternative short-term revolving credit facilities, the repayment obligations of Metropolitan under which may be secured as either Senior Parity Obligations or Subordinate Parity Obligations.

## **Outstanding Subordinate Revenue Bonds and Subordinate Parity Obligations**

### **Subordinate Revenue Bonds**

The water revenue bonds issued under the Subordinate Debt Resolutions outstanding as of December 1, 2020, are set forth below:

<u>Name of Issue</u>	<u>Principal Outstanding</u>
Subordinate Water Revenue Bonds, 2016 Authorization Series A <sup>(1)</sup>	\$ 175,000,000
Subordinate Water Revenue Refunding Bonds, 2017 Series A	232,715,000
Subordinate Water Revenue Refunding Bonds, 2017 Series B <sup>(2)</sup>	142,575,000
Subordinate Water Revenue Bonds, 2017 Series C <sup>(1)</sup>	80,000,000
Subordinate Water Revenue Refunding Bonds, 2017 Series D <sup>(1)</sup>	95,630,000
Subordinate Water Revenue Refunding Bonds, 2017 Series E <sup>(1)</sup>	95,625,000
Subordinate Water Revenue Refunding Bonds, 2018 Series A	90,115,000
Subordinate Water Revenue Bonds, 2018 Series B	64,345,000
Subordinate Water Revenue Refunding Bonds, 2019 Series A	233,660,000
Subordinate Water Revenue Refunding Bonds, 2020 Series A	152,455,000
<b>Total</b>	<b>\$1,362,120,000</b>

Source: Metropolitan.

<sup>(1)</sup> Outstanding variable rate obligation.

<sup>(2)</sup> Metropolitan expects to refund the \$35,645,000 principal amount of these bonds maturing on August 1, 2021 on or after their July 1, 2021 optional call date and prior to their maturity date.



### **Variable Rate Bonds**

As of December 1, 2020, of the \$1.36 billion outstanding Subordinate Revenue Bonds, \$446.3 million were variable rate obligations. The outstanding variable rate Subordinate Revenue Bonds (described under this caption “–Variable Rate Bonds”) are all bonds bearing interest in a LIBOR Index Mode or a SIFMA Index Mode (referred to herein as “Index Tender Bonds”). Metropolitan also has outstanding \$46.8 million short-term notes issued as variable rate Subordinate Parity Obligations (described under “–Subordinate Parity Obligations – Subordinate Short-Term Certificates” below).

***Direct Purchase LIBOR Index Mode Bonds.*** In December 2016, Metropolitan entered into a Continuing Covenant Agreement with Bank of America, N.A. (“BANA,” and the “2016 BANA Agreement”), for the purchase by BANA and sale by Metropolitan of \$175 million Subordinate Water Revenue Bonds, 2016 Authorization Series A (the “Subordinate 2016 Series A Bonds”), which was the first series of bonds issued under the Subordinate Debt Resolutions. Proceeds were used to reimburse Metropolitan for the purchase of the Delta Islands in the San Francisco Bay\Sacramento-San Joaquin River Delta that was funded from Metropolitan’s reserves in July 2016.

The Subordinate 2016 Series A Bonds bear interest at a variable rate of interest, at a spread of 0.32 percent (so long as the current credit rating on Metropolitan’s Senior Revenue Bonds issued under the Senior Debt Resolutions is maintained) to one-month LIBOR. Under the 2016 BANA Agreement, upon a failure by Metropolitan to pay principal or interest of any Subordinate 2016 Series A Bonds, a failure by Metropolitan to perform or observe its covenants, a default in other specified indebtedness of Metropolitan, certain acts of insolvency, or other specified events of default (including if S&P shall have assigned a credit rating below “BBB–,” or if any of Fitch, S&P or Moody’s shall have assigned a credit rating below “BBB” or “Baa2,” to Senior Revenue Bonds issued under the Senior Debt Resolutions), BANA has the right to accelerate (depending on the event, seven days after the occurrence, or for certain events, only after 180 days’ notice) Metropolitan’s obligation to repay the Subordinate 2016 Series A Bonds. Metropolitan has secured its obligation to pay principal and interest under the 2016 BANA Agreement as a Subordinate Parity Obligation. The Subordinate 2016 Series A Bonds are Index Tender Bonds and are subject to mandatory tender for purchase on the scheduled mandatory tender date of June 21, 2021, or, if directed by BANA upon the occurrence and continuance of an event of default under the 2016 BANA Agreement, five business days after receipt of such direction. On or before the scheduled mandatory tender date, Metropolitan may request an extension of the 2016 BANA Agreement for another tender period or may request BANA to purchase the Subordinate 2016 Series A Bonds in another interest rate mode, or Metropolitan may seek to remarket the Subordinate 2016 Series A Bonds to another bank or in the public debt markets. In the event the 2016 BANA Agreement is not extended, Metropolitan is obligated under the 2016 BANA Agreement to cause unremarketed Subordinate 2016 Series A Bonds to be redeemed five business days after the scheduled mandatory tender date in the event the purchase price of the Subordinate 2016 Series A Bonds is not paid from the proceeds of a remarketing or other funds on the scheduled mandatory tender date. A failure to pay the purchase price of the Subordinate 2016 Series A Bonds upon a mandatory tender would constitute a default under the Subordinate Debt Resolutions if not remedied within five business days.

***SIFMA Index Mode Bonds.*** Metropolitan’s Subordinate Water Revenue Bonds, 2017 Series C, Subordinate Water Revenue Refunding Bonds, 2017 Series D and Subordinate Water Revenue Refunding Bonds, 2017 Series E (collectively, the “Subordinate 2017 Series C, D and E Bonds”) bear interest at a rate that fluctuates weekly based on the SIFMA Municipal Swap Index plus a spread. The Subordinate 2017 Series C, D and E Bonds are Index Tender Bonds and are subject to mandatory tender under certain circumstances, including on certain scheduled mandatory tender dates (unless earlier remarketed or otherwise retired). Metropolitan anticipates that it will pay the purchase price of tendered Subordinate 2017 Series C, D and E Bonds from the proceeds of remarketing such Index Tender Bonds or from other available funds. Metropolitan’s obligation to pay the purchase price of any such tendered Subordinate 2017 Series C, D and E Bonds is a special limited obligation of Metropolitan payable solely from Net Operating Revenues subordinate to the Senior Revenue Bonds and Senior Parity Obligations and on parity with the other

outstanding Subordinate Revenue Bonds and Subordinate Parity Obligations. Metropolitan has not secured any liquidity facility or letter of credit to support the payment of the purchase price of Subordinate 2017 Series C, D and E Bonds in connection with a scheduled mandatory tender. Failure to pay the purchase price of any Subordinate 2017 Series C, D and E Bonds on a scheduled mandatory tender date for such Index Tender Bonds for a period of five business days following written notice by any Owner of such Subordinate 2017 Series C, D and E Bonds will constitute an event of default under the Subordinate Debt Resolutions, upon the occurrence and continuance of which the owners of 25 percent in aggregate principal amount of the Subordinate Revenue Bonds then outstanding may elect a bondholders' committee to exercise rights and powers of such owners under the Subordinate Debt Resolutions, including the right to declare the entire unpaid principal of the Subordinate Revenue Bonds then outstanding to be immediately due and payable.

The mandatory tender dates and related tender periods for the Index Tender Bonds outstanding as of December 1, 2020, are summarized in the following table:

<b>Index Tender Bonds</b>				
<b>Series</b>	<b>Date of Issuance</b>	<b>Original Principal Amount Issued</b>	<b>Next Scheduled Mandatory Tender Date</b>	<b>Maturity Date</b>
Subordinate 2016 Authorization Series A	December 21, 2016	\$175,000,000	June 21, 2021 <sup>(1)</sup>	July 1, 2045
Subordinate 2017 Series C	July 3, 2017	80,000,000	June 21, 2021 <sup>(1)</sup>	July 1, 2047
Subordinate 2017 Refunding Series D	July 3, 2017	95,630,000	June 21, 2021 <sup>(1)</sup>	July 1, 2037
Subordinate 2017 Refunding Series E	July 3, 2017	<u>95,625,000</u>	June 21, 2021 <sup>(1)</sup>	July 1, 2037
<b>Total</b>		<b>\$446,255,000</b>		

Source: Metropolitan.

<sup>(1)</sup> Metropolitan expects to refund or remarket the Index Tender Bonds prior to their next scheduled mandatory tender date.

### **Subordinate Parity Obligations**

**Subordinate Short-Term Certificates.** In August 2019, Metropolitan entered into an amended and restated note purchase and continuing covenant agreement with BANA (the "Subordinate Refunding Note Purchase Agreement") for the purchase by BANA and sale by Metropolitan of Metropolitan's \$46.8 million principal amount of Short-Term Revenue Refunding Certificates, Series 2019 A (the "2019A Subordinate Short-Term Refunding Notes"). The \$46.8 principal amount of 2019A Subordinate Short-Term Refunding Notes issued by Metropolitan and purchased by BANA on August 1, 2019 refunded all of the outstanding notes previously issued by Metropolitan under a prior note purchase and continuing covenant agreement entered into in 2018 between Metropolitan and BANA. Such refunded notes were issued for the purpose of providing advance funding to support the California WaterFix as authorized by the Board on July 10, 2018. On May 2, 2019, DWR withdrew its approval of California WaterFix and announced plans to pursue a new planning and environmental review process for a single tunnel Bay-Delta conveyance project. See "METROPOLITAN'S WATER SUPPLY—State Water Project —Bay-Delta Proceedings Affecting State Water Project — Bay-Delta Planning Activities; Delta Conveyance" in this Appendix A.

The 2019A Subordinate Short-Term Refunding Notes bear interest at a fluctuating per annum interest rate, equal to one-month LIBOR plus a spread of 0.32 percent (which spread is subject to increase on a scale based upon the then applicable credit ratings on Metropolitan's Senior Revenue Bonds), not to exceed 18 percent per annum. The scheduled maturity date of the 2019A Subordinate Short-Term Refunding Notes is August 1, 2021. On or before the date 120 days prior to the scheduled maturity date of the 2019A Subordinate Short-Term Refunding Notes, Metropolitan may request BANA to extend its commitment and to refund and exchange the 2019A Subordinate Short-Term Refunding Notes with new refunding notes, or Metropolitan may seek to refund the 2019A Subordinate Short-Term Refunding Notes with another bank or

to refinance the 2019A Subordinate Short-Term Refunding Notes on a short or long-term basis in the public debt markets.

Concurrently with the execution of the Subordinate Refunding Note Purchase Agreement, in August 2019, Metropolitan entered into an additional note purchase and continuing covenant agreement (the "2019 Subordinate Note Purchase Agreement") with BANA for the purchase by BANA and sale by Metropolitan, from time to time, of Metropolitan's Short-Term Revenue Certificates, Series 2019. Pursuant to the terms of the 2019 Subordinate Note Purchase Agreement, Metropolitan may borrow, through the issuance and sale from time to time of short-term notes (with maturity dates not exceeding one year from their delivery date), an aggregate principal amount not to exceed \$39.2 million (including, subject to certain terms and conditions, notes to refund maturing notes) to be purchased by BANA during the term of BANA's commitment thereunder (the stated expiration date of which is July 30, 2021). As of December 1, 2020, Metropolitan had outstanding \$0 of Short-Term Revenue Certificates under the 2019 Subordinate Note Purchase Agreement.

Notes under the 2019 Subordinate Note Purchase Agreement bear interest at a fluctuating per annum interest rate: (i) for taxable borrowings, equal to one-month LIBOR plus a spread of 0.32 percent; and (ii) for tax-exempt borrowings, equal to 80 percent of one-month LIBOR plus a spread of 0.20 percent; in each case, which spread is subject to increase on a scale based upon the then applicable credit ratings on Metropolitan's Senior Revenue Bonds. The per annum interest rate on notes under 2019 Subordinate Note Purchase Agreement shall not exceed 12 percent on notes issued for new money purposes and shall not exceed 18 percent on notes issued to refund maturing notes.

Metropolitan has secured its obligations to pay principal and interest under the Subordinate Refunding Note Purchase Agreement and the 2019 Subordinate Note Purchase Agreement as Subordinate Parity Obligations, payable from Net Operating Revenues on a basis junior and subordinate to Metropolitan's Senior Revenue Bonds and Senior Parity Obligations and on parity with Metropolitan's Subordinate Revenue Bonds.

Under each of Subordinate Refunding Note Purchase Agreement and the 2019 Subordinate Note Purchase Agreement, upon a failure by Metropolitan to pay principal or interest of any note thereunder, upon a failure by Metropolitan to perform or observe its covenants, a default in other specified indebtedness of Metropolitan, certain acts of bankruptcy or insolvency, or other specified events of default (including if S&P shall have assigned a credit rating below "BBB-," or if any of Fitch, S&P or Moody's shall have assigned a credit rating below "BBB" or "Baa2," to Metropolitan's Senior Revenue Bonds), BANA has the right to terminate its commitments thereunder and may accelerate (depending on the event, seven days after the occurrence, or for certain events, only after 180 days' notice) Metropolitan's obligation to repay its borrowings. Upon the occurrence and during the continuation of an event of default under the Subordinate Refunding Note Purchase Agreement or the 2019 Subordinate Note Purchase Agreement, outstanding notes thereunder would bear interest at a default rate of 12 percent per annum.

#### **Other Junior Obligations**

Metropolitan currently is authorized to issue up to \$400,000,000 of Commercial Paper Notes payable from Net Operating Revenues on a basis subordinate to both the Senior Revenue Bonds and Senior Parity Obligations and to the Subordinate Revenue Bonds and Subordinate Parity Obligations. Although no Commercial Paper Notes are currently outstanding, the authorization remains in full force and effect and Metropolitan may issue Commercial Paper Notes from time to time.

#### **General Obligation Bonds**

As of December 1, 2020, \$32,230,000 aggregate principal amount of general obligation bonds payable from *ad valorem* property taxes were outstanding. See "METROPOLITAN REVENUES-General" and "Revenue Allocation Policy and Tax Revenues" in this Appendix A. Metropolitan's revenue bonds are not payable from the levy of *ad valorem* property taxes.

<b>General Obligation Bonds</b>	<b>Amount Issued<sup>(1)</sup></b>	<b>Principal Outstanding</b>
Waterworks General Obligation Refunding Bonds, 2014 Series A	\$49,645,000	\$ 4,540,000
Waterworks General Obligation Refunding Bonds, 2019 Series A	16,755,000	14,025,000
Water Works General Obligation Refunding Bonds, 2020 Series A	<u>13,665,000</u>	<u>13,665,000</u>
<b>Total</b>	<b><u>\$80,065,000</u></b>	<b><u>\$32,230,000</u></b>

Source: Metropolitan.

<sup>(1)</sup> Voters authorized Metropolitan to issue \$850,000,000 of Waterworks General Obligation Bonds, Election 1966, in multiple series, in a special election held on June 7, 1966. This authorization has been fully utilized. This table lists bonds that refunded such Waterworks General Obligation Bonds, Election 1966.

### State Water Contract Obligations

**General.** As described herein, in 1960, Metropolitan entered into its State Water Contract with DWR to receive water from the State Water Project. All expenditures for capital and operations, maintenance, power and replacement costs associated with the State Water Project facilities used for water delivery are paid for by the 29 Contractors that have executed State water supply contracts with DWR, including Metropolitan. Contractors are obligated to pay allocable portions of the cost of construction of the system and ongoing operating and maintenance costs through at least 2035, regardless of quantities of water available from the project. Other payments are based on deliveries requested and actual deliveries received, costs of power required for actual deliveries of water, and offsets for credits received. In exchange, Contractors have the right to participate in the system, with an entitlement to water service from the State Water Project and the right to use the portion of the State Water Project conveyance system necessary to deliver water to them at no additional cost as long as capacity exists. Metropolitan's State Water Contract accounts for nearly one-half of the total entitlement for State Water Project water contracted for by all Contractors.

DWR and other State Water Contractors, including Metropolitan, have reached an Agreement in Principle to extend their State water supply contracts to 2085 and to make certain changes related to the financial management of the State Water Project in the future. See "METROPOLITAN'S WATER SUPPLY—State Water Project" in this Appendix A.

Metropolitan's payment obligation for the State Water Project for the fiscal year ended June 30, 2020 was \$518.9 million, which amount reflects prior year's credits of \$33.2 million. For the fiscal year ended June 30, 2020, Metropolitan's payment obligations under the State Water Contract were approximately 35 percent of Metropolitan's total annual expenses. A portion of Metropolitan's annual property tax levy is for payment of State Water Contract obligations, as described above under "METROPOLITAN REVENUES—Revenue Allocation Policy and Tax Revenues" in this Appendix A. Any deficiency between tax levy receipts and Metropolitan's State Water Contract obligations is expected to be paid from Operating Revenues, as defined in the Senior Debt Resolutions. See Note 9(a) to Metropolitan's audited financial statements in Appendix B for an estimate of Metropolitan's payment obligations under the State Water Contract. See also "—Power Sources and Costs; Related Long-Term Commitments" for a description of current and future costs for electric power required to operate State Water Project pumping systems and a description of litigation involving the federal relicensing of the Hyatt-Thermalito hydroelectric generating facilities at Lake Oroville.

Metropolitan capitalizes its share of the State Water Project capital costs as participation rights in State Water Project facilities as such costs are billed by DWR. Unamortized participation rights essentially represent a prepayment for future water deliveries through the State Water Project system. Metropolitan's share of system operating and maintenance costs are annually expensed.

DWR and various subsets of the State Water Contractors have entered into amendments to the State water supply contracts related to the financing of certain State Water Project facilities. The amendments establish procedures to provide for the payment of construction costs financed by DWR bonds by establishing separate subcategories of charges to produce the revenues required to pay all of the annual financing costs (including coverage on the allocable bonds) relating to the financed project. If any affected Contractor defaults on payment under certain of such amendments, the shortfall may be collected from the non-defaulting affected Contractors, subject to certain limitations.

These amendments represent additional long-term obligations of Metropolitan, as described below.

***Devil Canyon-Castaic Contract.*** On June 23, 1972, Metropolitan and five other Southern California public agencies entered into a contract (the "Devil Canyon-Castaic Contract") with DWR for the financing and construction of the Devil Canyon and Castaic power recovery facilities, located on the aqueduct system of the State Water Project. Under this contract, DWR agreed to build the Devil Canyon and Castaic facilities, using the proceeds of revenue bonds issued by DWR under the State Central Valley Project Act. DWR also agreed to use and apply the power made available by the construction and operation of such facilities to deliver water to Metropolitan and the other contracting agencies. Metropolitan, in turn, agreed to pay to DWR 88 percent of the debt service on the revenue bonds issued by DWR. For calendar year 2020, this represented a payment of \$7.8 million. In addition, Metropolitan agreed to pay 78.5 percent of the operation and maintenance expenses of the Devil Canyon facilities and 96 percent of the operation and maintenance expenses of the Castaic facilities. Metropolitan's obligations under the Devil Canyon-Castaic Contract continue until the bonds are fully retired in 2022 even if DWR is unable to operate the facilities or deliver power from these facilities.

***Off-Aqueduct Power Facilities.*** In addition to system "on-aqueduct" power facilities costs, DWR has, either on its own or by joint venture, financed certain off-aqueduct power facilities. The power generated is utilized by the system for water transportation and other State Water Project purposes. Power generated in excess of system needs is marketed to various utilities and the California Independent System Operator ("CAISO"). Metropolitan is entitled to a proportionate share of the revenues resulting from sales of excess power. By virtue of a 1982 amendment to the State Water Contract and the other water supply contracts, Metropolitan and the other water Contractors are responsible for paying the capital and operating costs of the off-aqueduct power facilities regardless of the amount of power generated.

***East Branch Enlargement Amendment.*** In 1986, Metropolitan's State Water Contract and the water supply contracts of certain other State Water Contractors were amended for the purpose, among others, of financing the enlargement of the East Branch of the California Aqueduct. Under the amendment, enlargement of the East Branch can be initiated either at Metropolitan's request or by DWR finding that enlargement is needed to meet demands. Metropolitan, the other State Water Contractors on the East Branch, and DWR are currently in discussions on the timetable and plan for future East Branch enlargement actions.

The amendment establishes a separate subcategory of the Transportation Charge under the State Water Contract for the East Branch Enlargement and provides for the payment of costs associated with financing and operating the East Branch Enlargement. Under the amendment, the annual financing costs for such facilities financed by bonds issued by DWR are allocated among the participating Contractors based upon the delivery capacity increase allocable to each participating Contractor. Such costs include, but are not limited to, debt service, including coverage requirements, deposits to reserves, and certain operation and maintenance expenses, less any credits, interest earnings or other moneys received by DWR in connection with this facility.

If any participating Contractor defaults on payment of its allocable charges under the amendment, among other things, the non-defaulting participating Contractors may assume responsibility for such charges and receive delivery capability that would otherwise be available to the defaulting participating Contractor in

proportion to the non-defaulting Contractor's participation in the East Branch Enlargement. If participating Contractors fail to cure the default, Metropolitan will, in exchange for the delivery capability that would otherwise be available to the defaulting participating Contractor, assume responsibility for the capital charges of the defaulting participating Contractor.

***Water System Revenue Bond Amendment.*** In 1987, the State Water Contract and other water supply contracts were amended for the purpose of financing State Water Project facilities through revenue bonds. This amendment establishes a separate subcategory of the Delta Water Charge and the Transportation Charge under the State water supply contracts for projects financed with DWR water system revenue bonds. This subcategory of charge provides the revenues required to pay the annual financing costs of the bonds and consists of two elements. The first element is an annual charge for repayment of capital costs of certain revenue bond financed water system facilities under the existing water supply contract procedures. The second element is a water system revenue bond surcharge to pay the difference between the total annual charges under the first element and the annual financing costs, including coverage and reserves, of DWR's water system revenue bonds.

If any Contractor defaults on payment of its allocable charges under this amendment, DWR is required to allocate a portion of the default to each of the nondefaulting Contractors, subject to certain limitations, including a provision that no nondefaulting Contractor may be charged more than 125 percent of the amount of its annual payment in the absence of any such default. Under certain circumstances, the nondefaulting Contractors would be entitled to receive an allocation of the water supply of the defaulting Contractor.

The following table sets forth Metropolitan's projected costs of State Water Project water based upon DWR's Appendix B to Bulletin 132-19 (an annual report produced by DWR setting forth data and computations used by the State in determining State Water Contractors' Statements of Charges), Metropolitan's share of the forecasted costs associated with the planning of a single tunnel Bay-Delta conveyance project (see "METROPOLITAN'S WATER SUPPLY-State Water Project -Bay-Delta Proceedings Affecting State Water Project - Bay-Delta Planning Activities; Delta Conveyance"), and power costs forecasted by Metropolitan.

The projections for fiscal year 2020-21 are revised from the projections adopted in the fiscal year 2020-21 and 2021-22 biennial budget and based on results through November 2020. The projections for fiscal years 2021-22 through 2024-25 reflect Metropolitan's biennial budget for fiscal years 2020-21 and 2021-22, which includes a ten-year financial forecast. See also "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A. The projections reflect certain assumptions concerning future events and circumstances which may not occur or materialize. Actual costs may vary from these projections if such events and circumstances do not occur as expected or materialize, and such variances may be material.

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**PROJECTED COSTS OF METROPOLITAN  
FOR STATE WATER CONTRACT AND DELTA CONVEYANCE  
(Dollars in Millions)**

Year Ending June 30	Capital Costs <sup>(1)</sup>	Minimum OMP&R <sup>(1)</sup>	Power Costs <sup>(2)</sup>	Refunds & Credits <sup>(1)</sup>	Delta Conveyance <sup>(3)</sup>	Total <sup>(4)</sup>
2021	\$180.4	\$262.8	\$126.6	\$(39.9)	\$25.0	\$554.9
2022	211.9	275.2	212.4	(70.1)	25.0	654.4
2023	189.4	283.9	212.2	(63.5)	50.0	672.0
2024	209.9	294.9	212.5	(64.0)	--	653.3
2025	228.2	309.8	218.9	(66.8)	--	690.1

Source: Metropolitan.

- (1) Capital Costs, Minimum Operations, Maintenance, Power and Replacement ("OMP&R") and Refunds and Credits projections are based on DWR's Appendix B to Bulletin 132-19. Capital costs reflect DWR's October 2019 capital expenditures projections based upon its condition assessment review of State Water Project repair and replacement needs.
- (2) Power costs are forecasted by Metropolitan based on a 50 percent State Water Project allocation. Availability of State Water Project supplies vary and deliveries may include transfers and storage. All deliveries are based upon availability, as determined by hydrology, water quality and wildlife conditions. See "METROPOLITAN'S WATER SUPPLY-State Water Project" and "Endangered Species Act and Other Environmental Considerations" in this Appendix A.
- (3) Based on Metropolitan's share of the forecasted planning costs for a single tunnel project. Does not include any capital costs associated with any future proposed Bay-Delta conveyance project.
- (4) Totals may not add due to rounding.

**Power Sources and Costs; Related Long-Term Commitments**

Current and future costs for electric power required for operating the pumping systems of the CRA and the State Water Project are a substantial part of Metropolitan's overall expenses. Metropolitan's power costs include various ongoing fixed annual obligations under its contracts with the U.S. Department of Energy Western Area Power Administration and the Bureau of Reclamation for power from the Hoover and Parker Power Plants respectively. Expenses for electric power for the CRA for the fiscal years 2018-19 and 2019-20 were approximately and \$39.3 million and \$39.6 million, respectively. Expenses for electric power and transmission service for the State Water Project for fiscal years 2018-19 and 2019-20 were approximately \$127.5 million and \$134.0 million, respectively. Electricity markets are subject to volatility and Metropolitan is unable to give any assurance with respect to the magnitude of future power costs.

**Colorado River Aqueduct.** Approximately 50 percent of the annual power requirements for pumping at full capacity (1.25 million acre-feet of Colorado River water) in Metropolitan's CRA are secured through long-term contracts for energy generated from federal facilities located on the Colorado River (Hoover Power Plant and Parker Power Plant). Payments made under the Hoover Power Plant and Parker Power Plant contracts are operation and maintenance expenses. These contracts provide Metropolitan with reliable and economical power resources to pump Colorado River water to Metropolitan's service area.

As provided for under the Hoover Power Allocation Act of 2011 (H.R. 470), Metropolitan has executed a 50-year agreement with the Western Area Power Administration for the continued purchase of electric energy generated at the Hoover Power Plant through September 2067, succeeding Metropolitan's prior Hoover contract that expired on September 30, 2017.

Depending on pumping conditions, Metropolitan can require additional energy in excess of the base resources available to Metropolitan from the Hoover and Parker Power Plants. The remaining up to approximately 50 percent of annual pumping power requirements for full capacity pumping on the CRA is obtained through energy purchases from municipal and investor-owned utilities, third party suppliers, or the



CAISO markets. Metropolitan is a member of the Western Systems Power Pool (“WSPP”) and utilizes its industry standard form contract to make wholesale power purchases at market cost.

Gross diversions of water from Lake Havasu for fiscal years 2018-19 and 2019-20 were approximately 798,000 acre-feet and 552,000 acre-feet, respectively, including Metropolitan’s basic apportionment of Colorado River water and supplies from water transfer and storage programs. In fiscal years 2018-19 and 2019-20, Metropolitan purchased approximately 395,000 and sold 54,000 megawatt-hours, respectively, of additional energy.

Metropolitan has agreements with the Arizona Electric Power Cooperative (“AEPSCO”) to provide transmission and energy purchasing services to support CRA power operations. The term of these agreements extends to December 31, 2035.

**State Water Project.** The State Water Project’s power requirements are met from a diverse mix of resources, including State-owned hydroelectric generating facilities. DWR has short-term contracts with Metropolitan (hydropower), Kern River Conservation District (hydropower), Northern California Power Agency (natural gas generation), Wells Fargo Company (Solar), Dominion Solar Holdings (Solar), and S-Power Corporation (Solar). The remainder of the State Water Project power needs is met by purchases from the CAISO.

DWR is seeking renewal of the license issued by FERC for the State Water Project’s Hyatt-Thermalito hydroelectric generating facilities at Lake Oroville. A Settlement Agreement containing recommended conditions for the new license was submitted to FERC in March 2006. That agreement was signed by over 50 stakeholders, including Metropolitan and other State Water Contractors. With only a few minor modifications, FERC staff recommended that the Settlement Agreement be adopted as the condition for the new license. DWR issued a final EIR for the relicensing project on July 22, 2008.

Butte County and Plumas County filed separate lawsuits against DWR challenging the adequacy of the final EIR. This lawsuit also named all of the signatories to the Settlement Agreement, including Metropolitan, as “real parties in interest,” since they could be adversely affected by this litigation. On September 5, 2019, the Court of Appeal ruled that review pursuant to CEQA is preempted in certain respects by the Federal Power Act. The case is now before the California Supreme Court. If the decision is affirmed, the case will be dismissed. If the California Supreme Court finds in favor of the plaintiffs, the case will be remanded to the California Court of Appeal for a determination of sufficiency regarding the merits of the CEQA petition.

Regulatory permits and authorizations are also required before the new license can take effect. In December 2016, NMFS issued a biological opinion setting forth the terms and conditions under which the relicensing project must operate in order to avoid adverse impacts to threatened and endangered species. This was the last major regulatory requirement prior to FERC issuing a new license. Following the 2017 Oroville Dam spillway incident, Butte County, the City of Oroville, and others requested that FERC not issue a new license until an Independent Forensic Team (“IFT”) delivered their final report to FERC and FERC has had adequate time to review the report. The Final IFT report was delivered on January 5, 2018. DWR submitted a plan to address the findings of the report to FERC on March 12, 2018. See “METROPOLITAN’S WATER SUPPLY—State Water Project—2017 Oroville Dam Spillway Incident.” Metropolitan anticipates that FERC will issue the new license; however, the timeframe for FERC approval is not currently known. However, FERC has issued one-year renewals of the existing license since its initial expiration date on January 31, 2007 and is expected to issue successive one-year renewals until a new license is obtained.

DWR receives transmission service from the CAISO. The transmission service providers participating in the CAISO may seek increased transmission rates, subject to the approval of FERC. DWR

has the right to contest any such proposed increase. DWR may also be subject to increases in the cost of transmission service as new electric grid facilities are constructed.

On September 10, 2018, Governor Brown signed SB 100 into law, which took effect on January 1, 2019. SB 100 establishes a goal of providing 100 percent carbon-free electricity by 2045 and increases the 2030 Renewables Portfolio Standard ("RPS") requirement for retail electric utilities from 50 percent to 60 percent. Simultaneously, the Governor announced Executive Order B-55-18 directing state agencies to develop a framework to achieve and maintain carbon neutrality by 2045. Metropolitan and DWR are not subject to the RPS requirements. However, as a state agency, DWR is subject to the Executive Order. DWR has an existing climate action plan in order to achieve carbon neutrality by 2045.

October 9, 2019, Governor Newsom signed SB 49 into law. SB 49 requires Natural Resources, in collaboration with the Energy Commission and the Department of Water Resources to assess by January 1, 2022 the opportunities and constraints for potential operational and structural upgrades to the State Water Project to aid California in achieving its climate and energy goals, and to provide associated recommendations consistent with California's energy goals.

### **Defined Benefit Pension Plan and Other Post-Employment Benefits**

Metropolitan is a member of the California Public Employees' Retirement System ("PERS"), a multiple-employer pension system that provides a contributory defined-benefit pension for substantially all Metropolitan employees. PERS provides retirement and disability benefits, annual cost-of-living adjustments and death benefits to plan members and beneficiaries. PERS acts as a common investment and administrative agent for participating public entities within the State. PERS is a contributory plan deriving funds from employee contributions as well as from employer contributions and earnings from investments. A menu of benefit provisions is established by State statutes within the Public Employees' Retirement Law. Metropolitan selects optional benefit provisions from the benefit menu by contract with PERS.

Metropolitan makes contributions to PERS based on actuarially determined employer contribution rates. The actuarial methods and assumptions used are those adopted by the PERS Board of Administration ("PERS Board"). Employees hired prior to January 1, 2013 are required to contribute 7.00 percent of their earnings (excluding overtime pay) to PERS. Pursuant to the current memoranda of understanding, Metropolitan contributes the requisite 7.00 percent contribution for all employees represented by the Management and Professional Employees Association, the Association of Confidential Employees, Supervisors and Professional Personnel Association and AFSCME Local 1902 and who were hired prior to January 1, 2012. Employees in all four bargaining units who were hired on or after January 1, 2012 but before January 1, 2013, pay the full 7.00 percent contribution to PERS for the first five years of employment. After the employee completes five years of employment, Metropolitan contributes the requisite 7.00 percent contribution. Metropolitan also contributes the entire 7.00 percent on behalf of unrepresented employees. Employees hired on or after January 1, 2013 and who are "new" PERS members as defined by Public Employees' Pension Reform Act of 2013 pay a member contribution of 6.00 percent in fiscal years 2018-19 through 2019-20 and 7.25 percent in fiscal years 2020-21 through 2021-22. In addition, Metropolitan is required to contribute the actuarially determined remaining amounts necessary to fund the benefits for its members.

The contribution requirements of the plan members are established by State statute and the employer contribution rate is established and may be amended by PERS. The fiscal year contributions were/are based on the following actuarial reports and discount rates:

<b>Fiscal Year</b>	<b>Actuarial Valuation</b>	<b>Discount Rate</b>
2018-19	June 30, 2016	7.375%
2019-20	June 30, 2017	7.25%
2020-21	June 30, 2018	7.00%
2021-22	June 30, 2019	7.00%

Metropolitan was required to contribute 25.97 percent and 29.97 percent of annual projected payroll for fiscal years 2018-19 and 2019-20, respectively. Metropolitan's actual contribution for fiscal years 2018-19 and 2019-20 were \$68.3 million or 32.14 percent of annual covered payroll and \$77.6 million or 34.38 percent of annual covered payroll, respectively. The fiscal years 2018-19 and 2019-20 actual contribution included \$11.8 million or 5.56 percent and \$11.5 million or 5.10 percent of annual covered payroll, respectively, for Metropolitan's pick-up of the employees' 7.00 percent share. For fiscal years 2020-21 and 2021-22, Metropolitan is required to contribute 32.43 percent and 34.39 percent, respectively, of annual projected payroll, in addition to member contributions paid by Metropolitan.

Metropolitan's required contributions to PERS fluctuate each year and include a normal cost component and a component equal to an amortized amount of the unfunded liability. Many assumptions are used to estimate the ultimate liability of pensions and the contributions that will be required to meet those obligations. The PERS Board has adjusted and may in the future further adjust certain assumptions used in the PERS actuarial valuations, which may increase Metropolitan's required contributions to PERS in future years. Accordingly, Metropolitan cannot provide any assurances that its required contributions to PERS in future years will not significantly increase (or otherwise vary) from any past or current projected levels of contributions.

On December 21, 2016, the PERS Board approved lowering the discount rate to 7.00 percent over a three-year period. PERS has estimated that with a reduction in the rate of return to 7.00 percent, most employers could expect a rate increase of 1.00 percent to 3.00 percent of normal cost as a percent of payroll for miscellaneous plans and an increase in payments toward unfunded accrued liabilities of between 30 to 40 percent. As a result, required contributions of employers, including Metropolitan, are expected to increase.

Beginning with fiscal year 2017-18 PERS began collecting employer contributions towards the plan's unfunded liability as dollar amounts instead of the prior method of contribution rate. This change addresses potential funding issues that could arise from a declining payroll or reduction in the number of active members in the plan.

On December 19, 2017, the PERS Board adopted new actuarial assumptions based on the recommendations in the December 2017 CalPERS Experience Study and Review of Actuarial Assumptions. This study reviewed the retirement rates, termination rates, mortality rates, rates of salary increases and inflation assumption for public agencies. These new assumptions were incorporated in the June 30, 2017 actuarial valuation and reflected in the required contribution for fiscal year 2019-20. In addition, the Board adopted a new asset portfolio as part of its Asset Liability Management. The new asset mix supports a 7.00 percent discount rate. The reduction of the inflation assumption will be implemented in two steps in conjunction with the decreases in the discount rate. For the June 30, 2017 valuation an inflation rate of 2.625 percent was used and for the June 30, 2018 and subsequent valuations, an inflation rate of 2.50 percent was/will be used.

The PERS Board has adopted a new amortization policy effective with the June 30, 2019 actuarial valuation. The new policy shortens the period over which actuarial gains and losses are amortized from 30 years to 20 years with the payments computed using a level dollar amount. In addition, the new policy removes the five-year ramp-up and ramp-down on unfunded accrued liability bases attributable to

assumption changes and non-investment gains/losses. The new policy removes the five-year ramp-down on investment gains/losses. These changes will apply only to new unfunded accrued liability bases established on or after June 30, 2019.

The following table shows the funding progress of Metropolitan's pension plan.

<b>Valuation Date</b>	<b>Accrued Liability (\$ in billions)</b>	<b>Market Value of Assets (\$ in billions)</b>	<b>Unfunded Accrued Liability (\$ in billions)</b>	<b>Funded Ratio</b>
6/30/19 <sup>(1)</sup>	\$2.534	\$1.810	\$(0.724)	71.4%
6/30/18	\$2.433	\$1.744	\$(0.689)	71.7%
6/30/17	\$2.269	\$1.651	\$(0.618)	72.7%
6/30/16	\$2.166	\$1.524	\$(0.642)	70.3%
6/30/15	\$2.060	\$1.556	\$(0.504)	75.5%
6/30/14	\$1.983	\$1.560	\$(0.423)	78.7%
6/30/13	\$1.805	\$1.356	\$(0.449)	75.1%

<sup>(1)</sup> Most recent actuarial valuation available.

Source: California Public Employees' Retirement System.

The market value of assets reflected above is based upon the most recent actuarial valuation as of June 30, 2019. The actuarial valuation as of June 30, 2020 is not expected to be available before summer 2021. The June 30, 2020 valuation report will be used to establish the contribution requirements for fiscal year 2022-23. Increased volatility has been experienced in the financial markets in recent months and the market value at the time of the June 30, 2020 valuation is not yet known. Significant losses in market value or failure to achieve projected investment returns could substantially increase unfunded pension liabilities and future pension costs. See also "INTRODUCTION-COVID-19 Pandemic." However, as noted above, under the amortization policy adopted by PERS, changes in the unfunded accrued liability due to actuarial gains or losses are amortized over a fixed 20-year period with a five-year ramp up at the beginning and a five-year ramp down at the end of the amortization period, as a result of which the immediate fiscal impact of any one year's negative return on Metropolitan's contribution rates is reduced.

The following tables show the changes in Net Pension Liability and related ratios of Metropolitan's pension plan for fiscal years 2019-20 and 2018-19, and for fiscal years 2018-19 and 2017-18.

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(Dollars in thousands)	06/30/20	6/30/19	Increase/ (Decrease)
<b>Total Pension Liability</b>	\$2,479,307	\$2,376,778	\$102,529
<b>Plan Fiduciary Net Position</b>	1,810,312	1,742,741	67,571
<b>Plan Net Pension Liability</b>	\$ 668,995	\$ 634,037	\$ 34,958
Plan fiduciary net positions as a % of the total pension liability	73.02%	73.32%	
Covered payroll	\$ 212,558	\$ 204,635	
Plan net pension liability as a % of covered payroll	314.74%	309.84%	

(Dollars in thousands)	06/30/19	6/30/18	Increase/ (Decrease)
<b>Total Pension Liability</b>	\$2,376,778	\$2,315,248	\$61,530
<b>Plan Fiduciary Net Position</b>	1,742,741	1,654,331	88,410
<b>Plan Net Pension Liability</b>	\$ 634,037	\$ 660,917	\$(26,880)
Plan fiduciary net positions as a % of the total pension liability	73.32%	71.45%	
Covered payroll	\$ 204,635	\$ 199,186	
Plan net pension liability as a % of covered payroll	309.84%	331.81%	

The Net Pension Liability for Metropolitan's Miscellaneous Plan for the fiscal years ended June 30, 2020 and 2019 was measured as of June 30, 2019 and June 30, 2018, respectively, and the Total Pension Liability used to calculate the Net Pension Liability as of such dates was determined by an annual actuarial valuation as of June 30, 2018 and June 30, 2017, respectively.

For more information on the plan, see APPENDIX B—"THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA INDEPENDENT AUDITORS' REPORT AND BASIC FINANCIAL STATEMENTS FOR FISCAL YEARS ENDED JUNE 30, 2020 AND JUNE 30, 2019 AND BASIC FINANCIAL STATEMENTS FOR THE THREE MONTHS ENDED SEPTEMBER 30, 2020 AND 2019 (UNAUDITED)."

Metropolitan currently provides post-employment medical insurance to retirees and pays the post-employment medical insurance premiums to PERS. On January 1, 2012, Metropolitan implemented a longer vesting schedule for retiree medical benefits, which applies to all new employees hired on or after January 1, 2012. Payments for this benefit were \$27.3 million in fiscal year 2018-19 and \$45.3 million in fiscal year 2019-20. Under Governmental Accounting Standards Board Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*, Metropolitan is required to account for and report the outstanding obligations and commitments related to such benefits, commonly referred to as other post-employment benefits ("OPEB"), on an accrual basis.

The actuarial valuations dated June 30, 2017 and June 30, 2019, were released in March of 2018 and June of 2020, respectively. The 2017 valuation indicated that the Actuarially Determined Contribution ("ADC") in fiscal year 2019-20 was \$28.1 million and 2019 valuation indicate that the ADC will be

\$23.2 million and \$23.6 million in fiscal years 2020-21 and 2021-22, respectively. The ADC was based on the entry-age normal actuarial cost method with contributions determined as a level percent of pay. The actuarial assumptions included the following:

	June 30, 2019 Valuation	June 30, 2017 Valuation
Investment Rate of Return	6.75%	6.75%
Inflation	2.75%	2.75%
Salary Increases	3.00%	3.00%
Health Care Cost Trends	Medicare – starting at 6.3%, grading down to 4.0% over fifty-five years. Non-Medicare – starting at 7.25%, grading down to 4.0% over fifty-five years	Medicare – starting at 6.5%, grading down to 4.0% over fifty-seven years. Non-Medicare – starting at 7.5%, grading down to 4.0% over fifty-seven years.
Mortality, Termination, Disability	CalPERS 1997-2015 Experience Study Mortality projected fully generational with Scale MP-2019	CalPERS 1997-2011 Experience Study Mortality projected fully generational with Scale MP-2017
Affordable Care Act (ACA) Excise Tax	Not included. Repealed in December 2019.	2% load on retiree medical premium subsidy

As of June 30, 2019, the date of the most recent OPEB actuarial report, the unfunded actuarial accrued liability was estimated to be \$164.3 million and projected to be \$156.7 million at June 30, 2020. The amortization period for the unfunded actuarial accrued liability is 23 years closed with 17 years remaining as of fiscal year end 2020 and the amortization period of actuarial gains and losses is 15 years closed. Adjustments to the ADC include amortization of the unfunded actuarial accrued liability and actuarial gains and losses.

In September 2013, Metropolitan’s Board established an irrevocable OPEB trust fund with the California Employers’ Retiree Benefit Trust Fund. The market value of assets in the trust as of June 30, 2020 was \$287.7 million. As part of its biennial budget process, the Board approved the full funding of the ADC for fiscal years 2020-21 and 2021-22.

As noted above, the COVID-19 pandemic and related economic consequences have contributed to increased volatility in the financial markets. Declines in the market value of the OPEB trust fund or failure to achieve projected investment returns could negatively affect the funding status of the trust fund and increase ADCs in the future. See also “INTRODUCTION–COVID-19 Pandemic.”

The following tables show the changes in Net OPEB Liability and related ratios of Metropolitan’s OPEB plan for fiscal years 2019-20 and 2018-19, and for fiscal years 2018-19 and 2017-18.

<u>(Dollars in thousands)</u>	<u>06/30/20</u>	<u>6/30/19</u>	<u>Increase/ (Decrease)</u>
<b>Total OPEB Liability</b>	\$434,759	\$468,185	\$(33,426)
<b>Plan Fiduciary Net Position</b>	266,773	239,851	26,922
<b>Plan Net OPEB Liability</b>	\$167,986	\$228,334	\$(60,348)
Plan fiduciary net positions as a % of the total OPEB liability	61.36%	51.23%	
Covered payroll	\$212,558	\$204,635	
Plan net OPEB liability as a % of covered payroll	79.03%	111.58%	

<u>(Dollars in thousands)</u>	<u>06/30/19</u>	<u>6/30/18</u>	<u>Increase/ (Decrease)</u>
<b>Total OPEB Liability</b>	\$468,185	\$448,095	\$ 20,090
<b>Plan Fiduciary Net Position</b>	239,851	207,526	32,325
<b>Plan Net OPEB Liability</b>	\$228,334	\$240,569	\$(12,235)
Plan fiduciary net positions as a % of the total OPEB liability	51.23%	46.31%	
Covered payroll	\$204,635	\$199,186	
Plan net OPEB liability as a % of covered payroll	111.58%	120.78%	

The Net OPEB Liability for the fiscal years ended June 30, 2020 and 2019 was measured as of June 30, 2019 and June 30, 2018, respectively, and the Total OPEB Liability used to calculate the Net OPEB Liability as of such dates was determined by an annual actuarial valuation as of June 30, 2019 and June 30, 2017, respectively.

#### HISTORICAL AND PROJECTED REVENUES AND EXPENSES

The "Historical and Projected Revenues and Expenses" table below provides a summary of revenues and expenses of Metropolitan prepared on a modified accrual basis. This is consistent with the biennial budget for fiscal years 2020-21 and 2021-22, which includes a ten-year financial forecast. The table does not reflect the accrual basis of accounting, which is used to prepare Metropolitan's annual audited financial statements. The modified accrual basis of accounting varies from the accrual basis of accounting in the following respects: depreciation and amortization are not recorded and payments for debt service and pay-as-you-go construction are recorded when paid. Under the modified accrual basis of accounting, revenues are recognized in the fiscal year in which they are earned, and expenses are recognized when incurred. Thus, water revenues are recognized in the month the water transaction occurs and expenses are recognized when goods have been received and services have been rendered. The change to modified accrual accounting is for budgeting purposes and Metropolitan will continue to calculate compliance with its rate covenant, limitations on additional bonds and other financial covenants in the Revenue Bond Resolutions in accordance with their terms.

The projections are based on assumptions concerning future events and circumstances that may impact revenues and expenses and represent management's best estimates of results at this time. See the



footnotes to the table below entitled “HISTORICAL AND PROJECTED REVENUES AND EXPENSES” and “MANAGEMENT’S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES” for relevant assumptions, including projected water transactions and the average annual increase in the effective water rate, and “MANAGEMENT’S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES” for a discussion of potential impacts. Some assumptions inevitably will not materialize, and unanticipated events and circumstances may occur. Therefore, the actual results achieved during the projection period will vary from the projections and the variations may be material. The budget and projection information, and all other forward-looking statements in this Appendix A, are based on current expectations and are not intended as representations of facts or guarantees of future results.

The COVID-19 outbreak is a significant recent development that is currently materially adversely affecting global, national, State, and local economic activity and prospects. Because of the unprecedented nature of the COVID-19 pandemic, historical data may not be an accurate predictor of future performance. Accordingly, any trends that may be suggested by historical data and budgets or projections described herein which pre-date the onset of the COVID-19 emergency or do not include information regarding its impact should be considered in light of a possible or probable negative impact of COVID-19. Moreover, the COVID-19 pandemic is ongoing and possible future impacts involve many developing and unknown outcomes, several of which are identified in the discussion included under “INTRODUCTION- COVID-19 Pandemic.”

As discussed under “INTRODUCTION–COVID-19 Pandemic,” Metropolitan modified certain assumptions made in its preliminary biennial budget as initially presented to the Board in February 2020 following the onset of the COVID-19 outbreak to consider certain then-anticipated effects of COVID-19, primarily potential effects on the regional economy, financial impacts to member agencies and impacts on construction schedules and timing of capital expenditures. The biennial budget for fiscal years 2020-21 and 2021-22, and water rates and charges for calendar years 2021 and 2022 as adopted by the Board on April 14, 2020, reflect these adjustments. In recognition of the changed circumstances and the ongoing uncertainties related to COVID-19 (including those referenced above), as was contemplated in connection with its approval of the biennial budget for fiscal years 2020-21 and 2021-22, Metropolitan’s Board reviewed the adopted budget and rates in September 2020 to consider further impacts resulting from the COVID-19 crisis.

As noted herein, the financial projection for fiscal year 2020-21 reflects revised projections based on results through November 2020, and the financial projections for fiscal years 2021-22 through 2024-25 reflect the biennial budget for fiscal years 2020-21 and 2021-22 and ten-year financial forecast provided therein. The financial projections include Metropolitan’s share of the forecasted costs associated with the planning of a single tunnel Bay-Delta conveyance project. See “METROPOLITAN’S WATER SUPPLY–State Water Project –Bay-Delta Proceedings Affecting State Water Project – Bay-Delta Planning Activities; Delta Conveyance” in this Appendix A.

Metropolitan’s resource planning projections are developed using a comprehensive analytical process that incorporates demographic growth projections from recognized regional planning entities, historical and projected data acquired through coordination with local agencies, and the use of generally accepted empirical and analytical methodologies. See “METROPOLITAN’S WATER SUPPLY–Integrated Water Resources Plan” in this Appendix A. Due to the variability of supplemental wholesale water transactions and unpredictability of future hydrologic conditions, projections of the volume of annual water transactions are based on projections in Metropolitan’s latest Board adopted Integrated Resources Plan, the 2015 IRP Update and recently recalibrated by Metropolitan’s Water Resource Management for the biennial budget for fiscal years 2020-21 and 2021-22 and ten-year financial forecast provided therein.

Nevertheless, Metropolitan’s assumptions have been questioned by directors representing SDCWA on Metropolitan’s Board. Metropolitan has reviewed SDCWA’s concerns and, while recognizing that

assumptions may vary, believes that the estimates and assumptions that support Metropolitan's projections are reasonable based upon history, experience and other factors as described herein.

Metropolitan's projections of the level of water transactions are the result of a comprehensive retail demand, conservation, and local supply estimation process, including supply projections from member agencies and other water providers within Metropolitan's service area. Retail demands for water are estimated with a model driven by projections of relevant demographics provided by SCAG and SANDAG. Retail demands are adjusted downward for conservation savings and local supplies, with the remainder being the estimated demand for Metropolitan supplies. Conservation savings estimates include all conservation programs in place to date as well as estimates of future conservation program goals outlined in the 2015 IRP Update. See "CONSERVATION AND WATER SHORTAGE MEASURES" in this Appendix A. Local supplies include water produced by local agencies from various sources including but not limited to groundwater, surface water, locally-owned imported supplies, recycled water, and seawater desalination (see "REGIONAL WATER RESOURCES" in this Appendix A). For additional description of Metropolitan's water transactions projections, see "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A.

The water transactions projections used to determine water rates and charges assume an average year hydrology. Actual water transactions are likely to vary from projections. As shown in the chart entitled "Historical Water Transactions" below, transactions can vary significantly from average and demonstrates the degree to which Metropolitan's commitments to meet supplemental demands can impact transactions. In years when actual transactions exceed projections, the revenues from water transactions during the fiscal year will exceed budget, potentially resulting in an increase in financial reserves. In years when actual transactions are less than projections, Metropolitan uses various tools to manage reductions in revenues, such as reducing expenses below budgeted levels, reducing funding of capital from revenues, and drawing on reserves. See "METROPOLITAN REVENUES—Financial Reserve Policy" in this Appendix A. Metropolitan considers actual transactions, revenues and expenses, and financial reserve balances in setting rates for future fiscal years.

Projections in the following table reflect revised projections for fiscal year 2020-21 based on results through November 2020. Financial projections for fiscal years 2021-22 through 2024-25 reflect the biennial budget for fiscal year 2020-21 and 2021-22 and ten-year financial forecast provided therein. This includes the issuance of \$585 million of bonds for fiscal years 2020-21 through 2024-25 to finance the CIP. See "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES" and "CAPITAL INVESTMENT PLAN—Capital Investment Plan Financing" in this Appendix A.

Water transactions with member agencies were 1.37 million acre-feet in fiscal year 2019-20. Water transactions with member agencies are projected to be 1.48 million acre-feet for fiscal year 2020-21, 1.60 million acre-feet for fiscal years 2021-22 and 2022-23, 1.64 million acre-feet for fiscal year 2023-24, and 1.69 million acre-feet for fiscal year 2024-25. Rates and charges increased by 3.0 percent on January 1, 2021 and will increase by 4.0 percent on January 1, 2022. Rates and charges are projected to increase 5.0 percent for each of calendar years 2023 and 2024, and 4.0 percent for calendar year 2025. Actual rates and charges to be effective in 2023 and thereafter are subject to adoption by Metropolitan's Board.

The projections were prepared by Metropolitan and have not been reviewed by independent certified public accountants or any entity other than Metropolitan. Dollar amounts are rounded.

**HISTORICAL AND PROJECTED REVENUES AND EXPENSES<sup>(a)</sup>**  
**Fiscal Years Ended June 30**  
**(Dollars in Millions)**

	Actual				Projected				
	2017	2018	2019	2020	2021	2022	2023	2024	2025
Water Revenues <sup>(b)</sup>	\$1,151	\$1,285	\$1,149	\$1,188	\$1,328	\$1,476	\$1,542	\$1,667	\$1,793
Additional Revenue Sources <sup>(c)</sup>	184	172	170	165	165	175	183	189	202
<b>Total Operating Revenues</b>	<b>1,335</b>	<b>1,457</b>	<b>1,319</b>	<b>1,353</b>	<b>1,493</b>	<b>1,651</b>	<b>1,725</b>	<b>1,856</b>	<b>1,995</b>
O&M, CRA Power and Water Transfer Costs <sup>(d)</sup>	(559)	(568)	(569)	(642)	(710)	(750)	(796)	(847)	(877)
Total SWC OMP&R and Power Costs <sup>(e)</sup>	(368)	(395)	(347)	(384)	(424)	(513)	(546)	(507)	(529)
<b>Total Operation and Maintenance</b>	<b>(927)</b>	<b>(963)</b>	<b>(916)</b>	<b>(1,026)</b>	<b>(1,134)</b>	<b>(1,263)</b>	<b>(1,342)</b>	<b>(1,354)</b>	<b>(1,406)</b>
<b>Net Operating Revenues</b>	<b>\$ 408</b>	<b>\$ 494</b>	<b>\$ 403</b>	<b>\$ 327</b>	<b>\$ 359</b>	<b>\$ 388</b>	<b>\$ 383</b>	<b>\$ 502</b>	<b>\$ 589</b>
Miscellaneous Revenue <sup>(f)</sup>	18	27	22	14	8	26	27	27	28
Transfer from Reserve Funds <sup>(g)</sup>	33	1	--	--	--	--	--	--	--
Sales of Hydroelectric Power <sup>(h)</sup>	21	24	18	16	15	22	23	14	14
Interest on Investments <sup>(i)</sup>	4	8	34	20	18	18	18	18	19
<b>Adjusted Net Operating Revenues<sup>(j)</sup></b>	<b>484</b>	<b>554</b>	<b>477</b>	<b>377</b>	<b>400</b>	<b>454</b>	<b>451</b>	<b>561</b>	<b>650</b>
Senior and Subordinate Obligations <sup>(k)</sup>	(308)	(340)	(333)	(272)	(279)	(298)	(306)	(323)	(320)
<b>Funds Available from Operations</b>	<b>\$ 176</b>	<b>\$ 214</b>	<b>\$ 144</b>	<b>\$ 105</b>	<b>\$ 121</b>	<b>\$ 156</b>	<b>\$ 145</b>	<b>\$ 238</b>	<b>\$ 330</b>
<b>Debt Service Coverage on all Senior and Subordinate Bonds<sup>(l)</sup></b>	<b>1.57</b>	<b>1.63</b>	<b>1.43</b>	<b>1.39</b>	<b>1.43</b>	<b>1.52</b>	<b>1.47</b>	<b>1.74</b>	<b>2.03</b>
<b>Funds Available from Operations</b>	<b>\$ 176</b>	<b>\$ 214</b>	<b>\$ 144</b>	<b>\$ 105</b>	<b>\$ 121</b>	<b>\$ 156</b>	<b>\$ 145</b>	<b>\$ 238</b>	<b>\$ 330</b>
Other Revenues (Expenses)	(4)	(5)	(6)	(6)	(7)	(7)	(7)	(8)	(8)
Pay-As-You Go Construction	(132)	(98)	(128)	(39)	(110)	(135)	(180)	(180)	(210)
Pay-As-You Go Funded from Replacement & Refurbishment Fund Reserves	1	1	--	1	--	--	--	--	--
<b>Total SWC Capital Costs Paid from Current Year Operations</b>	<b>(45)</b>	<b>(21)</b>	<b>(4)</b>	<b>(1)</b>	<b>1</b>	<b>(10)</b>	<b>12</b>	<b>(8)</b>	<b>(24)</b>
<b>Remaining Funds Available from Operations</b>	<b>(4)</b>	<b>91</b>	<b>6</b>	<b>60</b>	<b>5</b>	<b>4</b>	<b>(30)</b>	<b>42</b>	<b>88</b>
Fixed Charge Coverage <sup>(m)</sup>	1.37	1.53	1.42	1.38	1.44	1.47	1.53	1.69	1.89
Property Taxes	116	131	145	147	140	140	140	140	140
General Obligation Bonds Debt Service	(22)	(20)	(14)	(13)	(7)	(8)	(2)	(2)	(2)
SWC Capital Costs Paid from Taxes	(94)	(111)	(131)	(134)	(133)	(132)	(138)	(138)	(138)
<b>Net Funds Available from Current Year</b>	<b>\$ (4)</b>	<b>\$ 91</b>	<b>\$ 6</b>	<b>\$ 60</b>	<b>\$ 5</b>	<b>\$ 4</b>	<b>\$ (30)</b>	<b>\$ 42</b>	<b>\$ 88</b>

Source: Metropolitan.

(Footnotes on next page)

(Footnotes to table on prior page)

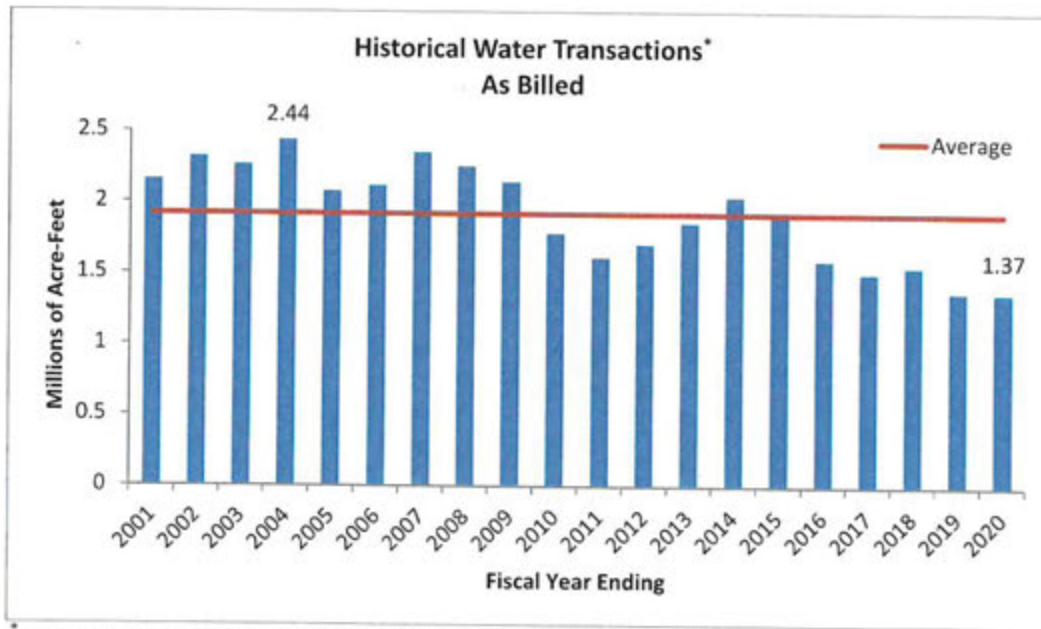
- (a) Unaudited. Prepared on a modified accrual basis. Projected revenues and expenses in fiscal year 2020-21 are based on results through November 2020 and revised from the projections provided in the adopted biennial budget for fiscal years 2020-21 and 2021-22. Projections for fiscal year 2021-22 through fiscal year 2024-25 are based on assumptions and estimates used in the biennial budget for fiscal years 2020-21 and 2021-22 and ten-year financial forecast provided therein, and reflect the projected issuance of additional bonds. See "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A.
- (b) Water Revenues include revenues from water sales, exchanges, and wheeling. During the fiscal years ended June 30, 2018 through June 30, 2020, annual water transactions with member agencies (in acre-feet) were 1.55 million, 1.37 million, and 1.37 million, respectively. See the table entitled "Summary of Water Transactions and Revenues" under "METROPOLITAN REVENUES—Water Revenues" in this Appendix A. The water transactions projections (in acre-feet) are 1.48 million acre-feet for fiscal year 2020-21, 1.60 million acre-feet for fiscal years 2021-22 and 2022-23, 1.64 million acre-feet for fiscal year 2023-24, and 1.69 million acre-feet for fiscal year 2024-25. Projections reflect adopted overall rate and charge increases of 3.0 percent effective on January 1, 2021 and 4.0 percent effective on January 1, 2022. Rates and charges are projected to increase an average of 5.0 percent in each of calendar years 2023 and 2024, and an average of 4.0 percent for calendar year 2025, subject to adoption by Metropolitan's Board. See "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A.
- (c) Includes revenues from water standby, readiness-to-serve, and capacity charges. The term Operating Revenues excludes *ad valorem* taxes. See "METROPOLITAN REVENUES—Other Charges" in this Appendix A.
- (d) Water Transfer Costs and Regional Recycled Water Program planning costs (described under "REGIONAL WATER RESOURCES—Local Water Supplies – Recycled Water-Metropolitan Regional Recycled Water Program") are included in operation and maintenance expenses for purposes of calculating the debt service coverage on all Obligations.
- (e) Includes on- and off-aqueduct power and operation, maintenance, power and replacement costs payable under the State Water Contract and Bay-Delta conveyance planning costs. See "METROPOLITAN EXPENSES—State Water Contract Obligations" in this Appendix A. See also "METROPOLITAN'S WATER SUPPLY—State Water Project –Bay-Delta Proceedings Affecting State Water Project – Bay-Delta Planning Activities; Delta Conveyance" in this Appendix A.
- (f) May include lease and rental net proceeds, net proceeds from sale of surplus property, reimbursements, and historically, federal interest subsidy payments for Build America Bonds.
- (g) Reflects transfers from the Water Management Fund, the Water Stewardship Fund, and the Water Rate Stabilization Fund, of \$33 million in fiscal year 2016-17, and \$1 million in fiscal year 2017-18, to fund a like amount of costs for conservation and supply programs. See "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A.
- (h) Includes CRA power sales.
- (i) Does not include interest applicable to Bond Construction Funds, the Excess Earnings Funds, other trust funds and the Deferred Compensation Trust Fund.
- (j) Adjusted Net Operating Revenues is the sum of all available revenues that the revenue bond resolutions specify may be considered by Metropolitan in setting rates and issuing additional Senior Revenue Bonds and Senior Parity Obligations and Subordinate Revenue Bonds and Subordinate Parity Obligations.
- (k) Includes debt service on outstanding Senior Revenue Bonds, Senior Parity Obligations, Subordinate Revenue Bonds, Subordinate Parity Obligations, and additional Revenue Bonds (projected). Assumes issuance of approximately \$255 million in additional Revenue Bonds in fiscal year 2020 21, approximately \$120 million in each of fiscal years 2022 23 and 2023-24, and approximately \$90 million in fiscal year 2024 25. Fiscal year 2017-18 debt service increased by \$15.3 million for debt service prepaid through bond refunding transactions in June 2018, rather than on July 1, 2018 and fiscal year 2018-19 debt service is therefore reduced by \$15.3 million. Fiscal year 2018-19 debt service increased by \$28.5 million for debt service prepaid in June 2019, rather than on July 1, 2019 and fiscal year 2019-20 debt service is therefore reduced by \$28.5 million. See "CAPITAL INVESTMENT PLAN—Capital Investment Plan Financing" in this Appendix A.
- (l) Adjusted Net Operating Revenues, divided by the sum of debt service on outstanding Senior Revenue Bonds, Senior Parity Obligations, Subordinate Revenue Bonds and Subordinate Parity Obligations, including the subordinate lien California Safe Drinking Water Revolving Fund Loan (prior to its discharge in 2017) and projected Revenue Bonds. See "METROPOLITAN EXPENSES—Outstanding Senior Revenue Bonds and Senior Parity Obligations" and "—Outstanding Subordinate Revenue Bonds and Subordinate Parity Obligations" in this Appendix A.
- (m) Adjusted Net Operating Revenues, divided by the sum of State Water Contract capital costs paid from current year operations and debt service on outstanding Senior Revenue Bonds, Senior Parity Obligations, Subordinate Revenue Bonds and Subordinate Parity Obligations, including the subordinate lien California Safe Drinking Water Revolving Fund Loan (prior to its discharge in 2017) and additional Revenue Bonds (projected).

## MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES

### Water Transactions Projections

The water transactions with member agencies in the table above for fiscal year 2019-20 were 1.37 million acre-feet. The water transactions forecast is 1.48 million acre-feet for fiscal year 2020-21 (reflecting the revised projections based on results through November 2020), and 1.60 million acre-feet for fiscal years 2021-22 and 2022-23, 1.64 million acre-feet for fiscal year 2023-24, and 1.69 million acre-feet for fiscal year 2024-25, consistent with the biennial budget and ten-year financial forecast. For purposes of comparison, Metropolitan's highest level of water transactions during the past 20 fiscal years was approximately 2.44 million acre-feet in fiscal year 2003-04 and the lowest was 1.37 million acre-feet in fiscal

year 2019-20. The chart below shows the volume of water transactions with member agencies over the last 20 fiscal years.



\*Water transactions include sales, exchanges, and wheeling with member agencies.

### Water Revenues

Metropolitan relies on revenues from water transactions for about 75 percent of its total revenues. In adopting the budget and rates and charges for each fiscal year, Metropolitan’s Board reviews the anticipated revenue requirements and projected water transactions to determine the rates necessary to produce the required revenues to be derived from water transactions during the fiscal year. Metropolitan sets rates and charges estimated to provide operating revenues sufficient, with other sources of funds, to provide for payment of its expenses. See “HISTORICAL AND PROJECTED REVENUES AND EXPENSES” in this Appendix A.

Metropolitan’s Board has adopted annual increases in water rates each year beginning with the rates effective January 1, 2004. See “METROPOLITAN REVENUES–Rate Structure” and “–Classes of Water Service” in this Appendix A. On April 14, 2020, the Board adopted average increases in rate and charges of 3.0 percent, to become effective on January 1, 2021, and 4.0 percent, to become effective on January 1, 2022. Rates and charges are projected to increase 5.0 percent for each of calendar years 2023 and 2024, and 4.0 percent for calendar year 2025. Actual rates and charges to be effective in 2023 and thereafter are subject to adoption by Metropolitan’s Board.

### Projected Fiscal Year 2020-21 Results

Projections for fiscal year 2020-21, in the table above, are revised from the projections adopted in the fiscal year 2020-21 and 2021-22 biennial budget and based on results through November 2020. Financial projections for fiscal years 2021-22 through 2024-25 are reflected in the fiscal year 2020-21 and 2021-22 biennial budget and ten-year financial forecast provided therein. The fiscal year 2020-21 and 2021-22 biennial budget and rates set the stage for predictable and reasonable rate increases over the ten-year planning period, with Board adopted overall rate increases of 3.0 percent for calendar year 2021 and 4.0 percent for calendar year 2022. The fiscal year 2020-21 and 2021-22 biennial budget and ten-year financial forecast includes rate increases of 5.0 percent for each of calendar years 2023 and 2024, and

4.0 percent for calendar year 2025. Actual rates and charges to be effective in 2023 and thereafter are subject to adoption by Metropolitan's Board as part of the biennial budget process, at which point the ten-year forecast will be updated as well. Increases in rates and charges reflect the impact of reduced water transactions projections, increasing operations and maintenance costs, and increasing State Water Project costs, when compared to prior fiscal years.

Operation and maintenance expenses in fiscal year 2020-21 are projected to be \$1,134 million, which represents approximately 68.1 percent of total costs. These expenses include the costs of labor, electrical power, materials and supplies of both Metropolitan and its contractual share of the State Water Project. Metropolitan's operation and maintenance expenses are projected to be \$96 million under budget in fiscal year 2020-21. Comparatively, operations and maintenance expenses in fiscal year 2019-20 were \$1,026 million, which represents approximately 69.0 percent of total costs. Overall, projected expenses for the twelve months ending June 30, 2021 are \$1.7 billion. This is \$112 million, or 6.3 percent, less than budgeted expenses.

Fiscal year 2020-21 revenue bond debt service coverage is projected to be 1.43x and fixed charge coverage to be 1.44x. Fiscal year 2020-21 capital expenditures, currently estimated at \$304.6 million, will be partially funded by the proceeds of bonds issued for Fiscal Year 2020-21 for such purpose and the remainder from pay-as-you-go funding. Metropolitan's unrestricted reserves are projected to be approximately \$429 million at June 30, 2021. See "METROPOLITAN REVENUES--Financial Reserve Policy" in this Appendix A. This amount does not include funds held in the Exchange Agreement Set-Aside Fund.

As discussed under "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" and noted above, projections for fiscal year 2020-21 are based on results through November 2020. Metropolitan's biennial budget for fiscal years 2020-21 and 2021-22, adopted by the Board on April 14, 2020, and the financial projections for fiscal years 2020-21 through 2024-25 included in the ten-year financial forecast provided therein, reflect adjustments made to the underlying assumptions to consider certain then-identified potential effects of the COVID-19 outbreak. Metropolitan is continuing to monitor the pandemic but is not able to fully predict the effect it will have on Metropolitan's financial performance or operations. Metropolitan's financial results during the fiscal years 2020-21 through 2024-25 projection period may be impacted by subsequent developments relating to the COVID-19 pandemic and its consequences. Metropolitan's Board action on April 14, 2020 to adopt the biennial budget for fiscal years 2020-21 and 2021-22, and water rates and charges for calendar years 2021 and 2022, included a review of the adopted budget and rates in September 2020 to consider further impacts resulting from the COVID-19 crisis. In September 2020, the Board determined to maintain the previously adopted rates and charges for calendar years 2021 and 2022. Among other things, at that time, the Board took certain other actions, including approving cost containment measures for fiscal years 2020-21 and 2021-22, and directing staff to develop a payment deferral program for member agencies that record and report significant customer payment delinquencies and likewise grant deferrals to their customers; evaluate potential new revenue-generating programs; and place a moratorium on on-emergency unbudgeted spending.

See also the "Management's Discussion and Analysis" contained in APPENDIX B--"THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA INDEPENDENT AUDITORS' REPORT AND BASIC FINANCIAL STATEMENTS FOR FISCAL YEARS ENDED JUNE 30, 2020 AND JUNE 30, 2019 AND BASIC FINANCIAL STATEMENTS FOR THE THREE MONTHS ENDED SEPTEMBER 30, 2020 AND 2019 (UNAUDITED)."

## Appendix G

### Water Supply Assessment Checklist



## Water Supply Assessment Checklist

Water Code Section	Water Supply Assessment Content	Page # in WSA
10910(c)(2)	Incorporate data from UWMP.	1-37
10910(d)(1)	Identification of existing water supply entitlements, water rights, or water service contracts relevant to identified water supply for proposed project, and description of quantity of water received in prior years.	22-37
10910(d)(2)(A)	Written contracts or other proof of entitlement to an identified water supply.	22-37
10910(d)(2)(B)	Capital outlay program for financing the delivery of a water supply that has been adopted.	36
10910(d)(2)(C)	Federal, state, and local permits for construction of necessary infrastructure associated with delivering the water supply.	13-36
10910(d)(2)(D)	Any necessary regulatory approval to deliver/convey the water supply.	13-36
10910(f)(1)	Review of any information contained in the UWMP relevant to the identified water supply for the proposed project.	1-37
10910(f)(2)	Description of any groundwater basin(s) from which proposed project will be supplied. For basins with adjudicated groundwater pumping rights, include a copy of the order/decreed adopted by the court or the board and a description of quantity of groundwater public water system has the legal right to pump under the order/decreed.	20-22, 24-26 Appendix D
10910(f)(3)	Description and analysis of amount and location of groundwater pumped for the past 5 years from any groundwater basin from which the proposed project will be supplied.	24-26
10910(f)(4)	Description and analysis of amount and location of groundwater that is projected to be pumped from any basin to provided water to the proposed project.	20-22, 24-26
10910(f)(5)	Analysis of sufficiency of groundwater from the basins from which the proposed project will be supplied to meet projected water demand of the proposed project.	20-22, 24-26



## **WATER SUPPLY ASSESSMENT**

### **FOR THE DOWNTOWN LOS ANGELES SOUTH PARK PROPERTIES SITE 2 PROJECT**

Prepared by:  
Water Resources Division

Prepared on  
April 19, 2021

## Table of Contents

Introduction .....	4
Findings.....	5
The Downtown Los Angeles South Park Properties Site 2 Project Description.....	6
The Downtown Los Angeles South Park Properties Site 2 Project Water Demand Estimate .....	7
Water Demand Forecast .....	11
Los Angeles Department of Water and Power – 2015 UWMP .....	12
Near-Term Conservation Strategies.....	13
Long-Term Local Supply Strategies .....	14
1.0 Increase Water Conservation Through Reduction of Outdoor Water Use and New Technology .....	14
2.0 Water Recycling.....	17
3.0 Enhancing Stormwater Capture.....	18
4.0 Accelerating Clean-Up of SFB.....	20
Water Supplies .....	22
1.0 Los Angeles Aqueducts .....	22
2.0 Groundwater .....	24
3.0 Metropolitan Water District of Southern California .....	27
4.0 Secondary Sources and Other Considerations.....	34
Water System Financing Program .....	36
Conclusion .....	37

## References

California Department of Water Resources California's Groundwater Bulletin 118 Update 2003

Upper Los Angeles River Area Watermaster Report for 2017/2018  
Dated December 2019

Los Angeles Department of Water and Power 2015 Urban Water Management Plan

Metropolitan Water District of Southern California Integrated Water Resources Plan 2015 Update

Metropolitan Water District of Southern California 2015 Urban Water Management Water Plan

California Code of Regulations Title 23. Waters, Division 2. Department of Water Resources, Chapter 2.7. Model Water Efficient Landscape Ordinance

City of Los Angeles Department of Public Works Bureau of Sanitation (LASAN) Sewer Generation Rates Table

## Appendix

- A. City of Los Angeles, Department of City Planning letter, Request for Water Supply Assessment, received on November 20, 2020, and Scope Confirmation e-mail received on April 16, 2021
- B. Water Conservation Commitment Letter
- C. Project Location Map
- D. Adjudicated Groundwater Basin Judgments
- E. Water Supply Assessment Provisions – California Water Code Section 10910-10915
- F. MWD of Southern California (Appendix A)
- G. Water Supply Assessment Checklist



## Introduction

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Proposed major projects subject to certain requirements in the California Water Code Sections 10910-10915 require that a city or county identify any public water system that may supply water to the Downtown Los Angeles South Park Properties Site 2 Project (Project) and request the public water system provide a Water Supply Assessment (WSA). The WSA is a determination by the water supplier that the demands associated with the Project were included in its most recently adopted 2015 Urban Water Management Plan (2015 UWMP) showing that there is an adequate 20-year water supply. The UWMP serves as the City of Los Angeles' (City) master plan for reliable water supply and resources management.

The City of Los Angeles Department of City Planning (Planning Department), serving as the lead agency as prescribed by the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.), for the Project, has identified Los Angeles Department of Water and Power (LADWP) as the public water system that will supply water. In response to Planning Department's request for a WSA on November 20, 2020, LADWP has performed the assessment contained herein.

LADWP has supplied the City with a safe and reliable water supply for over a century. Over time, the City's water supplies have evolved from primarily local groundwater to predominantly imported supplies. As of Fiscal Year Ending (FYE) 2020, the City relies on over 85 percent of its water from imported sources. To reduce the City's dependence on purchased imported supplies, LADWP's 2015 UWMP outlines the City's strategy to achieve its goals and policy objectives. In April 2019, LADWP, in conjunction with the City, developed short-term and long-term sustainability targets through LA's Green New Deal (Green New Deal), to form a more reliable and resilient water supply. LADWP is committed to meet all the City's water needs while increasing supply reliability, stabilizing imported water purchases, and increasing locally produced water. For more information on the Green New Deal, it is available for download at [http://plan.lamayor.org/sites/default/files/pLAn\\_2019\\_final.pdf](http://plan.lamayor.org/sites/default/files/pLAn_2019_final.pdf).

The WSA is prepared to meet the applicable requirements of state law as set forth in California State Water Code Sections 10910-10915. Significant references and data for this WSA are from the LADWP's 2015 UWMP, adopted by the Board of Water and Power Commissioners (Board) on June 7, 2016. LADWP's 2015 UWMP is incorporated by reference and is available through LADWP's Web site, [www.ladwp.com/uwmp](http://www.ladwp.com/uwmp).

## Findings

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The Project is estimated to increase the total net water demand within the site by 75 acre-feet (AF) annually based on review of information submitted by Planning Department. The total net water demand included additional water use efficiency measures that MREG 1105 Olive, LLC (Applicant) has committed to include in the Project. Therefore, LADWP finds adequate water supplies will be available to meet the total additional water demand of 75 AF annually for the Project. LADWP anticipates the projected water demand from the Project can be met during normal, single-dry, and multiple-dry water years, in addition to the existing and planned future demands on LADWP.

The basis for approving WSAs for developments is LADWP's most recently adopted UWMP. LADWP's water demand forecast, as contained in LADWP's 2015 UWMP, uses long-term demographic projections for population, housing, and employment. The California Urban Water Management Planning Act requires water suppliers to develop a UWMP every five years to identify short-term and long-term water resources management measures to meet growing water demands during normal, single-dry, and multiple-dry years. If the projected water demand associated with the Project was not accounted for in the most recently adopted LADWP 2015 UWMP, WSA must include a discussion with regard to whether LADWP's total projected water supplies available during normal, single-dry, and multiple-dry water years during a 20-year projection will meet the projected water demand associated with the Project, in addition to LADWP's existing and planned future uses.

The City's water demand projection in LADWP's 2015 UWMP was developed based on the 2012 Regional Transportation Plan (RTP) demographic projection by the Southern California Association of Governments (SCAG) using the 2010 United States (U.S.) Census for the City. LADWP's 2015 UWMP identified water supplies to meet projected water demands through 2040. Therefore, the City's water supply projections in LADWP's 2015 UWMP are sufficient to meet the water demand for projects that are determined by the CEQA lead agency to be consistent with the 2012 RTP by SCAG.

The Planning Department has indicated that the Project conforms with the use and intensity of development permitted by the City's General Plan. The Planning Department has also determined that the Project is consistent with the demographic projections for the City from both the 2012 and 2016 RTPs. Based on the information provided by Planning Department, anticipated water demand for the Project is within LADWP's 2015 UWMP's projected water supplies for normal, single-dry, and multiple-dry years through the year 2040 and is within the LADWP 2015 UWMP's 25-year water demand growth projection. This WSA can be approved based on the fact that the Project's water demand falls within the LADWP 2015 UWMP's projected increase in citywide water demands, while anticipating multi-dry year water supply conditions occurring at the same time. Additionally, LADWP's 2015 UWMP contains a water



shortage contingency plan for multi-year dry hydrological periods and the City's Water Rate Ordinance. This water shortage contingency plan was based on the City's Emergency Water Conservation Plan (Conservation Ordinance), which was implemented on June 1, 2009, when the Board adopted Shortage Year Rates, and the City Council implemented the landscape irrigation and prohibited use restrictions contained in the City's Water Conservation Ordinance. This water shortage contingency plan helps to ensure sufficient use of water during multi-year dry periods. The City's Water Rate Ordinance, originally adopted in June 1995, was last amended by the Board, and became effective April 15, 2016. The revised rate ordinance restructured the rates to help further promote conservation, which is reflected in the 2015 UWMP's 25-year water demand projections. For example, single family rates switched to a four-tier system that sends a strong price signal to deter against wasteful water use. The Board finds that the price signals contained in the Water Rate Ordinance encourage conservation and support further reduction in City-wide demand. Past and current implementation of water rate price signals and higher ordinance phases have resulted in reducing the total customer water usage.

This WSA approval addresses the City's long-term water supply and demand forecasts to accommodate the Project. It is not an approval for water service connection. A separate request shall be made to LADWP requesting an evaluation of water service connection for the Project.

## **The Downtown Los Angeles South Park Properties Site 2 Project Description**

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The following project information was obtained from Planning Department's WSA Request Letter and the scope confirmation e-mail (Appendix A):

Project Name: Downtown Los Angeles South Park Properties Site 2  
Lead Agency: Planning Department  
Community Plan: Central City Community Plan

The Project will develop an approximately 0.83-acre site within the Central City Community Plan area of the City for residential and commercial land use. The Project site is generally bounded by 11<sup>th</sup> Street to the north, Olive Street to the east, a commercial parking structure to the south, and an alley (Margo Place) to the west. The Project site currently contains a surface parking lot and does not contain any vegetation or landscaping.



The Project is proposing a 51-story mixed use development. It will include 536 residential units. There will be residential amenities such as a swimming pool, fitness space, lounges, and shared office spaces for the resident's use only. The ground floor will contain commercial offices and a 4,178 square feet (SF) restaurant. The Project will also include covered parking, a 1,000 ton cooling tower, and landscaping on the ground floor and throughout the building. LADWP staff performed the water demand analysis and determined the net increase in water demand for the Project is 75 AFY.

A subsequent revised WSA may be required if one or more of the following occurs:

1. Changes in the Project result in a substantial increase in water demand for the Project.
2. Changes in the circumstances or conditions substantially affecting the ability of LADWP to provide a sufficient supply of water for the Project.
3. Significant new information becomes available which was not known and could not have been known at the time when WSA was prepared.

If deemed necessary, the Applicant may request a revised WSA through the CEQA lead agency.

## **The Downtown Los Angeles South Park Properties Site 2 Project Water Demand Estimate**

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Projected total net water demand increase for the Project is estimated to be 75 AF annually. This amount takes into account savings due to water conservation ordinances which are approximately 55 AFY, and savings due to additional voluntary conservation measures which are approximately 1 AFY.

In evaluating the Project's water demand, the Sewer Generation Factors (SGF), published by the City of Los Angeles Department of Public Works Bureau of Sanitation (LASAN) in 2012, are applied to the Project scope for calculating indoor water use. SGFs are factors of how much wastewater is generated (gallons per day) per unit (per sf, per dwelling unit, per seat, etc.). LASAN publishes a list of SGFs for approximately 175 different building use types in the City, and updates factors to make necessary adjustments due to water conservation efforts and increased efficiencies in new appliances and plumbing fixtures. Outdoor landscape water demand is estimated per California Code of Regulations Title 23 Division 2 Chapter 2.7 Model Water Efficient Landscape Ordinance. Historical billing records are used to establish existing baseline water demand on the property. LADWP also encouraged the Project to implement additional water conservation measures above and beyond the current water conservation ordinance requirements.

The net increase in water demand, which is the projected additional water demand of the Project, is calculated by subtracting the existing baseline water demand and water saving amount from the total proposed water demand.

Table I shows a breakdown of the existing and proposed new types of uses for the Project, and the corresponding estimated volume of water usage with the implementation of the required and voluntary conservation measures for this project. Types of use were derived from the WSA Request Letter and the scope confirmation e-mail in Appendix A.

Table II shows an estimation of the total volume of additional water conservation based on conservation measures the Applicant has committed for the Project (Appendix B).

TABLE I Downtown Los Angeles South Park Properties - Site 2 Calculated Total Additional Water Demand							
Existing Use to be Removed <sup>1</sup>	Quantity	Unit	Water Use Factor <sup>2</sup> (gpd/unit)			Existing Water Use to be Removed (gpd) (af/y)	
Surface Parking Lot <sup>3</sup>	36,120	sf	0			0	
<b>Existing to be Removed Total</b>						<b>0</b>	<b>0.00</b>
Proposed Use <sup>4</sup>	Quantity	Unit	Water Use Factor <sup>2</sup> (gpd/unit)	Base Demand (gpd)	Required Ordinances Water Savings <sup>4</sup> (gpd)	Proposed Water Demand (gpd) (af/y)	
Residential: Studios	89	du	75.00	6,675			
Residential: 1 bd	266	du	110.00	29,260			
Residential: 1 bd Apartment with den	2	du	110.00	220			
Residential: 2 bd Apartment	176	du	150.00	26,400			
Residential: 3 bd	3	du	190.00	570			
Base Demand Adjustment (Residential Units) <sup>5</sup>				6,987			
<b>Residential Units Total</b>	<b>536</b>	<b>du</b>		<b>70,112</b>	<b>12,632</b>	<b>57,480</b>	<b>64.39</b>
Synthetic Turf Areas (lvl 5 outdoor dog run, lvl 6 pool and fitness area)	1,600	sf		0.02			
Dog Lounge (lvl 5) <sup>6</sup>	1,749	sf	0.18	319			
Fitness (lvl 5, 6)	3,518	sf	0.22	762			
Office (lvl 5 "co-working")	2,860	sf	0.06	172			
Lounge (lvl 6, 21,41,51) <sup>7</sup>	277	seats	12.86	3,561			
Pool and Spa (lvl 6)	1,632	sf		156			
Office (lvl 1)	1,470	sf	0.12	176			
Restaurant-seating area (lvl 1) <sup>8</sup>	139	seats	30.000	4,178			
Restaurant- kitchen/storage/etc (lvl 1) <sup>8</sup>	2,089	sf	0.300	627			
<b>Residential Amenities/Commercial Total</b>				<b>9,950</b>	<b>1,458</b>	<b>8,492</b>	<b>9.51</b>
<b>Landscaping<sup>9</sup></b>	<b>8,612</b>	<b>sf</b>		<b>817</b>	<b>380</b>	<b>437</b>	<b>0.49</b>
<b>Covered Parking<sup>10</sup></b>	<b>258,647</b>	<b>sf</b>	<b>0.02</b>	<b>170</b>	<b>0</b>	<b>170</b>	<b>0.19</b>
<b>Cooling Tower Total</b>	<b>1,000</b>	<b>ton</b>	<b>35.64</b>	<b>35,640</b>	<b>34,789</b>	<b>851</b>	<b>0.95</b>
<b>Proposed Subtotal</b>				<b>116,689</b>	<b>49,259</b>	<b>67,430</b>	<b>75.53</b>
Less Existing to be Removed Total						0	0.00
Less Additional Conservation <sup>11</sup>						357	0.40
<b>Net Additional Water Demand</b>						<b>67,073 gpd</b>	<b>75.1 af/y</b>

<sup>1</sup> Provided by City of Los Angeles Department of City Planning in the Request for Water Supply Assessment letter and Scope Confirmation e-mail. See Appendix A. Proposed Uses that do not have additional water demands are not shown here.

<sup>2</sup> Indoor water uses are based on 2012 City of Los Angeles Department of Public Works, Bureau of Sanitation Sewer Generation Rates table available at <http://www.lacitysan.org/fmd/pdf/sfcfeerates.pdf>.

<sup>3</sup> The existing restaurant was demolished in 2015 per LADBS Demolition Permit #15019-10000-01023 (Area = 15,047 SF); therefore, existing use for the last 5 years is a surface parking lot with no water demand.

<sup>4</sup> The proposed development land uses will conform to City of Los Angeles Ordinance No. 186488, 184248, 2020 Los Angeles Plumbing Code, and 2020 Los Angeles Green Building Code.

<sup>5</sup> Base Demand Adjustment is the estimated savings due to Ordinance No. 180822 accounted for in the current version of Bureau of Sanitation Sewer Generation Rates.

<sup>6</sup> For a conservative estimate, the dog lounge is assumed to have a water demand similar to beauty parlor.

<sup>7</sup> For a conservative estimate, only lounges containing plumbing fixtures will have a water demand.

<sup>8</sup> Restaurant space. Half the total area (4178 SF) is assumed for dining and the other half is kitchen/storage area.

<sup>9</sup> Landscaping water use is estimated per California Code of Regulations Title 23, Division 2, Chapter 2.7, Model Water Efficient Landscape Ordinance.

<sup>10</sup> Auto parking water uses are based on City of Los Angeles Department of Public Works, Bureau of Sanitation Sewer Generation Rates table, and 12 times/year cleaning assumption.

<sup>11</sup> Water conservation due to additional conservation commitments agreed by the Applicant. See Table II.

**Abbreviations:** sf - square feet du - dwelling unit gpd - gallons per day af/y - acre feet per year

<b>TABLE II</b>					
<b>Downtown Los Angeles South Park Properties Site 2</b>					
<b>Estimated Additional Water Conservation</b>					
Conservation Measures <sup>1</sup>	Quantity <sup>2</sup>	Units	Water Saving Factor <sup>3</sup> (gpd/unit)	Water Saved	
				(gpd)	(af/y)
Showerhead - Residential: studio apartment	89	du	0.27	24	0.03
Showerhead - Residential: 1 bd Apartment	266	du	0.27	70	0.08
Showerhead - Residential: 1 bd plus den Apartment	2	du	0.27	1	0.00
Showerhead - Residential: 2 bd Apartment	176	du	0.66	117	0.13
Showerhead - Residential: 3 bd Apartment	3	du	1.06	3	0.00
<b>Residential Unit Conservation Total</b>				<b>215</b>	<b>0.24</b>
Showerhead	6	ea	1.25	8	0.01
<b>Amenities/Commercial Total</b>				<b>8</b>	<b>0.01</b>
<b>Landscaping Total Conservation<sup>4</sup></b>				<b>134</b>	<b>0.15</b>
<b>Total Additional Water Conserved</b>				<b>357</b>	<b>1.00</b>

<sup>1</sup> Water conservation measures agreed to by the Applicant. See Appendix B.

<sup>2</sup> Plumbing fixture quantities were provided by the Applicant.

<sup>3</sup> Based on LADWP estimates.

<sup>4</sup> Landscaping water conservation is estimated per California Code of Regulations Title 23, Division 2, Chapter 2.7, Model Water Efficient Landscape Ordinance.



## Water Demand Forecast

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LADWP's 2015 UWMP projects yearly water demand to reach 675,700 AF by fiscal-year-ending (FYE) 2040 with passive water conservation, or an increase of 31.6 percent from FYE 2015 actual water demand. Water demand projections in five-year increments through FYE 2040 are available in LADWP's 2015 UWMP for each of the major customer classes: single-family, multifamily, commercial/governmental, and industrial. Demographic data from the Southern California Association of Government's 2012 RTP, as well as billing data for each major customer class, weather, conservation, price of water, personal income, family size, economy, and dry period conservation effect were factors used in forecasting future water demand growth.

LADWP's 2015 UWMP used a modified-unit-use approach to develop its service area-wide water demand projections. This methodology does not rely on individual development demands to determine area-wide growth, because such an inventory in LADWP service area in the next 25 years is only a subset of the total development potential. Therefore, the growth or decline in population, housing units, and employment for the entire service area was considered in developing long-term water projections for the City through FYE 2040. The historical water demand for a unit of customer class, such as gallons-per-day per single family, is modified to account for future changes, including water conservation, and applied to the 2012 RTP demographic projections by SCAG. This modified-unit-use-approach has proven to be a reliable forecast historically, when compared with actual consumption, excluding the effects of conservation.

Collaboration between LADWP and Metropolitan Water District of Southern California (MWD) is critical in ensuring that the City's anticipated water demands are incorporated into the development of MWD's long-term Integrated Water Resources Plan (MWD's IRP). MWD's IRP is a continuous regional effort to develop regional water resources involving all of MWD's member agencies, which includes the City. Successful implementation of MWD's IRP has resulted in reliable supplemental water supplies for the City from MWD.

## Los Angeles Department of Water and Power – 2015 UWMP

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The California Urban Water Management Planning Act (first effective on January 1, 1984) requires every urban water supplier prepare and adopt a UWMP every five years. The main goals of UWMPs are to forecast future water demands and water supplies under average and dry year conditions, identify future water supply projects such as recycled water, provide a summary of water conservation Best Management Practices (BMP), and provide a single and multi-dry year management strategy.<sup>1</sup>

LADWP's 2015 UWMP, available for reference through [www.ladwp.com/uwmp](http://www.ladwp.com/uwmp), serves two purposes: (1) achieve full compliance with requirements of California's Urban Water Management Planning Act; and (2) serve as a master plan for water supply and resources management consistent with the City's goals and policy objectives.<sup>2</sup>

A number of new requirements have been added to the Urban Water Management Planning Act and incorporated in LADWP's 2015 UWMP, including: an extension of the submittal deadline from December 31, 2015 to July 1, 2016, a narrative description of water demand measures implemented over the past five years and future measures planned to meet 20 percent demand reduction targets by 2020, implementation of a standard methodology for calculating system water loss, a mandatory electronic filing of UWMPs, a voluntary reporting of passive conservation savings, energy intensity, and climate change, and a requirement to analyze and define water features that are artificially supplied with water. Currently, LADWP has implemented a Water Loss Task Force to develop strategies to reduce water losses and increase efficiencies in the water distribution system. LADWP continues to track the energy intensity of water, update its climate change study, and maintain a daily per capita water use below the 2020 target of 142 gallons per capita per day (gpcd). The 142 gpcd target meets the Senate Bill X7-7 requirement to achieve 20 percent reduction in urban per capita water use by December 31, 2020.

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<sup>1</sup> *City of Los Angeles Department of Water and Power 2015 Urban Water Management Plan*, at ES-2.

<sup>2</sup> *Id.* at ES-2.



## **Near-Term Conservation Strategies**

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**Enforcing prohibited uses of water.** Prohibited uses of water are intended to eliminate waste and increase awareness of the need to conserve water. In effect at all times, prohibited uses have been in place since the early 1990s. Under enforcement, failure to comply would be subject to penalties, which can range from a written warning for a first violation to monetary fines and water service shutoff for continued non-compliance.

**Prohibited uses of water.** The City's Emergency Water Conservation Plan (Conservation Ordinance), Ordinance Nos. 181288, 183608, and 184250, prohibits uses of water, sets certain water conservation requirements, and contains phases of conservation depending on the severity of water shortages. The Conservation Ordinance, last updated in May 2016, was developed for the City to implement water demand management measures in case of a water supply shortage and to respond to ongoing dry conditions. Some of the prohibited uses in effect at all times (Phase I) include<sup>3</sup>:

- Outdoor irrigation between the hours of 9 a.m. to 4 p.m.
- Outdoor irrigation during and 48 hours after rain events

Currently, LADWP is in Phase II of the Conservation Ordinance. All prohibited uses in Phase I apply to Phase II. In addition, prohibited uses in Phase II include:

- Outdoor irrigation is restricted to three days a week with different watering days assigned to odd-numbered and even-numbered street addresses.

For a full list of Conservation Ordinance Phases and prohibited uses, please refer to LADWP's 2015 UWMP.

On January 17, 2014, with California facing water shortfalls in the driest year in recorded state history, Governor Brown proclaimed a Drought State of Emergency. Responding to the executive order, in 2015, SWRCB imposed mandatory cutbacks ranging from four percent to 36 percent. LADWP was required to reduce its water use by 16 percent compared to the 2013 levels. LADWP met the state mandated reduction goal and saved 16.1 percent between June 2015 and May 2016.

On October 14, 2014, Mayor Garcetti issued Executive Directive No. 5 (ED5) to set accelerated short-term conservation targets for the City to address the dry conditions including per capita water use reduction goal of 20 percent by 2017. On January 1, 2017, the City was able to meet the short-term target of 20 percent reduction through dry period response measures that reduced per capita water use to 104 gallons per day. By April 7, 2017, Governor Brown issued Executive Order B-40-17 formally

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<sup>3</sup> *Id.* at 3-11.



ending the emergency. While this extraordinary achievement will have lasting effects on the City's water use efficiency, LADWP continues to work together with residents and businesses to achieve additional permanent conservation savings and further reduce per capita water use.

**Extending outreach efforts.** Over the last several years, LADWP has expanded conservation outreach and educational efforts. Some activities to promote conservation include: increased communication with ratepayers through Twitter, Facebook, newspapers, radio, television, bus benches/shelters, and movie theaters, among other types of media; outreach to Homeowner Associations and Neighborhood Councils; distribution of hotel towel door hangers and restaurant table tent cards; and ramping up marketing of expanded water conservation incentive and rebate programs.

On April 9, 2015, the "Save the Drop" Water Conservation Outreach Campaign was launched. This campaign is a partnership between LADWP and the Mayor's Office. Outreach materials include public service announcements, radio spots, event handouts, and signage on the sides of LASAN trucks. The campaign has partnered with celebrities for public service announcements airing on television, cinema, and radio.

## **Long-Term Local Supply Strategies**

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On May 31, 2018, Governor Brown signed two long-term water-use efficiency bills: Assembly Bill 1668 and Senate Bill 606. These bills are designed to help the State better prepare for dry periods and climate change. They require that until January 1, 2025, the indoor residential use will reduce to 55 gpcd, 52.5 gpcd from January 1, 2025 to January 1, 2020, and 50 gpcd beginning January 1, 2030. The California State Water Resources Control Board (Water Board) and Department of Water Resources (DWR) may provide a recommendation to change these standards by 2021.

While the State has these set goals, LADWP has and continues to implement various long-term strategies to develop and provide resilient and sustainable local water supplies for the City.

### **1.0 Increase Water Conservation Through Reduction of Outdoor Water Use and New Technology**

#### Goal

Increase water conservation savings to improve water supply reliability while reducing costs, by cutting back on outdoor water use, expanding rebates and incentives, improving water use efficiency at public facilities, and enhancing savings through review of new developments.

## Action Plan

**Conservation Rebates and Incentives.** LADWP is continuing to expand rebates and incentives for homeowners and business owners to encourage them to purchase water-efficient technology. Rebate and incentive programs include the following: Commercial Rebate Program, Residential Rebate Program, Direct Install Partnership Program, and Technical Assistance Program. For a full list of LADWP's rebate programs, please refer to [www.ladwp.com](http://www.ladwp.com).

Some highlights from the list of LADWP's numerous water conservation accomplishments are:

- LADWP's Water Conservation Program has achieved a total cumulative hardware water savings of over 150,000 AFY as of FYE 2020, through installation of water efficient devices subsidized by rebates and incentives.
- Water conservation achievements have helped keep water usage lower than the 1970s average water usage despite a population increase of over one million people.
- Turf Removal – Since FYE 2010, LADWP has rebated over 50 million square feet of turf replacements, saving over 2.3 billion gallons of water per year.

**Enhancing Conservation through New Developments.** LADWP continues to work with the City's Green Building Team to pursue desired changes in local codes and standards to promote water efficiency in new construction projects and major building renovations. The most updated revisions to local codes are 2020 Los Angeles Plumbing Code and 2020 Los Angeles Green Building Code, effective January 1, 2020. On April 8, 2015, the California Energy Commission adopted new efficiency standards for toilets, faucets and other appliances effective January 1, 2016. Also, on July 15, 2015, in response to Governor Brown's Executive Order B-29-15, the California Water Commission approved the revised Model Water Efficient Landscape Ordinance, which reduces the maximum amount of water allowed from the 2009 version of the ordinance. Also, Ordinance No. 184248, *Green Building Codes Revision, Use of Greywater Systems, Water Conservation Measures*, became effective June 6, 2016, and mandates a number of new fixture requirements and methods of construction for plumbing and irrigation systems. California Plumbing Code, Los Angeles City Plumbing Code and amending ordinances apply to all newly constructed buildings, additions and alterations whenever new fixtures are installed in existing buildings. California Building Code, the LA Green Building Code and the amending ordinances also apply to new construction projects, but are limited to additions and alterations that exceed the Building Code's valuation or increase the building's conditioned volume.

In addition, the City adopted Ordinance No. 181899, also known as the "Low Impact Development" Ordinance, and Ordinance No. 183833, entitled "Stormwater and Urban Runoff Pollution Control." The purpose of these Ordinances includes rainwater harvesting and stormwater runoff management, water conservation, and recycled water



reuse and gray water use. Ordinance No. 181899 was effective as of November 14, 2011, and Ordinance No. 183833 was effective October 3, 2015.

**Future Programs<sup>4</sup>.** In December 2014, LADWP started its Home Water Use Report Pilot Study, which provided 73,000 single family residential customers with bi-monthly home water use reports on their water usage, statistics on how they compare to similar households, customized water saving tips and rebate recommendations. In addition to the bimonthly home water reports, the recipients also have access to online historical water use, water use disaggregation estimates, and leak detection modules. LADWP plans to expand the availability of home water use reports to the entire single-family residential sector by mid-2021.

LADWP soft launched the Turf Replacement Design Service in March 2021 to provide customers interested in seeking a turf replacement rebate with free customized landscape design plans for a sustainable, low water use garden. Additionally, LADWP intends to resume Hands on Workshops throughout the service area in Fall 2021. Attendees participate in a landscape transformation at a residential home, learn how to remove turf, sheet mulch, grade for rainwater capture and install water efficient irrigation.

**LADWP Water Conservation Potential Study<sup>5</sup>.** In Fall 2017, LADWP completed the Water Conservation Potential Study (WCPS), which is one of the most comprehensive assessments of the potential for future water conservation ever taken by a municipal water utility. The WCPS conducted detailed single-family and multifamily surveys, completed comprehensive onsite audits of City-owned facilities, and developed a sophisticated water conservation model to project future conservation potential. The WCPS determined that approximately 140,000 AFY in additional water conservation potential is achievable by FYE 2035, and meeting the City's aggressive 2025 and 2035 conservation goals will require tapping into most of the remaining conservation potential in the City.

Going forward, LADWP will use the WCPS findings and conservation model to develop a balanced conservation plan that achieves the City's long-term conservation goals. Meeting the goals will require a combination of increased funding for LADWP's conservation and water use efficiency programs and continued commitment from LADWP customers to make conservation a way of life for the City. The WCPS findings show that a large portion of the remaining conservation potential will come from passive water savings through customers' actions to comply with all City conservation codes and ordinances and finding additional opportunities to improve water efficiency for their residential or commercial properties.

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<sup>4</sup> *Id.* at 3-33.

<sup>5</sup> *Id.* at 3-34.

## 2.0 Water Recycling

LADWP's 2015 UWMP set a target of delivering 75,400 AFY of recycled water by 2040 to off-set imported water.<sup>6</sup> Some of the examples of the steps the City is taking in order to achieve this goal are listed below. There are other projects not listed below that will also contribute to recycled water use in the City's service area.

**Recycled Water Master Planning (RWMP).** In 2012, LADWP completed a three-year RWMP. RWMP documents guide near-term recycled water planning through 2035, as well as long-term recycled water planning for up to 50 years beyond the 2035 horizon. RWMP documents include an evaluation of recycling alternatives that integrate two strategies to increase recycling: Groundwater Replenishment (GWR), and non-potable reuse (NPR). The RWMP set goals for the GWR Project to replenish San Fernando Basin (SFB) with up to 30,000 AFY of recycled water, and for NPR projects to increase NPR recycled water use to 45,400 AFY by 2040.

**GWR Project.** The GWR Project is in the Planning phase. The Environmental Impact Report was certified in December 2016 by the Board of Water and Power Commissioners. The GWR Project is transitioning to a phased approach. The Initial Phase of the project will deliver up to 3,500 AFY of recycled water for indirect potable reuse in the San Fernando Valley by the end of 2021.

**The Machado Lake Pipeline Project (MLPP).** MLPP is a part of a joint agency project between LASAN, Los Angeles Bureau of Engineering, and LADWP to serve the Los Angeles Harbor area customers up to an additional 6 million gallons per day of advanced treated recycled water from an expanded Terminal Island Treatment Plant (TITP). The MLPP will construct 8,800 linear feet of 24-inch ductile iron pipeline that connects two segments of existing pipeline infrastructure, thus creating a looped pipeline service system within the Los Angeles Harbor Area. The project is split into two construction phases. Construction of Phase I was completed in late 2020 and Phase II is estimated to be completed by the end of 2021.

**Second Gap Connection Pipeline Project.** This pipeline project is to supply the Los Angeles County Dominguez Gap Seawater Intrusion Barrier (DGB) with a second supply line of advanced treated recycled water from the LASAN Terminal Island Water Reclamation Plant, and will increase service capacity to the DGB from 6 million gallons per day (mgd) up to 9.5 mgd. The pipeline is approximately 3000 linear feet of 24-inch diameter ductile iron pipe. LADWP and the Water Replenishment District of Southern California (WRD) negotiated an agreement that was executed in fall 2020 to construct this service pipeline as a joint agency project. Construction is anticipated to start in mid-2021 with an estimated completion in 2023.

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<sup>6</sup> *Id.* at 4-27.



**Harbor Recycled Water System Potable Backup Project.** The purpose of this project is to maximize the reuse of water from the Terminal Island Water Reclamation Plant by increasing the reliability of the Harbor Recycled Water System. This project will provide the Harbor Recycled Water System with a potable water backup supply capacity of 14.4 million gallon per day by constructing a 250 foot, 24-inch connection between a 36-inch steel pipe in LADWP's 320-foot potable Service Zone and a 24-inch ductile iron pipe in the Harbor Recycled Water System. LADWP and WRD negotiated an agreement that was executed in fall 2020 to construct this project as a joint agency project. Design is anticipated to start in early 2021 and construction is scheduled to start in early 2022. The estimated in-service date is in late 2024.

For more information on LADWP's existing and planned recycled water pipelines and projects, please see Recycled Water Annual Report available at the following link: [www.ladwp.com/recycledwaterreport](http://www.ladwp.com/recycledwaterreport).

### **3.0 Enhancing Stormwater Capture**

Stormwater runoff from urban areas is an underutilized resource. Within the City, the majority of stormwater runoff is directed to storm drains and ultimately channeled into the ocean. Unused stormwater reaching the ocean carries with it many pollutants that are harmful to marine life. In addition, local groundwater aquifers that should be replenished by stormwater are receiving less recharge than in the past due to increased urbanization. Urbanization has increased the City's hardscape, which has resulted in less infiltration of stormwater and a decline in groundwater elevations.

LADWP's Stormwater Capture Master Plan (SCMP), which was completed in August 2015, comprehensively evaluated stormwater capture potential within the City. The goals of the SCMP are to quantify stormwater capture potential and identify new projects, programs, and policies to significantly increase stormwater capture for water supply within the 20-year planning period. Achieving these goals, will help LADWP achieve its long-term strategy of enhancing local water supply through stormwater capture.

Through intensive implementation of both centralized projects and distributed programs, SCMP provides a strategy to achieve an annual average capture of 132,000 to 178,000 AFY by 2035, which includes the 2015 UWMP baseline capture of 64,000 AFY. These projects include stormwater captured through infiltration type projects and programs that recharge aquifers as well as direct use programs that offset potable water demands, though the bulk of the capture is achieved through infiltration.

LADWP's 2015 UWMP projects that there will be a minimum of 15,000 AFY of increased groundwater pumping in SFB due to water supply augmentation through centralized stormwater infiltration by year 2040. Anticipating that stored groundwater will rebound in response to enhanced groundwater replenishment, LADWP will work with the Upper Los Angeles River Area Watermaster to continue observing actual water

levels and re-evaluate basin safe yield to allow additional increases in groundwater production over time as SFB elevations rebound.<sup>7</sup>

The San Fernando Valley spreading facilities are effective at capturing stormwater flowing down the tributaries; however, they are incapable of capturing significant portions of flow during wet years. Weather patterns in Los Angeles are highly variable, with many periods of dry years and wet years. Some climate studies predict that these patterns may become extreme in the future.

LADWP is currently partnering with other government and non-governmental agencies in various stormwater capture projects that include the following:

#### **Completed Distributed Projects**

LADWP's already implemented distributed projects that have increased the amount of stormwater captured by 557 AFY during an average rainfall year. The following distributed projects were implemented within the last 5 years:

- Ben and Victory Green Stormwater Infrastructure
- Bradley Green Alley Project
- Great Street – Van Nuys Boulevard Project
- Laurel Canyon Green Street
- LAUSD Conserving for Our Kids Program
- Sun Valley Economic Development Administration Public Improvement Project

#### **Future Centralized Projects**

By 2024, the following centralized projects are expected to be implemented that will provide an estimated 16,300 AFY of increased stormwater capture annually during an average rainfall year:

- Bull Creek Pipeline
- Pacoima Spreading Grounds Upgrade
- Tujunga Spreading Grounds Upgrade

#### **Current/Future Distributed Projects**

The following distributed projects are expected to be implemented in the next three years that will provide an estimated 540 AFY of increased stormwater capture annually during an average rainfall year:

- Agnes and Vanowen Stormwater Capture Project
- Burbank Boulevard BMP Capture Project
- Ben and Victory Stormwater Capture Project
- Glenoaks and Filmore Stormwater Capture Project

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<sup>7</sup> *City of Los Angeles Department of Water and Power 2015 Urban Water Management Plan, at 7-29.*



- Glenoaks-Nettleton Stormwater Infiltration Project
- Great Street – Lankershim Boulevard Project
- Victory and Goodland Stormwater Capture Project

LADWP's current effort also includes the Stormwater Capture Parks Program. By 2026, the following projects are expected to be implemented that will provide an estimated 3,090 AFY of increased stormwater capture annually during an average rainfall year:

- Alexandria Park Stormwater Capture Project
- David M. Gonzales Recreation Center Stormwater Capture Project
- Fernangeles Park Stormwater Capture Project
- North Hollywood Park Stormwater Capture Project
- Strathern Park North Stormwater Capture Project
- Valley Plaza Park North Stormwater Capture Project
- Valley Plaza Park South Stormwater Capture Project
- Valley Village Park Stormwater Capture Project
- Whitsett Fields Park North Stormwater Capture Project

Additional information regarding stormwater capture projects can be found in LADWP's Stormwater Capture Master Plan (2015) and Urban Water Management Plan (2015).

#### **4.0 Accelerating Clean-Up of SFB**

The SFB is an aquifer that can provide sufficient drinking water to over 800,000 residents within the City. However, LADWP groundwater production wells in SFB have been impacted by contamination caused by improper handling and disposal of hazardous chemicals from the aircraft manufacturing industry and other, commercial activities dating back to the 1940s. Resolving the contamination problems and restoring the beneficial use of the SFB will help protect public health and the environment, and to recover LADWP's historical groundwater supply and valuable local water resource.

Since the 1980 discovery of volatile organic compound (VOC) contamination of groundwater in SFB, LADWP has been working with government agencies to contain and remediate man-made contaminants in SFB. Chlorinated solvents such as trichloroethylene (TCE), perchloroethylene (PCE) and carbon tetrachloride account for the majority of this groundwater contamination.

From 2009 to 2015<sup>8</sup>, LADWP completed an \$11.5 million, six-year study and development of a comprehensive remediation and cleanup strategy for all groundwater basin contamination in SFB.

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<sup>8</sup> *Id.* at 6-9.



### ***Development of State-of-the-Art Groundwater Basin Remediation Facilities***

- Based on the available groundwater quality information, a groundwater basin remediation program consisting of centralized as well as localized/well-head remediation facilities will be needed for public and environmental benefits as well as to prevent further losses to the beneficial use of groundwater.
- Design and construction of the groundwater basin remediation facilities is estimated to cost approximately \$600 million, and operation and maintenance is estimated to cost an additional \$50 million per year.

### **Groundwater and Treatment System Monitoring**

- In order to fully characterize SFB groundwater quality as required by SWRCB Board's Division of Drinking Water guidelines and policies, LADWP has drilled 26 new monitoring wells in SFB to fill in data gaps and utilized a network of over 70 existing monitoring and production wells.
- Cost to install the monitoring wells is approximately \$22 million.

With completion of SFB groundwater characterization, LADWP is proceeding with the necessary environmental reviews, design, permitting, construction, and start-up of the groundwater basin remediation program to effectively clean and remove contaminants from SFB.

The current groundwater remediation facilities in operation are:

- ***NHOU:*** The NHOU began operations in the 1980s to treat 4.5 cfs of contaminated groundwater; however, changing groundwater conditions limited the ability of the remedy to contain the VOC plume. Implementation of a Second Interim Remedy is currently in progress to contain concentrated areas of the plume, but will not address contamination that has migrated to other well fields.
- ***Liquid-Phase GAC Pilot Treatment Plant at Tujunga Wellfield:*** The Liquid-Phase GAC Pilot Treatment Plant removes VOCs from two of the twelve production wells in the Tujunga Wellfield at 8,000 gpm, and treats the extracted groundwater for potable use. This pilot facility is a joint project with MWD to demonstrate the effectiveness of utilizing certain liquid phase GAC media for removal of VOCs from the groundwater.
- ***Pollock Wells Treatment Plant:*** The plant provides four liquid-phase GAC vessels to remove VOC contamination from two groundwater wellheads. However, LADWP has recently identified 1,4-dioxane and hexavalent chromium as emerging contaminants that may impair the operation of the Pollock Wells Treatment Plant.

These facilities will work with the new remediation facilities to clean up the majority of contaminants impacting LADWP's highest producing wellfields, including TCE, PCE, and 1,4-dioxane. The proposed centralized and localized facilities are:

- North Hollywood West Wellhead Treatment – Operation expected by 2022
- North Hollywood Central Treatment – Operation expected by 2023
- Tujunga Central Treatment – Operation expected by 2023

The overall purpose of the San Fernando Groundwater Basin Remediation Project is to restore and protect the full beneficial use of the San Fernando Groundwater Basin as a source of water consistent with LADWP's long-term water rights and historic groundwater use.

More information about LADWP's SFB Groundwater Remediation program can be found at [www.ladwp.com/remediation](http://www.ladwp.com/remediation)

## Water Supplies

The Los Angeles Aqueducts (LAA), local groundwater, purchased water from MWD, and recycled water are the primary sources of water supplies for the City. Table III shows LADWP water supplies from FYE 2016 to FYE 2020 from these sources.

**TABLE III**  
**LADWP Water Supply**

FYE	Los Angeles Aqueducts	Local Groundwater	MWD	Recycled Water	Transfer, Spread, Spills, and Storage	Total
2016	57,853	79,056	339,975	9,913	-3,509	490,306
2017	224,724	50,439	216,299	8,032	9,350	490,144
2018	307,671	21,760	182,706	9,778	-200	522,116
2019	312,456	32,233	137,775	7,512	1,710	488,266
2020	292,095	34,363	152,647	9,641	1,155	487,591

Note: Units are in AF.

### 1.0 Los Angeles Aqueducts

Snowmelt runoff from the Eastern Sierra Nevada Mountains is collected and conveyed to the City via Los Angeles Aqueducts (LAA). LAA supplies come primarily from snowmelt and secondarily from groundwater pumping and can fluctuate annually due to the varying hydrologic conditions. Since 1992, LAA supplies have been less than the historical average due to environmental obligations in Mono and Inyo Counties.



Within the Owens Valley, the primary framework that governs LADWP environmental operations is the Long Term Water Agreement (LTWA). The LTWA is a stipulated court order between Inyo County and LADWP, issued in 1991, which established an overall goal for managing groundwater resources within Inyo County. The intent is "to avoid certain described decreases and changes in vegetation, and to cause no significant effect on the environment which cannot be acceptably mitigated, while providing a reliable supply of water for export to Los Angeles and for uses in Inyo County." The LTWA does not impact LADWP's surface water rights, but manages LADWP's groundwater pumping, and groundwater use within Inyo County. The LTWA also requires LADWP to implement and maintain a variety of "Enhancement/Mitigation Projects." Prior to implementation of the LTWA, average water uses and losses in Owens Valley totaled 216,000 AFY. After implementation, these uses and losses increased to 287,000 AFY.

In the Mono Basin, LADWP historically diverted water from four tributary streams of Mono Lake. Between 1971 and 1988, LADWP averaged 83,400 AFY from the Mono Basin. Beginning in 1989, with the issuance of a landmark California Supreme Court case, LADWP began to reduce exports to comply with legal requirements. In 1994, the State Water Resources Control Board (SWRCB) entered Decision 1631, which amended City water right licenses 10191 and 10192 to establish fishery protection flows for streams tributary to Mono Lake, and to protect public trust resources at Mono Lake and in the Mono Basin. Decision 1631 also set limits on LADWP water exports from the Mono Basin, which were set to a range of 0 to 16,000 AFY.

The City's water rights in the Eastern Sierra Nevada are comprised of riparian rights, pre-1914 appropriations, and post-1914 appropriation licenses held on various streams in the Mono Basin and Owens Valley. Riparian rights are for stream flow used on land adjacent to the stream. Appropriations by the City based on post-1914 water rights are made pursuant to licenses issued by the SWRCB. The majority of the City's water rights are pre-1914 water rights established prior to enactment of the State Water Commission Act. The most significant basis for export of surface water from the Eastern Sierra Nevada is an appropriation claim in 1905 to divert up to 50,000 miner's inches (1,250 cfs) from the Owens River at a location approximately 15 miles north of the town of Independence into the LAA for transport to Los Angeles. The City files supplemental statements (for riparian and pre-1914 water rights) and licensee reports (for post-1914 water rights) of water diversion and use with the SWRCB for its diversions during each calendar year.

The City's water right licenses in the Mono Basin were amended by the SWRCB in 1994 through the Mono Lake Basin Water Right Decision 1631. As of Runoff Year (RY) 2019/20, the Mono Lake water level was above the Water Right Decision 1631 trigger elevation of 6,380 feet; therefore, the amount of water now available for export from Mono Basin is 16,000 AF.

The primary groundwater right through which Los Angeles has developed groundwater resources in the Owens Valley is based on ownership of a majority of the land (approximately 252,000 acres) and associated water rights in the Owens Valley. Management of the groundwater supply in the Owens Valley is according to the LTWA. Groundwater Pumping is regulated under the LTWA by using vegetation water demand and available soil moisture to determine whether groundwater wells can be pumped. Groundwater is pumped from nine Owens Valley wellfields and began in 1970 after completion of the Second LAA.

Annual LAA deliveries to Los Angeles are dependent on snowfall in the Eastern Sierra Nevada. Years with abundant snowpack result in larger water deliveries from the LAA, and typically reduced purchases of supplemental water from MWD. Conversely, low LAA deliveries in dry years increase the demand for supplemental water from MWD. The impact to LAA water supplies due to varying hydrology in the Mono Basin and Owens Valley is amplified by the requirements to release supply water for environmental enhancement efforts in the Eastern Sierra Nevada.

Average deliveries from LAA system have been approximately 238,960 AF annually from Fiscal Year (FY) 2015/16 to 2019/20. This average delivery includes two of the five dry years that began in FY 2012/2013 and ended in FY 2016/2017. Since imported supplies vary from year to year depending on the hydrology, LADWP plans to increase resiliency to address hydrologic variability and natural disasters by developing sustainable local water supplies.

## **2.0 Groundwater**

LADWP pumps from three adjudicated basins within the City. SFB and Sylmar Basin are subject to the judgment in the City of Los Angeles vs. City of San Fernando, et al. Groundwater pumping by LADWP and other parties is tracked and reported to the court-appointed Upper Los Angeles River Area (ULARA) Watermaster. The Central Basin is also subject to court judgment. Pumping is reported to WRD, the administrative member of the Central Basin Water Rights Panel.

The SFB is the largest of four basins within ULARA. The basin consists of 112,000 acres of land and comprises 91.2 percent of ULARA valley fill area. The City has accumulated 591,460 AF of stored water credits in the San Fernando Basin as of October 1, 2018. A portion of this water is available for the City to withdraw during normal and dry years, or in an emergency, in addition to the City's approximate 87,000 AF annual entitlement. With SFB remediation facilities estimated to be operational by 2023, the groundwater storage credits may be used to optimize pumping beyond the City's annual entitlement.

While the majority of the City's groundwater is extracted from the SFB, the Sylmar Basin also provides local groundwater supply. Sylmar is located in the northern part of ULARA, consists of 5,600 acres, and comprises 4.6 percent of ULARA valley fill area.



The City's current annual entitlement per latest Sylmar Safe Yield is 3,570 AF. As of October 1, 2019, the City has accumulated 9,014 AF of stored water credits in the Sylmar Basin. Sylmar Basin production is anticipated to increase to 4,170 AFY from FYE 2021 to FYE 2036 to utilize groundwater the City has accumulated into storage and then return to the entitlement of 3,570 AFY in FYE 2037.<sup>9</sup>

The ULARA Judgment was adopted through court adjudication on January 26, 1979, dictating the water rights within the basins of ULARA. Enclosed with the assessment are copies of those pages from the judgment showing the entitlements (see Appendix D). Further information about ULARA is detailed in the annual ULARA Watermaster Report. Both the Watermaster Reports and Judgment are available for review at the office of the ULARA Watermaster or on-line at [www.ularawatermaster.com](http://www.ularawatermaster.com).

The City also has adjudicated groundwater extraction rights in the Central Basin. LADWP's annual entitlement is 17,236 AF. As of July 1, 2020, LADWP has accumulated 22,943 AF of stored water in the Central Basin, and pumping can be temporarily increased until stored water credits have been expended.<sup>10</sup> See Appendix D for copies of relevant portions of Central Basin third amended judgment. Judgment is available for review on the WRD Web site at <http://wrwater.org/>.

The City plans to continue to develop production from its groundwater basins in the coming years to offset reductions in imported supplies. Groundwater produced by the City from the San Fernando, Sylmar, and Central Basins for the last available five years are shown on Table IV. See LADWP 2015 UWMP Exhibit 6I for the projected groundwater production through FYE 2040.

**TABLE IV**  
**Local Groundwater Basin Supply**

Fiscal Year (July-June)	San Fernando	Sylmar	Central
2015-2016	75,958	683	8,395
2016-2017	55,116	0	3,005
2017-2018	22,259	0	0.77
2018-2019	36,871	1	5
2019-2020	35,948	2	10

Notes: Units are in AF. Historical data are from the Upper Los Angeles River Area Watermaster Monthly Reports, July 2014 to June 2019.

<sup>9</sup> *Id.* at 11-4.

<sup>10</sup> *Id.* at 6-24.

Per the Agreement for Interim Water System Connection and Water Delivery between the cities of Los Angeles and Burbank, the City has been receiving water from Burbank Water and Power via the LA-Burbank Interim Interconnection starting August 2019. This water is groundwater from SFB treated at the Burbank Operable Unit (BOU), blended with MWD treated surface water. The agreement also allows the City to be able to utilize its SFB entitlements and increase its local water supplies. The agreement will remain in effect until June 30, 2025 or earlier if terminated earlier by either party.

During 2012-2016 dry period, California was challenged with several statewide water shortage issues, including over pumping which results in land subsidence and dry well issues. The State Legislature enacted the Sustainable Groundwater Management Act (SGMA), effective January 1, 2015, in order to equip and empower local agencies with tools to manage local groundwater basins in a sustainable manner. Actions necessary to achieve sustainability will vary with each basin, but SGMA generally requires local agencies to form Groundwater Sustainability Agencies (GSAs) by January 30, 2017, develop and implement Groundwater Sustainability Plans (GSPs), and monitor and report status of groundwater conditions of high- and medium-priority basins. GSPs for critically over drafted high- and medium-priority basins were due to DWR by January 31, 2020. GSPs for the remaining high- and medium-priority basins are due to DWR by January 31, 2022. SGMA will mitigate and prevent the occurrence of adverse effects caused by unreasonable use of groundwater, such as groundwater storage depletion, land subsidence, seawater intrusion, water quality degradation, critical overdraft basin conditions, and surface water depletions.

The City overlies both adjudicated and unadjudicated basins. LADWP is working with its regional partners towards compliance with the SGMA for the unadjudicated basins, such as the Santa Monica Basin (SMB). In September 2017, DWR approved the formation of the SMBGSA as the exclusive GSA in the SMB. The five member agencies include LADWP, the City of Beverly Hills, the City of Santa Monica, the City of Culver City, and the County of Los Angeles. In November 2019, the SMBGSA initiated the development of a GSP for the SMB. The final GSP will be submitted to DWR by January 31, 2022. Another unadjudicated basin within the City boundary is the Hollywood Basin, but it was classified as low priority and not mandated to develop a GSA/GSP. Similarly, areas associated with adjudicated basins, like the northern area of Central Basin, were eventually characterized as lower priority and exempt by DWR's compliance with SGMA.



### 3.0 Metropolitan Water District of Southern California

MWD is the largest water wholesaler for domestic and municipal uses in Southern California. As one of the 26 member agencies, LADWP purchases supplemental water from MWD in addition to the supplies from local groundwater, recycled water and LAA. MWD imports a portion of its water supplies from Northern California through the State Water Project's (SWP) California Aqueduct and from the Colorado River through MWD's own Colorado River Aqueduct (CRA). LADWP will continue to rely on MWD to meet its current and future water needs.

In ongoing efforts to evaluate MWD's import reliability, an assessment was done to address changes in demand and supply conditions, and to provide additional resource reserves to mitigate against uncertainties in demand projections and risks in implementing supply programs. These efforts contributed to MWD's 2015 UWMP. [http://www.mwdh2o.com/PDF About Your Water/2.4.2 Regional Urban Water Management Plan.pdf](http://www.mwdh2o.com/PDF%20About%20Your%20Water/2.4.2%20Regional%20Urban%20Water%20Management%20Plan.pdf). Preparation of the 2020 UWMP by MWD is underway and is scheduled for adoption in May 2021.

All 26 member agencies have preferential rights to purchase water from MWD. Pursuant to Section 135 of MWD Act, "Each member public agency shall have a preferential right to purchase from the district for distribution by such agency, or any public utility therein empowered by such agency for the purpose, for domestic and municipal uses within the agency a portion of the water served by the district which shall, from time to time, bear the same ratio to all of the water supply of the district as the total accumulation of amounts paid by such agency to the district on tax assessments and otherwise, excepting purchase of water, toward the capital cost and operating expense of the district's works shall bear to the total payments received by the district on account of tax assessments and otherwise, excepting purchase of water, toward such capital cost and operating expense." This is known as preferential rights. As of June 30, 2020, LADWP has a preferential right to purchase 18.12 percent of MWD's total water supply.

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

The record dry and hot conditions of 2014 significantly impacted the water resources of both the State of California and MWD. DWR's SWP Table A allocation was limited to only five percent. MWD was able to meet demands in 2014 by relying heavily on storage reserves to make up for the historically low allocation on SWP. MWD's dry-year storage reserves ended 2014 at approximately 1.2 million AF.

On April 14, 2015, to support Governor Brown's Executive Order B-29-15, and to reduce withdrawals from MWD's dry-year storage reserves, MWD implemented WSAP

at a Level 3 Regional Shortage Level, effective July 1, 2015, through June 30, 2016. MWD's dry-year storage reserves ended 2015 at approximately 0.87 million AF.

On May 10, 2016, citing the improved water supply conditions and reduced water use due to conservation, MWD voted to rescind the WSAP Regional Shortage Level 3 and declared a Condition 2 Water Supply Alert for allocation year 2016/17. MWD, however, called for member agencies to continue with conservation efforts to safeguard against future dry years. On May 9, 2017, citing the improved water supply conditions, the actions taken by the Governor and the projected storage reserves, MWD voted to declare a Condition 1 Water Supply Watch.

LADWP plans to reduce purchases of MWD water supplies by increasing conservation and recycled water production, and by enhancing groundwater pumping through stormwater capture and groundwater replenishment. This would allow LADWP to further reduce dependence on purchased imported water from MWD and maintain a resilient and sustainable water supply for the City.

### **State Water Project**

The SWP is owned by the State of California and operated by DWR, delivering water to two-thirds of the population of California and 750,000 acres of farmland. The SWP facilities include 30 dams, 20 reservoirs, 29 pumping and generating plants, and approximately 700 miles of aqueducts and pipelines. The water stored and delivered by the SWP originates from Northern California's watersheds, where most of the State's precipitation occurs. SWP facilities originate in Northern California at Lake Oroville on the Feather River and is pumped from the Bay-Delta region to contractors in areas north and south of the San Francisco Bay and south of the Bay-Delta.

MWD receives SWP water at three locations: Castaic Lake in Los Angeles County at the terminus of SWP West Branch, Devil Canyon Afterbay in San Bernardino County at the terminus of SWP East Branch Extension, and Box Springs Turnout at Lake Perris in Riverside County at the terminus of SWP East Branch.

MWD began receiving water from the SWP in 1972. MWD is the largest of the 29 SWP contractors, holding a contract for 1.912 MAF per year, or 46 percent of the total contracted amount of the 4.173 MAF ultimate delivery capacity of the project. Variable hydrology, environmental issues, and regulatory restrictions in the San Francisco Bay/Sacramento-San Joaquin River Delta (Bay-Delta) have periodically reduced the quantity of water that the SWP delivers to MWD.

Contract allocations for SWP contractors are provided by DWR in "Table A," based on the original projected SWP maximum yield of 4.173 MAF. DWR annually approves the amount of contract allocations SWP contractors will receive. The contract allocation amount received by contractors varies based on contractor demands and projected available water supplies. Variables impacting projected water supplies include



snowpack in the Sierra Nevada, capacity available in reservoirs, operational constraints, and demands of other water users.

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

### **Endangered Species Act Considerations**

DWR has altered the SWP's operations to accommodate certain species that are threatened or endangered, which impact SWP deliveries to MWD. On December 15, 2008, the United States Fish and Wildlife Service (USFWS) released a biological opinion on the impacts of the State Water Project and the federal Central Valley Project on Delta smelt. Based on the biological opinion's findings, the USFWS provided recommended actions to protect the Delta smelt. On June 4, 2009, the National Marine Fisheries Service (NMFS) released a biological opinion for salmonid species. The water supply restrictions imposed by these biological opinions on Delta smelt and salmonid species have a range of impacts on Metropolitan's deliveries from the SWP that are dependent on hydrologic conditions. The impact on total SWP deliveries to State Water Contractors attributable to the Delta smelt and salmonid species biological opinions combined is estimated to be one million AF in an average year, reducing total State Water Project deliveries to State Water Contractors from approximately 3.3 million AF to approximately 2.3 million AF during a year below average hydrology.

On October 22, 2019, USFWS and NMFS released new biological opinions. The Bureau of Reclamation completed its environmental review of the proposed action covered by the new biological opinions on February 19, 2020. The new opinions replace the existing federal permits for the Central Valley Project.

On March 31, 2020, the California Department of Fish and Wildlife (CDFW) issued an Incidental Take Permit (ITP) to DWR for long-term operations of the SWP. In April 2020, MWD, with the MWD Board approval, joined the State Water Contractors in their litigation against DWR and CDFW over the ITP. The impacts to MWD from the ongoing negotiation of Voluntary Agreements on the new biological opinions and incidental take permit, as well as litigation challenging them, remain unknown.

### **New Bay-Delta Conveyance Facility**

In 2006, multiple state and federal resource agencies, water agencies, and other stakeholder groups entered into a planning agreement for the Bay-Delta Conservation Plan (BDCP). The BDCP included alternatives for new water conveyance infrastructure and extensive habitat restoration in the Bay-Delta. In 2015, during the administration of the Governor Brown, the state and federal lead agencies proposed an alternative implementation strategy and new alternatives to the BDCP to provide for the protection of water supplies conveyed through the Bay-Delta and the restoration of the ecosystem of the Bay-Delta, termed "California WaterFix" and "California EcoRestore," respectively.

In July 2017, DWR certified a final EIR and approved the California WaterFix as an improvement to the State Water Project. As originally approved by DWR, the California WaterFix would provide new conveyance facilities for the transportation of State Water Project and Central Valley Project water from the north Delta, through two 30-mile long tunnels running under the Delta, to the existing aqueduct systems in the south Delta.

On April 29, 2019, Governor Newsom issued an executive order directing state agencies to develop a comprehensive statewide strategy to build a climate-resilient water system that included consideration of a single-tunnel conveyance facility instead of the approved two-tunnel WaterFix project. DWR began pursuing a new environmental review and planning process for the single tunnel "Delta Conveyance Project". The formal environmental review process commenced with the issuance by DWR of a Notice of Preparation under CEQA on January 15, 2020. In August 2020, the U.S. Army Corps of Engineers issued a Notice of Intent for the development of a new Environmental Impact Statement.

### **Colorado River**

MWD owns and operates the CRA, which since 1942 has delivered water from the Colorado River to Southern California. The Colorado River currently supplies approximately 17 percent of Southern California's water needs, and on average makes up about 15 percent of LADWP's purchases from MWD. This source of supply has been secured to MWD through long-standing legal entitlements. However, extended dry conditions and increased demands by other users have recently impacted its reliability.

The Colorado River supplies come from watersheds of the Upper Colorado River Basin in the states of Colorado, Utah, and Wyoming. Due to the way that Colorado River supplies are apportioned, snowpack and runoff levels do not impact MWD water supplies in the current year. Instead, snowpack and runoff impact storage levels at Lake Powell and Lake Mead, which would then affect the likelihood of surplus or shortage conditions in the future.

Because MWD has two principal sources of supply that draw from two different watersheds, MWD is able to utilize supplies from the Colorado River to offset potential reductions in SWP supplies and buffer impacts during dry periods. MWD plans to use CRA deliveries, storage reserves, and supplemental water transfers and purchases to meet regional demands.

Under a permanent service contract with the U.S. Secretary of the Interior, MWD is entitled to receive water from the Colorado River and its tributaries. This water is also available to other users in California, as well as users in the states of Arizona, Colorado, Nevada, New Mexico, Utah, and Wyoming. Under a 1944 treaty, Mexico is allotted 1.5 million AF annually, except in extraordinary circumstances. There is long history of competition among users, but current conditions necessitate increased cooperation.



California is apportioned 4.4 million AFY, 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. Since 2003, due to increased consumption, there has been no such unused, apportioned water available to California. Of the California apportionment, MWD holds the fourth priority right to 550,000 AFY under the 1931 priority system governing allotments to California. This is the last priority within California's basic apportionment of 4.4 million AF. Beyond the basic apportionment, MWD holds the fifth priority right to 662,000 AF of water. See Appendix F for more details.

MWD has historically been able to claim most of its legal entitlement of Colorado River water and could divert over 1.2 million AF in any year, but persistent dry conditions since 1999 have contributed to a decrease in these claims. The recent 16-year dry period was so severe that it resulted in major reductions in water deliveries from the Colorado River. In response, the federal government, as well as state, urban, and agricultural water districts that depend on the Colorado River worked together toward a solution.

The Secretary of the Interior adopted the Interim Surplus Guidelines in 2001 to identify surplus Colorado River water available for use in California, Arizona, and Nevada (Lower Basin States) through 2016. In 2007, the Secretary of the Interior issued the Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead through a Record of Decision. The Record of Decision provide water release criteria from Lake Powell and water storage and water release criteria from Lake Mead during shortage and surplus conditions in the Lower Basin, provided a mechanism for the storage and delivery of conserved system and non-system water in Lake Mead and extend the Interim Surplus Guidelines through 2026. The guidelines also created the Intentionally Created Surplus (ICS) program, which allows the Lower Basin States to store conserved water in Lake Mead. ICS water (water that has been conserved through an extraordinary conservation measure, such as land fallowing) is eligible for storage in Lake Mead by MWD.

Since the 2007 Lower Basin shortage guidelines were issued for the coordinated operations of Lake Powell and Lake Mead, the Colorado River has continued to experience dry conditions. In order to reduce the risk of Lake Powell and Lake Mead declining below critical elevations, the federal government, states and urban and agricultural water districts that depend on the Colorado River worked together to adopt and enact the Drought Contingency Plan in 2019. The Drought Contingency Plan is a collection of agreements within and among the seven western states in the Colorado River Basin to boost storage levels in Lake Mead and Lake Powell and prevent the reservoirs from reaching critically low levels.

The Lower Basin Drought Contingency Plan Agreement requires California, Arizona and Nevada to store defined volumes of water in Lake Mead at specified lake levels. California would begin making contributions if Lake Mead's elevation is projected to be

at or below 1,045 feet above sea level on January 1. As of January 1, 2021, Lake Mead's elevation measured approximately 1,084 feet.

### **Reliability Efforts for Southern California**

MWD has been developing plans and making efforts to provide additional water supply reliability for the entire Southern California region. LADWP coordinates closely with MWD to ensure implementation of these water resource development plans. MWD's long-term plans to meet its member agencies' growing reliability needs include SWP improvements as outlined in the EcoRestore plans, conjunctive management efforts on the Colorado River, water transfer programs, outdoor conservation measures, and development of additional local resources such as recycling, brackish water desalination, and seawater desalination. These plans are contained in MWD's 2015 IRP and 2015 UWMP, which can be found at the following links:

- MWD 2015 IRP:  
[http://mwdh2o.com/PDF\\_About\\_Your\\_Water/2015%20IRP%20Update%20Report%20\(web\).pdf](http://mwdh2o.com/PDF_About_Your_Water/2015%20IRP%20Update%20Report%20(web).pdf)
- MWD 2015 UWMP:  
[http://www.mwdh2o.com/PDF\\_About\\_Your\\_Water/2.4.2\\_Regional\\_Urban\\_Water\\_Management\\_Plan.pdf](http://www.mwdh2o.com/PDF_About_Your_Water/2.4.2_Regional_Urban_Water_Management_Plan.pdf)

Additionally, MWD has more than 5.0 million AF of storage capacity available in reservoirs and banking/transfer programs. MWD has approximately 3.2 million AF of water in Water Surplus Drought Management storage and an additional 750,000 AF in emergency storage as of January 1, 2021. Continued efficiency in the region kept demands low in 2020, resulting in available water supplies far exceeding demands. With the implementation of new and modified storage programs to manage the available surplus supplies, MWD has been able to maintain historically high storage levels.

MWD's 2015 IRP was built upon the strong foundation of diversification and adaptation developed in previous IRPs. The 2015 IRP reinforced MWD commitment to meeting the region's water supply needs through an evolving long-term strategy that called for maintaining and stabilizing existing resources along with developing more conservation and new local supplies. Development for the 2020 IRP is currently underway with a tentative adoption in September 2021.

MWD's 2015 UWMP reports on water reliability and identifies projected supplies to meet the long-term demand within MWD's service area. Table V summarizes MWD's reliability in five-year increments extending to 2040 and is based on information contained in MWD's 2015 UWMP. As reported, MWD has supply capabilities that would be sufficient to meet expected demands from 2020 through 2040 under average year, single dry-year and multiple dry-year hydrologic conditions. An in-depth discussion on MWD is attached in Appendix F.



**Table V**  
**MWD System Forecast Supplies and Demands**  
**Average Year (1922 - 2012 Hydrology)**

Forecast year	Supply (Thousands of AF per Year)				
	2020	2025	2030	2035	2040
<i>Current Programs</i>					
In-Region Supplies and Programs	693	774	852	956	992
State Water Project <sup>1</sup>	1,555	1,576	1,606	1,632	1,632
Colorado River Aqueduct					
Colorado River Aqueduct Supply <sup>2</sup>	1,468	1,488	1,484	1,471	1,460
Aqueduct Capacity Limit <sup>3</sup>	1,200	1,200	1,200	1,200	1,200
Colorado Aqueduct Capability	1,200	1,200	1,200	1,200	1,200
<b>Capability of Current Programs</b>	<b>3,448</b>	<b>3,550</b>	<b>3,658</b>	<b>3,788</b>	<b>3,824</b>
<i>Demands</i>					
Total Demands on MWD	1,586	1,636	1,677	1,726	1,765
Imperial Irrigation District - San Diego County Water Authority Transfers and Canal Linings <sup>4</sup>	274	282	282	282	282
<b>Total Demands on MWD</b>	<b>1,860</b>	<b>1,918</b>	<b>1,959</b>	<b>2,008</b>	<b>2,047</b>
<b>Surplus</b>	<b>1,588</b>	<b>1,632</b>	<b>1,699</b>	<b>1,780</b>	<b>1,777</b>
<i>Programs Under Development</i>					
In-Region Supplies and Programs	43	80	118	160	200
State Water Project	20	20	268	268	268
Colorado River Aqueduct					
Colorado River Aqueduct Supply	5	25	25	25	25
Aqueduct Capacity Limit <sup>2</sup>	0	0	0	0	0
Colorado River Aqueduct Capability	0	0	0	0	0
<b>Capability of Programs Under Development</b>	<b>63</b>	<b>100</b>	<b>386</b>	<b>428</b>	<b>468</b>
<b>Maximum MWD Supply Capability</b>	<b>3,511</b>	<b>3,650</b>	<b>4,044</b>	<b>4,216</b>	<b>4,292</b>
<b>Potential Surplus</b>	<b>1,651</b>	<b>1,732</b>	<b>2,085</b>	<b>2,208</b>	<b>2,245</b>

1. Includes water transfers and groundwater banking associated with SWP.

2. Includes 296 TAF of non-MWD supplies conveyed in CRA for Imperial Irrigation District - San Diego County Water Authority Transfers and Canal Linings.

3. CRA has a capacity constraint of 1.20 MAF per year.

4. Does not include 16 TAF subject to satisfaction of conditions specified in agreement among MWD, the US, and the San Luis Rey Settlement.

#### **4.0 Secondary Sources and Other Considerations**

Stormwater capture, water conservation, and recycling will play an increasing role in meeting future water demands. LADWP has implemented stormwater capture, conservation, and recycling programs with efforts under way to further promote and increase the level of these programs. LADWP is committed to supply a higher percentage of the City's water demand through local water supply development.

LADWP works closely with MWD, LASAN, other regional water providers, and various stakeholders to develop and implement programs that reduce overall water use. One example of such collaboration is an integrated resources planning process.

#### **5.0 Summary of Water Demand and Supply Projections for 20 years**

Table VI tabulates the service reliability assessment for average weather year. Existing water conservation has been subtracted already from projected demands, but new water conservation is included as a supply source.

**Table VI  
Service Area Reliability Assessment for Average Weather Year**

Demand and Supply Projections (in acre-feet)	Average Weather Conditions (FY 1961/62 to 2010/11)				
	Fiscal Year Ending on June 30				
	2020	2025	2030	2035	2040
<b>Total Water Demand<sup>1</sup></b>	<b>611,800</b>	<b>644,700</b>	<b>652,900</b>	<b>661,800</b>	<b>675,700</b>
<b>pLAn Water Demand Target</b>	<b>485,600</b>	<b>533,000</b>	<b>540,100</b>	<b>551,100</b>	<b>565,600</b>
<b>Existing / Planned Supplies</b>					
Conservation (Additional Active <sup>2</sup> and Passive <sup>3</sup> after FY14/15)	125,800	110,900	111,600	109,100	108,100
Los Angeles Aqueduct <sup>4</sup>	275,700	293,400	291,000	288,600	286,200
Groundwater <sup>5</sup> (Net)	112,670	110,670	106,670	114,670	114,070
Recycled Water					
- Irrigation and Industrial Use	19,800	29,000	39,000	42,200	45,400
- Groundwater Replenishment	0	30,000	30,000	30,000	30,000
Stormwater Capture					
- Stormwater Reuse (Harvesting)	400	800	1,200	1,600	2,000
- Stormwater Recharge (Increased Pumping)	<u>2,000</u>	<u>4,000</u>	<u>8,000</u>	<u>15,000</u>	<u>15,000</u>
Subtotal	536,370	578,770	587,470	601,170	600,770
<b>MWD Water Purchases</b>					
With Existing/Planned Supplies	75,430	65,930	65,430	60,630	74,930
<b>Total Supplies</b>	<b>611,800</b>	<b>644,700</b>	<b>652,900</b>	<b>661,800</b>	<b>675,700</b>
<b>Potential Supplies</b>					
Water Transfers <sup>6</sup>	<u>40,000</u>	<u>40,000</u>	<u>40,000</u>	<u>40,000</u>	<u>40,000</u>
Subtotal	40,000	40,000	40,000	40,000	40,000
<b>MWD Water Purchases</b>					
With Existing/Planned/Potential Supplies	35,430	25,930	25,430	20,630	34,930
<b>Total Supplies</b>	<b>611,800</b>	<b>644,700</b>	<b>652,900</b>	<b>661,800</b>	<b>675,700</b>

<sup>1</sup> Total Demand with existing passive conservation

<sup>2</sup> Cumulative hardware savings since late 1980s reached 118,034 AFY by 2014-15.

<sup>3</sup> Additional non-hardware conservation required to meet water use reduction goals set in the Sustainable City pLAn.

<sup>4</sup> LADWP anticipates conserving 20,000 AFY of water usage for dust mitigation on Owens Lake after the Master Project is implemented in FY 2023-24. Los Angeles Aqueduct supply is estimated to decrease 0.1652% per year due to climate change impact.

<sup>5</sup> Net GW excludes Stormwater Recharge and Groundwater Replenishment supplies that contribute to increased pumping. The LADWP Groundwater Remediation project in the San Fernando Basin is expected in operation in 2021-22. Storage credit of 5,000 AFY will be used to maximize pumping in 2019-20 and thereafter. Sylmar Basin production will increase to 4,170 AFY from 2015-16 to 2038-39 to avoid the expiration of stored water credits, then go back to its entitlement of 3,570 AFY in 2039-40.

<sup>6</sup> Potential water transfer occurs in dry years with stored water acquired in average and wet years.



Service area reliability assessments for single-dry year and multiple-dry year conditions are shown in LADWP 2015 UWMP Exhibits 11F through 11H. Demands are met by the available supplies under all scenarios

### **Water System Financing Program**

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Capital costs to finance facilities for the delivery of water supply to LADWP's service area are supported through customer-billed water rates. The Board sets rates subject to approval of City Council by ordinance. The Board is obligated by City Charter to establish water rates and collect charges in an amount sufficient to service the water system indebtedness and to meet its expenses for operation and maintenance.

On March 15, 2016, City Council approved the new water rates and rate structure. New water rates, which became effective April 15, 2016, through Ordinance 184130 provide for modest rate increases each year over a five-year period for infrastructure improvements, meeting regulatory water quality requirements, Owens Valley mitigation measures, and expanding the local water supply, which includes recycled water, stormwater capture, conservation, and groundwater remediation. New water rate structure increases the number of tiers from two to four for single-family residential customers. The goal is to incentivize conservation while recovering the higher costs of providing water to high volume users. In keeping with cost of service principles, the incremental pricing for the tiers is based on the cost of water supply.

Another method to finance projects and help achieve LADWP's commitment to developing sustainable local water supplies is through grants and loans. Critical funding from Proposition 1 (Prop 1) – the Water Quality, Supply, and Infrastructure Improvement Act of 2014 was passed on November 4, 2014 to support groundwater cleanup, stormwater capture, recycled water, water conservation, regional water management, and Los Angeles River revitalization projects. Prop 1 is a bond measure that provides \$7.545 billion to fund investments in water projects and programs as part of a statewide, comprehensive water plan for California. As of FYE 2020, LADWP has been awarded \$327.9 million in grants and \$3 million in zero-interest loans.

## Conclusion

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The Project is estimated to increase the total water demand within the site by 75 AF annually. This additional water demand for the Project site has been accounted for in the City's overall total demand projections in the LADWP 2015 UWMP using a service area-wide approach that does not rely on individual development demand. The LADWP 2015 UWMP utilized SCAG's RTP data that provide for more reliable water demand forecasts, considering changes in population, housing units, and employment.

Based on the Planning Department's determination that the Project is consistent with the demographic forecasts for the City from the 2012 SCAG RTP, LADWP finds that the Project water demand is included in the City's LADWP 2015 UWMP. Furthermore, the LADWP 2015 UWMP forecasts adequate water supplies to meet all projected water demands in the City through the year 2040. LADWP therefore concludes that the projected 75 AFY increase in the total water demand for this Project is accounted for in the 2015 UWMP's 25-year water demand projections. LADWP finds it will be able to meet the proposed water demand of the Project as well as existing and planned future water demands of its service area.

## Appendix A

City of Los Angeles Department of City Planning  
Request for Water Supply Assessment,  
and Scope Confirmation e-mail



DEPARTMENT OF  
CITY PLANNING

COMMISSION OFFICE  
(213) 978-1300

CITY PLANNING COMMISSION

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VACANT  
DEPUTY DIRECTOR

November 20, 2020

Mr. Richard F. Harasick

Senior Assistant General Manager for Water Systems

Water Resources Development Group

City of Los Angeles Department of Water and Power

111 North Hope Street, Room 1455

Los Angeles, CA 90012

**RE: REQUEST FOR WATER SUPPLY ASSESSMENT FOR THE DTLA SOUTH PARK PROPERTIES SITE 2  
PROJECT LOCATED AT 1105-1123 SOUTH OLIVE STREET, LOS ANGELES, CA 90015**

Dear Mr. Harasick,

California Senate Bill (SB) 610, effective January 1, 2002, states that a water supply assessment (WSA) must be provided to local governments for inclusion in any environmental documentation for certain projects subject to the California Environmental Quality Act (CEQA). Specifically, SB 610 requires that for certain projects, the CEQA lead agency must identify any public water system that may supply water to a proposed project and request the public water system to determine the water demand associated with the project and whether such demand was included as part of the most recently adopted Urban Water Management Plan (UWMP). Per Section 10912 of the California Water Code (CWC), a project which is subject to the requirements of SB 610 includes, but is not limited to: (1) a proposed residential development of more than 500 dwelling units; (2) a proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space; (3) a proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space; (4) a proposed hotel or motel, or both, having more than 500 rooms; (5) a proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area; (6) a mixed-use project that includes one or more of the projects specified in this subdivision; or (7)

a project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling-unit project.

The City of Los Angeles Department of City Planning (the City) is preparing a Sustainable Communities Environmental Assessment (SCEA) in accordance with CEQA for two projects known as the Downtown Los Angeles (DTLA) South Park Properties Site 2 and Site 3 (Projects). These two Projects are separated by Olive Street in downtown Los Angeles. While both developments will be evaluated in one SCEA document for the purposes of CEQA, the Applicants have filed separate applications for each site and the City is considering requested entitlements separately. As such, two separate WSAs are being requested. This request is for the development at Site 2 proposed by MREG 1105 Olive, LLC (Project). The request for Site 3 is being submitted separately.

The proposed Project constitutes a "project" as defined in Section 10912(a) of the CWC and thus, is subject to the provisions for determining water availability as outlined in Sections 10910-10915 of the CWC. As such, the Department of City Planning requests your assistance in preparing a WSA pursuant to the requirements of SB 610 to determine the Los Angeles Department of Water and Power's (LADWP) ability to meet the water demands of the proposed Project. Provided below is a brief description of the Project and an estimate of potential water demand.

#### **Project Location**

As described above, while the Projects consist of two separate sites, this request is for the development located at Site 2. Site 2 occupies the southwest corner of the intersection of 11th Street and South Olive Street in downtown Los Angeles. Current addresses associated with Site 2 are 1105, 1115, 1117, 1119 and 1123 South Olive Street, Los Angeles, CA 90015 (see Attachment A Location Map).

#### **Existing Conditions**

Site 2 is approximately 36,120 square feet and consists of Assessor's Parcel Numbers (APNs) 5139-020-025, 5139-020-007 and 5139-020-006. Site 2 is bounded by 11th Street to the north, Olive Street to the east, a parking structure to the south, and the Margo Street alley to the west. The site is currently occupied by active surface parking facilities and does not contain any vegetation or landscaping. There is 1 street tree on Olive Street and 2 street trees on 11th Street. The site is designated for Regional Center Commercial General Plan Land Uses by the Central City Community Plan and zoned C2-4D-O. The Project does not involve a General Plan Amendment or a Zone Change.

## **Proposed Project**

The proposed Site 2 building would include a 51-story, mixed-use building with a six-level subterranean parking, a ground floor with retail and lobby space and parking spaces, a three-level above-grade parking podium, and a 48-story residential tower (see Attachment B Plot Plan). The building will be approximately 603 feet in height with a total of 491,515 square feet of floor area including 487,333 square feet of residential floor area and 4,178 square feet of retail space along the 11<sup>th</sup> Street frontage. The residential component of the proposed mixed-use building would contain 89 studios, 266 one-bedroom units, 2 one-bedroom units with a den, 176 two-bedroom units, and 3 three-bedroom units for a total of 536 residential units. The building would also feature an outdoor dog run with a 1,308-square-foot synthetic turf and 6,787 square feet of lounge, fitness and co-working space at Level 5; an approximately 22,662-square-foot amenity deck on Level 6 with a swimming pool, community recreation, lounge, fitness areas, and raised planters; two sky lounges with outdoor decks at Levels 21 and 41; and a 3,990-square-foot roof terrace and a 1,021-square-foot lounge at Level 51 (see Attachment C Open Space Diagrams). The Project would provide 581 automobile parking spaces; 23 short-term bicycle racks and 211 long term-bicycle lockers. Pedestrian improvements would be made along the 11th Street and S. Olive Street frontages of the Project. The Project would remove three existing trees in the public right-of-way and plant 115 trees on-site, including 8 trees at the ground level in the public right-of-way, 95 trees at Level 6 and 12 trees at Level 51. The Project proposes to provide approximately 6,452 square feet of landscaping, including 102 square feet at the ground level, 230 square feet at Level 5, 5,336 square feet at Level 6, and 784 square feet at Level 51 (see Attachment D Landscape Plans).

Information about the Project is summarized in the **Table 1, Project Data** below. Estimated fixture count is included in **Table 2, Estimated Fixture Count**. Landscaping information is provided in **Table 3, Landscaping Water Usage Estimate**. A site plan is attached to this letter.

The Project would comply with the requirements in the City's Green Building Code and Title 24, which requires buildings to be designed to include green building measures for energy efficiency, water conservation, recycling, light pollution reduction, electric vehicle charging stations, Energy Star-rated appliances, eco-friendly building materials, non-volatile organic compound paints/adhesives, drought-tolerant planting, high performance building envelopment, etc. to the extent feasible. For cooling purposes, the Site 2 building would include a 1,000-ton capacity cooling tower. The cooling tower would operate 24 hours per day using 100% non-potable water.

For the purposes of analysis, Site 2 is expected to be built by 2024.

**Table 1, Project Data**

General Information	Street Address	1105-1123 S. Olive St.
	APN No's.	5139-020-025, 5139-020-007, & 5139-020-006
	Existing Zoning	C2-4D-O
	Proposed Zoning	C2-4D-O
	General Plan Designation	Regional Center Commercial
	Lot Area	36,120 square feet / 0.83 acres
	Buildable Lot Area (LAMC 14.5.3)	58,839 square feet
	Proposed total floor area	491,515 square feet
	Proposed FAR	9.13:1 (Based on Buildable Lot Area)
	Building Height	603 feet (51 Stories)
Project Details	Residential Units	536 Units
	Studio	89 Units
	One Bedroom	266 Units
	One Bedroom with a Den	2 Units
	Two Bedrooms	176 Units
	Three Bedrooms	3 Units
	Residential Amenities (Covered)	
	Lounges	5,878 square feet
	Co-Working Space	2,860 square feet
	Fitness Rooms	3,518 square feet
	Terraces	2,311 square feet
	Residential Amenities (Uncovered)	
	Entry Area	905 square feet
	Dog Run	1,308 square feet
	Terraces	23,595 square feet
	Residential Balconies	17,900 square feet
	Total Amenity Space	58,275 square feet
	Commercial	4,817 square feet
	Parking	
	Total Automobile Parking	581 (Required & Provided)
	Total Bicycle Parking	234 (Required & Provided)
	Total Covered Parking Area	263,937 square feet

Table 2, Estimated Fixture Count

	Residential Dwelling Units	Residential Common Area	Restaurant /Bar	Retail/ Commercial	Office	Hotel Rooms	Hotel Common Facility
Water Closets	N/A	17	5	0	0	N/A	0
Urinals	N/A	1	1	0	0	N/A	0
Lavatory Faucets	N/A	16	4	0	0	N/A	0
Kitchen Faucets	N/A	8	1	0	0	N/A	0
Commercial Kitchen Pre-Rinse Spray Faucets	N/A	0	1	0	0	N/A	0
Showerheads	N/A	6	0	0	0	N/A	0
Clothes Washer (Residential)	536	0	0	0	0	0	0
Clothes Washer (Commercial)	0	0	0	0	0	0	0
Dishwasher (Residential)	536	1	0	0	0	0	0
Dishwasher (Commercial)	0	0	1	0	0	0	0

**Table 3, Landscaping Water Usage Estimate**

Hydrozone	Plant Factor (PF)	Irrigation Method	Irrigation Efficiency (IE)	ETAF (PF/IE)	Landscape Area	ETAF x Area	Estimated Water Use (gallons per year)
Ground Level	0.3	Drip	0.81	0.37	102	37.74	11,72.29
Podium (Level 5 & 6)	0.3	Drip	0.81	0.37	5,336	1974.32	61,326.13
Terraces (levels 21 and 41)	0.3	Drip	0.81	0.37	182	67.34	2091.84
Roof Deck	0.3	Drip	0.81	0.37	784	290.08	9,011.01
Synthetic turf	0.1	Spray	0.75	0.13	1,308	170.04	5,281.71
<b>TOTAL:</b>					8,043.00	3,262.27	78,882.98
Source: EPT Design (Project Landscape Architect)							

**Project Conformance with the General Plan and Municipal Code**

The Project site is located within the Central City Community Plan Area and designated for Regional Center Commercial land uses. The residential objectives of the Central City Community Plan are:

- Objective 1-1 To promote development of residential units in South Park.
- Objective 1-2 To increase the range of housing choices available to Downtown employees and residents.



- Objective 1-3 To foster residential development which can accommodate a full range of incomes
- Objective 1-4 To facilitate the conversion of historic buildings in the Historic Core to housing, office, art, and cultural uses in order to attract new residents.
- Objective 1-5 To preserve the existing low-income housing stock, including single room occupancy (SRO) units.
- Objective 1-6 To support additions to the housing stock in Little Tokyo.

The Project is generally consistent with these objectives as it develops residential units in South Park without removing any historic buildings or existing housing stock.

Consistent with the Community Plan Land Use Designation, the Project site is zoned C2-4D. The C2 Commercial Zone permits a variety of uses, such as multi-family residential; retail with limited manufacturing; service stations and garages; and office uses, hotels, and hospitals. The Project site is in Height District No. 4, which permits a maximum floor area ratio (FAR) of 13:1, with no limitation for building height. However, the "D" Development Limitation restricts the FAR to 6:1, unless the Project obtains Transfer of Floor Area Rights approval. The development proposed for Site 2 would require the following entitlements from the City:

- Transfer of Floor Area Rights (TFAR) of approximately 274,795 square feet of floor area from the Los Angeles Convention Center (Donor Site) to the Project Site on Site 2 (Receiver Site), pursuant to LAMC Section 14.5.7;
- Zone Variance to allow reduced parking stall dimensions of a minimum 8'-6" wide by 16' deep in lieu of the otherwise required 9'-4" wide by 18' deep parking stall and to allow reduced drive aisle widths of a minimum 25-foot-1-inch in lieu of the otherwise required 27-foot, 4-inch drive aisle, pursuant to LAMC Section 12.27;
- Director's Decision to provide less than one on-site tree per four dwelling units (115 trees in lieu of 134 trees required), pursuant to LAMC Section 12.21 G.3 and Ordinance No. 185,573;
- Site Plan Review, pursuant to LAMC Section 16.05;
- Conditional Use Permit for two off-site sale establishments and two on-site sale establishments for alcoholic beverages, pursuant to LAMC Section 12.24.W.1; and

- Vesting Tentative Tract Map No. 82109, pursuant to LAMC Section 17.01 et seq.

#### **Project Conformance with the SCAG 2016-2040 RTP/SCS**

The Project is consistent with the General Plan Land Use Designation, density, and building intensity outlined in the SCAG 2016-2040 RTP/SCS. The Project Site is within an area designated by the 2016-2040 RTP/SCS as "Urban," a land development category (LDC) with the highest density and intensity of land development. The 2016-2040 RTP/SCS describes the Urban LDC as areas often found within and/or directly adjacent to moderate and high-density urban centers, where virtually all new development would be considered infill or redevelopment. Housing tends to be higher density multi-family and attached single-family (townhome) varieties which, overall, consume less water and energy than detached residences in less urban locations. Urban LDC areas have high levels of mobility, particularly for people who choose not to drive or do not have access to a vehicle, seen through the presence of a variety of regional and local transit services and a development pattern that is conducive to walking. The proposed Project is consistent with the Urban Land Use Development Category.

The proposed Project is located within a highly urbanized area within the City of Los Angeles. The California State Department of Finance (DOF) average household size for the City of Los Angeles at 2.83 persons per household. The current DOF estimated City population as of January 2019 is approximately 4,040,079 people. Therefore, the proposed Project would represent an increase of less than one percent of the City's current population. According to growth estimates from SCAG's 2016–2040 RTP/SCS, the City had an estimated population of 3,845,500 people in 2012 and is projected to have a population of 4,609,400 in 2040. The addition of the Project would be within the SCAG's population forecasts for the City.

#### **Existing Water Consumption**

The site is a surface parking lot with no on-site facilities. As such, for purposes of this request, it is assumed that there is no existing water consumption associated with the site.

**Forecasted Water Demand**

The following table presents estimated water demand for the Project as provided by the Applicant.

<b>Table 4 – DTLA Site 2 Estimated Proposed Water Consumption</b>				
<b>BuildingUse</b>	<b>Water Consumption Rate per Unit (GPD)<sup>(a)</sup></b>	<b>Units</b>	<b>Quantity</b>	<b>Total Consumption (GPD)</b>
APT - BACHELOR	90	DU	89	8,010
1 BDR APT	132	DU	268	35,376
2 BDR APT	180	DU	176	31,680
3 BDR APT/PH	228	DU	3	684
RETAIL AREA	30/1,000	GSF	4,178	125
SWIMMING POOL	600	-	1	600
SPA/JACUZZI	600	-	1	600
LANDSCAPING <sup>(b)</sup>				216
<b>Total Estimated Proposed Water Consumption</b>			<b>TOTAL (GPD)</b>	<b>77,291</b>
(a) The average daily flow based on 120% of City of Los Angeles sewerage generation factors.				
(b) See Table 3 above, converted to GPD				

**Contact Information**

- **Lead Agency:**  
Nuri Cho, City Planner  
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nuri.cho@lacity.org  
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- **Applicant:**  
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[nbaldwin@MeridianConsultantsLLC.com](mailto:nbaldwin@MeridianConsultantsLLC.com)  
(805) 413-4185

Based on the above projections, the Department of City Planning is requesting your assistance in preparing a WSA pursuant to the requirements of SB 610. SB 610 requires a water supply assessment to evaluate whether total projected water supplies will meet the projected water demand for certain development projects that are otherwise subject to CEQA review.

Thank you for your assistance with this request. Your expert evaluation will help ensure that our analysis of the Project's impacts related to water demand is accurate and complete. If you have any questions or comments, please contact Nuri Cho at (213) 978-1177 or [Nuri.Cho@lacity.org](mailto:Nuri.Cho@lacity.org).

Sincerely,

VINCENT P. BERTONI, AICP  
Director of Planning



---

Nuri Cho, City Planner  
Central Project Planning Division  
Department of City Planning  
200 N. Spring Street, Room 621  
Los Angeles, CA 90012

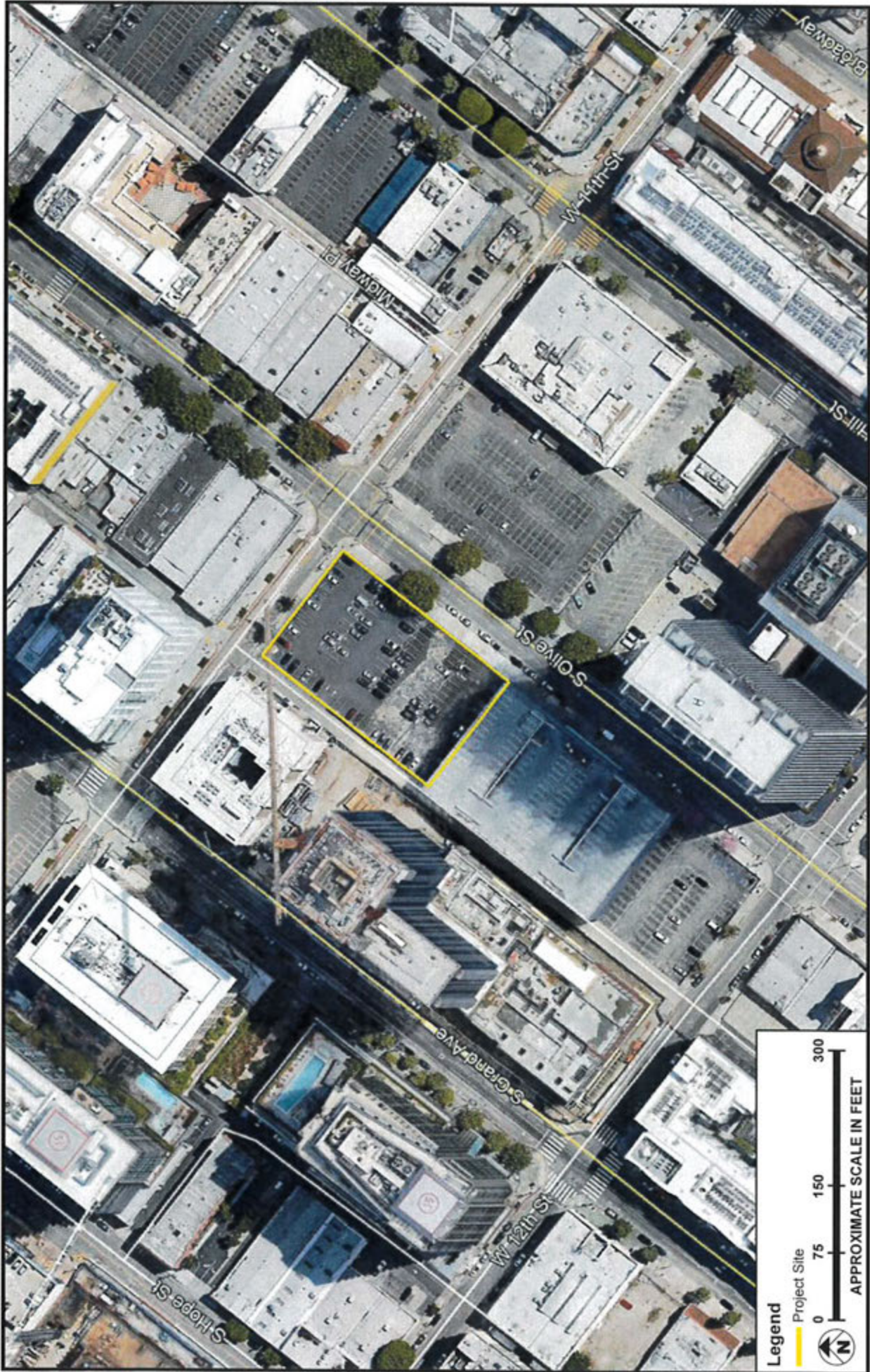
Attachments:

- A – Location Map
- B – Plot Plan
- C – Open Space Diagrams
- D – Landscape Plans

**Request for Water Supply Assessment**  
**DTLA South Park Properties Site 2**  
**1105-1123 South Olive Street, Los Angeles, CA 90015**

**Attachment A**  
**Location Map**





SOURCE: Google Earth - 2020; Meridian Consultants, LLC - February 2020

SITE 2-A

Site 2 Location





Request for Water Supply Assessment  
DTLA South Park Properties Site 2  
1105-1123 South Olive Street, Los Angeles, CA 90015

Attachment B

Plot Plan

CALLISON|TKL

CALLISON|TKL, INC.  
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SAN DIEGO, CALIFORNIA 92161-5006  
TEL: 619.491.4500  
WWW.CALLISON|TKL.COM

DATE: 02/28/2023

DTLA South Park Properties Site 2

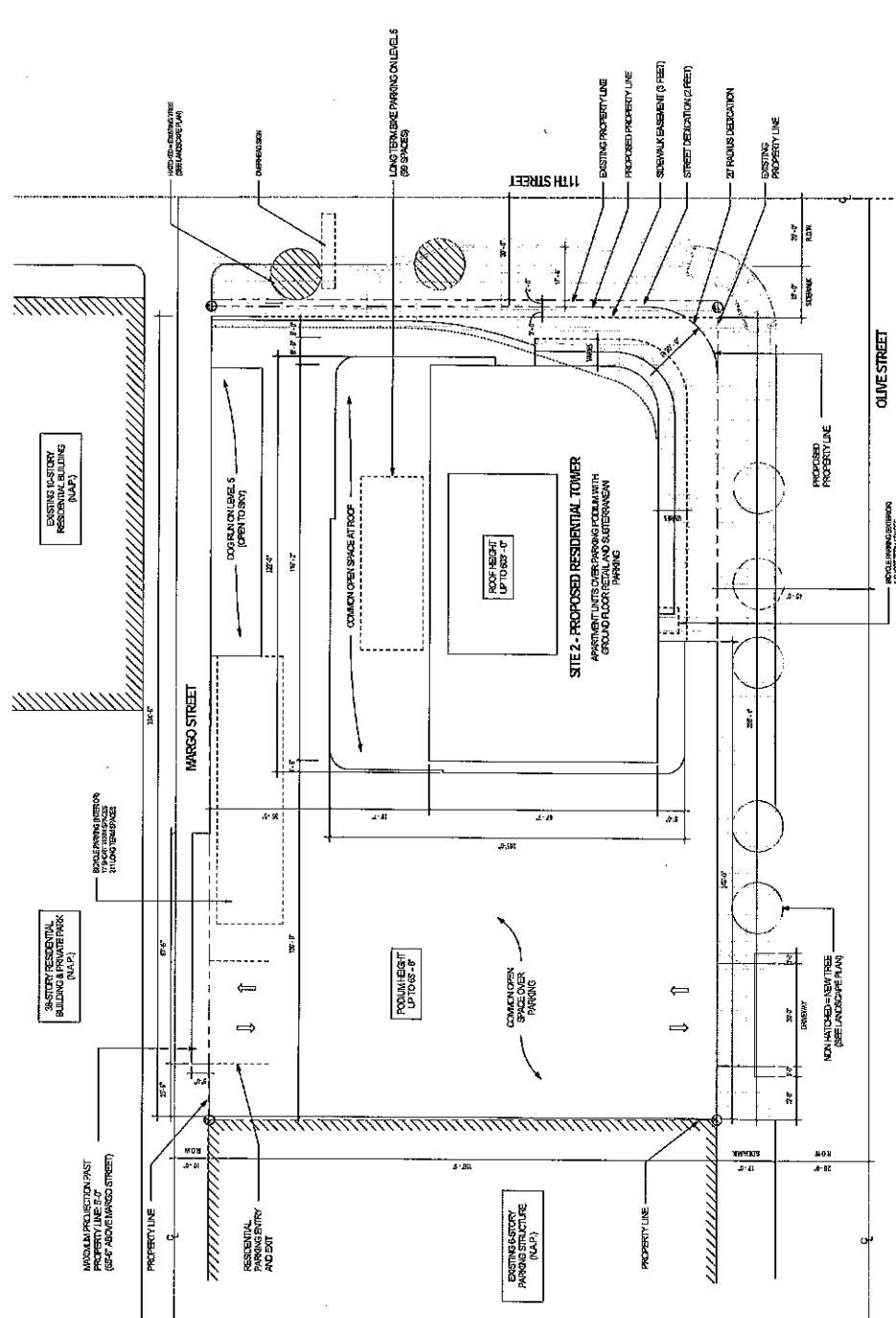
Owner Address  
1200 B STREET  
DOWNTOWN DTLA

Sheet Drawing Log

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3	03/02/23	SITE PLAN REVIEW #3
4	03/03/23	SITE PLAN REVIEW #4
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Sheet Identification  
PLOT PLAN

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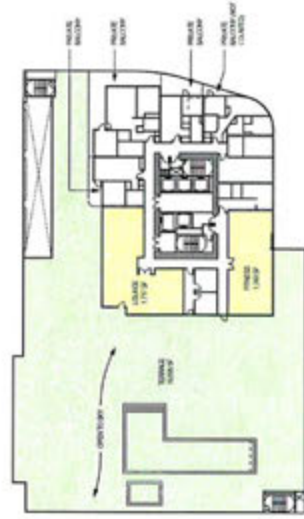


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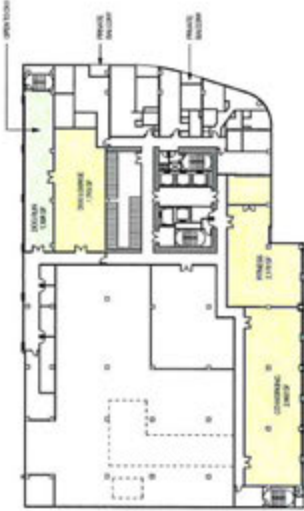
NOT FOR CONSTRUCTION

Request for Water Supply Assessment  
DTLA South Park Properties Site 2  
1105-1123 South Olive Street, Los Angeles, CA 90015

Attachment C  
Open Space Diagrams



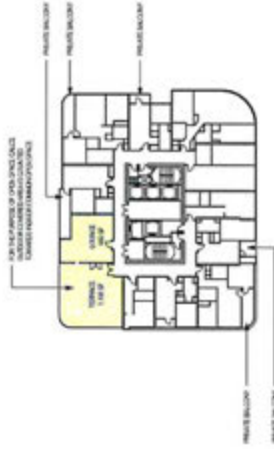
1 L1 - OPEN SPACE  
 11' x 132'



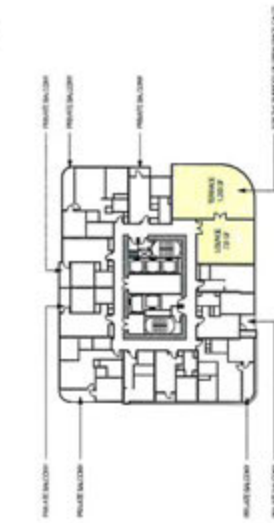
2 L5 - OPEN SPACE  
 11' x 132'



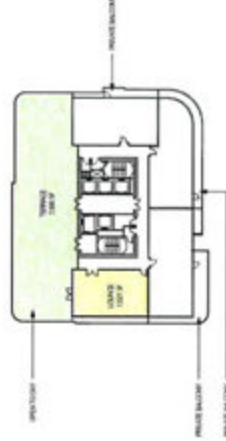
3 L21 - OPEN SPACE  
 11' x 132'



4 L6 - OPEN SPACE  
 11' x 132'



5 L41 - OPEN SPACE  
 11' x 132'



6 L51 - OPEN SPACE  
 11' x 132'

ROOM NAME	ROOM NUMBER	ROOM TYPE	
		INDOOR AMENITY	OUTDOOR AMENITY
1	101	Y	N
2	102	Y	N
3	103	Y	N
4	104	Y	N
5	105	Y	N
6	106	Y	N
7	107	Y	N
8	108	Y	N
9	109	Y	N
10	110	Y	N
11	111	Y	N
12	112	Y	N
13	113	Y	N
14	114	Y	N
15	115	Y	N
16	116	Y	N
17	117	Y	N
18	118	Y	N
19	119	Y	N
20	120	Y	N
21	121	Y	N
22	122	Y	N
23	123	Y	N
24	124	Y	N
25	125	Y	N
26	126	Y	N
27	127	Y	N
28	128	Y	N
29	129	Y	N
30	130	Y	N
31	131	Y	N
32	132	Y	N
33	133	Y	N
34	134	Y	N
35	135	Y	N
36	136	Y	N
37	137	Y	N
38	138	Y	N
39	139	Y	N
40	140	Y	N
41	141	Y	N
42	142	Y	N
43	143	Y	N
44	144	Y	N
45	145	Y	N
46	146	Y	N
47	147	Y	N
48	148	Y	N
49	149	Y	N
50	150	Y	N
51	151	Y	N
52	152	Y	N
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91	191	Y	N
92	192	Y	N
93	193	Y	N
94	194	Y	N
95	195	Y	N
96	196	Y	N
97	197	Y	N
98	198	Y	N
99	199	Y	N
100	200	Y	N

NOT FOR CONSTRUCTION

Request for Water Supply Assessment  
DTLA South Park Properties Site 2  
1105-1123 South Olive Street, Los Angeles, CA 90015

Attachment D  
Landscape Plans

**DTLA South Park  
Properties Site 2**

Sheet Inventory Log

NO.	DATE	DESCRIPTION
1	10/20/17	ISSUE FOR PERMITTING
2	10/20/17	ISSUE FOR PERMITTING
3	10/20/17	ISSUE FOR PERMITTING
4	10/20/17	ISSUE FOR PERMITTING
5	10/20/17	ISSUE FOR PERMITTING
6	10/20/17	ISSUE FOR PERMITTING
7	10/20/17	ISSUE FOR PERMITTING
8	10/20/17	ISSUE FOR PERMITTING
9	10/20/17	ISSUE FOR PERMITTING
10	10/20/17	ISSUE FOR PERMITTING
11	10/20/17	ISSUE FOR PERMITTING

**LEGEND**

- ① 11th Street Improvements & Street Trees per MyFig Streetscape Plans; Refer to next sheet, L1.01B for more information.
- ② Upgraded Paving within Property Line
- ③ Pre-Approved B.O.E. Specialty Finish Concrete
- ④ 18" Wide Brick Band per Downtown Design Guidelines
- ⑤ 7' x 15' Planter
- ⑥ Entry Drive
- ⑦ Existing Street Light
- ⑧ Short Term Bicycle Parking, 24 Spaces Provided
- ⑨ Raised Planter
- ⑩ Painted Graphic Connection to Neighboring Park
- ⑪ Approximate Curbside Parking Locations; 19' x 8', typ.

**Proposed Street Trees:**  
*Platanus acerifolia* - London Planetree

**Required Quantity of Trees: 134**  
**Proposed Quantity of Trees: 115**

Ground Level:	8
Level 5 Mezzanine:	0
Level 6 Amenity:	95
Level 21 Amenity:	0
Level 41 Amenity:	0
Level 51 Penthouse:	12

**Common Open Space: 25,807 SF**  
**Landscaped Open Space Required: 6,452 SF**  
**Landscaped Open Space Provided: 6,452 SF**

Ground Level:	102 SF
Level 5 Mezzanine:	230 SF
Level 6 Amenity:	5,336 SF
Level 21 Amenity:	0 SF
Level 41 Amenity:	0 SF
Level 51 Penthouse:	784 SF



SCALE: 1"=16'-0"

**NOT FOR CONSTRUCTION**





**DTLA South Park  
Properties Site 2**

Project Address:  
1111 North 1st Street  
Phoenix, AZ 85004

Issue Drawing Log

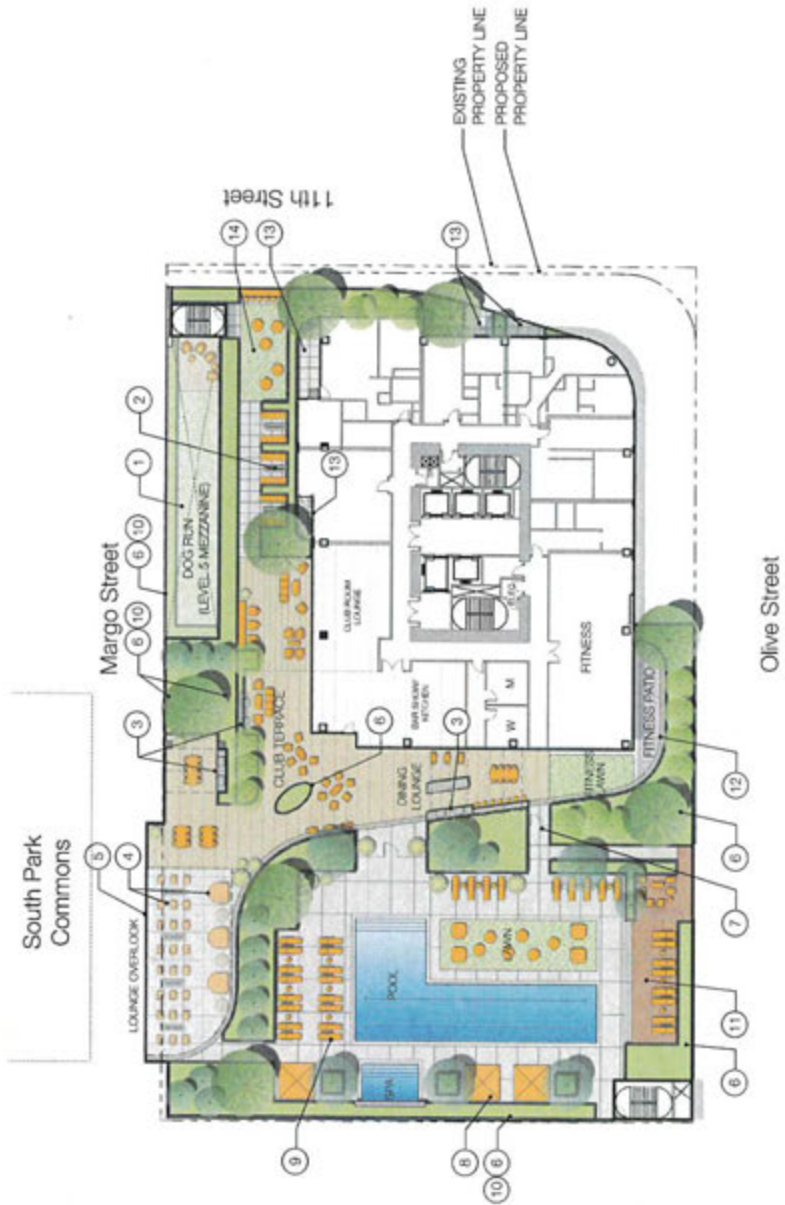
NO.	DATE	DESCRIPTION
001	08/11/2011	ISSUED FOR PERMIT REVIEW
002	08/11/2011	ISSUED FOR PERMIT REVIEW
003	08/11/2011	ISSUED FOR PERMIT REVIEW
004	08/11/2011	ISSUED FOR PERMIT REVIEW
005	08/11/2011	ISSUED FOR PERMIT REVIEW
006	08/11/2011	ISSUED FOR PERMIT REVIEW
007	08/11/2011	ISSUED FOR PERMIT REVIEW
008	08/11/2011	ISSUED FOR PERMIT REVIEW
009	08/11/2011	ISSUED FOR PERMIT REVIEW
010	08/11/2011	ISSUED FOR PERMIT REVIEW
011	08/11/2011	ISSUED FOR PERMIT REVIEW
012	08/11/2011	ISSUED FOR PERMIT REVIEW
013	08/11/2011	ISSUED FOR PERMIT REVIEW
014	08/11/2011	ISSUED FOR PERMIT REVIEW
015	08/11/2011	ISSUED FOR PERMIT REVIEW
016	08/11/2011	ISSUED FOR PERMIT REVIEW
017	08/11/2011	ISSUED FOR PERMIT REVIEW
018	08/11/2011	ISSUED FOR PERMIT REVIEW
019	08/11/2011	ISSUED FOR PERMIT REVIEW
020	08/11/2011	ISSUED FOR PERMIT REVIEW

**LEGEND**

- 1 Dog Park Below with Enclosure Gate & Owner Lounge
- 2 Firepit and Lounge Seating
- 3 Counter Top with BBQ Grills
- 4 Firepits, Daybeds, & Overhead Trills
- 5 5' Building Overhang
- 6 Raised Planter, Typical
- 7 5' High Glass Pool Enclosure Fence
- 8 Pool Cabanas
- 9 Chaise Lounges
- 10 Screening Hedge
- 11 Raised Sun Terrace
- 12 Rubberized Athletic Surface
- 13 Private Patio
- 14 Lawn Panel with Outdoor Games

**Proposed Trees:**

- Acacia stanophylla - Shoestring Acacia
- Cercidium x 'Desert Museum' - Palo Verde 'Desert Museum'
- Olea europaea - Fruitless Olive
- Prosopis alba 'Colorado' - Thornless Argentine Mesquite



SCALE: 1"=16'-0"  
NOT FOR CONSTRUCTION

**DTLA South Park  
Properties Site 2**

NO.	DESCRIPTION	DATE	BY
1	PREPARE SITE PLAN REVIEW		
2	REVISIONS		
3	FINAL SITE PLAN REVIEW		
4	FINAL SITE PLAN REVIEW		

**SITE 2 LANDSCAPE  
LEVEL 6 -  
PLANTING AND  
OPEN SPACE PLAN**

**L1.02B**

**LEGEND**

COMMON OPEN SPACE	AREA	SQUARE FOOTAGE
EXTERIOR COMMON OPEN SPACE		15,347 SF
LANDSCAPED COMMON OPEN SPACE		5,565 SF
<b>TOTAL COMMON OPEN SPACE</b>		<b>20,913 SF</b>

REFER TO ARCHITECTURAL SHEET 60.01a FOR TOTAL OPEN SPACE INFORMATION

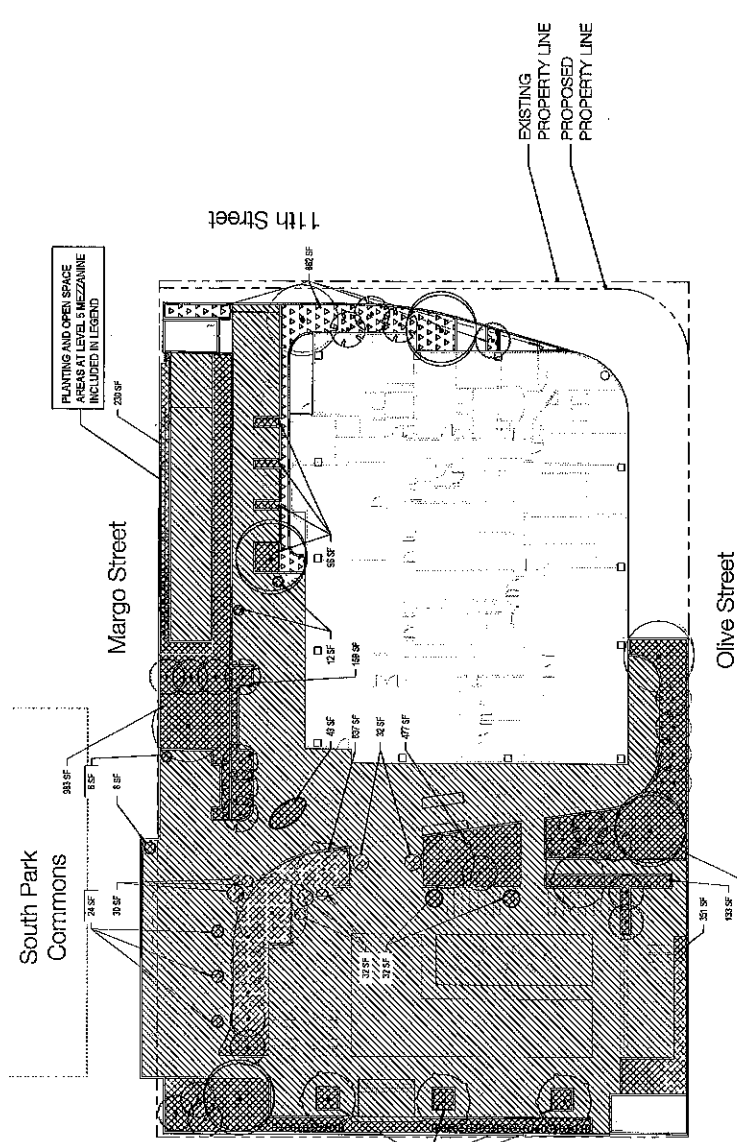
LANDSCAPED AREA (SHOWN AS REFERENCE)	AREA	SQUARE FOOTAGE
		682 SF

**PLANTING LEGEND: Trees Such As:**

SYMBOL	NAME	QTY	SIZE
	ADONIA STENOPHYLLA	14	24" BOX STD
	CERCIDIUM X 'DESERT MUSEUM'	15	24" BOX STD
	OLEA EUROPEA SP 'FRUITLESS OLIVE'	5	36" BOX STD
	PODOCARPUS E. 'MONNAL'	52	24" BOX STD
	PRINOSIPIS ALBA 'COLOSODON'	8	36" BOX STD

**PLANTING LEGEND: Shrubs/Groundcover Such As:**

SYMBOL	NAME	QTY	SIZE
	AGAVE ATTENUATA		
	FOXTAIL AGAVE		
	AEONIUM 'JOLLY GREEN'		
	CAREX DIVULSA		
	BERKLEY SEDGE		
	DANELLA REVOLUTA 'CASSA BLUE'		
	CASSA BLUE FLAX LILY		
	DANELLA REVOLUTA 'LITTLE REV'		
	LITTLE REV FLAX LILY		
	DIETES GRANDIFLORA 'VIREGATA'		
	STRIPED PORTULACA LILY		
	FESTUCA 'SISKIYOU BLUE'	16,228 SF	40% @ 18" o.c.
	SISKIYOU BLUE FESCUE	16,228 SF	40% @ 36" o.c.
	LOWANDRA LONGFOLIA 'BREEZE'		
	DWARF MAT RUSH		
	OLEA EUROPEA 'MONTRA'		
	LITTLE OLIVE 'DWARF OLIVE'		
	ROSMARINUS OFFICINALIS 'IRENE'		
	TRAILING BLUE ROSEMARY		
	SALVIA SP.		
	SAGE 180		
	SEDUM 'BLUE SPRUCE'		
	BLUE SPRUCE STONECROP		
	SENECIO CYLINDRICUS		
	NARROW-LEAF CHALKSTICKS		



SCALE: 1"=16'-0"

**NOT FOR CONSTRUCTION**



Client Address:  
11111 NE 11th Street, Suite 1000  
Bellevue, WA 98004

Project Name:  
DTLA South Park Properties Site 2

Project Location:  
11th Street & Olive Street  
Bellevue, WA 98004

Project Number:  
2023-001

Revision:  
1

Date:  
10/10/2023

**LEGEND**

AREA	SQUARE FOOTAGE
EXTERIOR AREA (SHOWN FOR REFERENCE)	1,123 SF
EXTERIOR AREA (SHOWN FOR REFERENCE)	80 SF
LANDSCAPED AREA (SHOWN FOR REFERENCE)	1,203 SF
TOTAL EXTERIOR AREA	1,283 SF

REFER TO ARCHITECTURAL SHEET G0.01a FOR TOTAL OPEN SPACE INFORMATION

**PLANTING LEGEND: Shrubs/Groundcover Such As:**

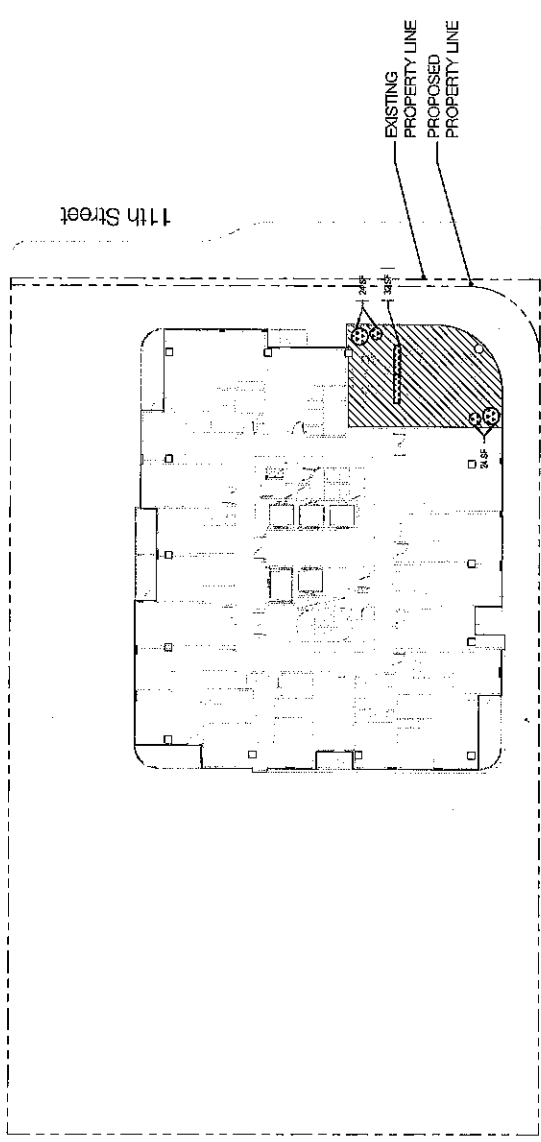
SYMBOL	NAME	QTY	SIZE
▽▽▽▽	AGAVE ATTENUATA		
▽▽▽▽	FOXGLOVE		
▽▽▽▽	AEONIAM 'JOLLY GREEN'		
▽▽▽▽	AEONIAM		
▽▽▽▽	DIANELLA REVOLUTA 'CASSA BLUE'	40%	1 GAL @ 16" O.C.
▽▽▽▽	CASSA BLUE FLAX LILY		
▽▽▽▽	DIANELLA REVOLUTA 'LITTLE REY'		
▽▽▽▽	LITTLE REY FLAX LILY		
▽▽▽▽	FESTUCA 'SISKIYOU BLUE'	80 SF	5 GAL @ 3" O.C.
▽▽▽▽	SISKIYOU BLUE PSCUOE		
▽▽▽▽	LOMANDRAL LONGIFOLIA 'BREEZE'		
▽▽▽▽	DWARF MAT RUSH		
▽▽▽▽	ROSMARINUS OFFICINALIS 'IRENE'		
▽▽▽▽	TRAILING BLUE ROSEMARY		
▽▽▽▽	SEDUM BLUE SPRUCE		
▽▽▽▽	BLUE SPRUCE STONECRIP		
▽▽▽▽	SENECO CYLINDRICALIS		
▽▽▽▽	NARROW LEAF CHALISTIKAS		

South Park Commons

Margo Street

11th Street

Olive Street



SCALE: 1"=16'-0"  
NOT FOR CONSTRUCTION

Notes:

1	SEE PLAN SHEET
2	SEE PLAN SHEET
3	SEE PLAN SHEET
4	SEE PLAN SHEET
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7	SEE PLAN SHEET
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49	SEE PLAN SHEET
50	SEE PLAN SHEET

**LEGEND**

- ① Glass Railing
- ② Lounge Seating
- ③ Entertainment Wall with Lounge Furniture
- ④ Low Planter
- ⑤ Private Patio

South Park Commons



SCALE: 1"=16'-0"

**NOT FOR CONSTRUCTION**



**Revision Log**

NO.	DESCRIPTION	DATE
1	ISSUED FOR PERMIT REVIEW	08/11/2015
2	ISSUED FOR PERMIT REVIEW	08/11/2015
3	ISSUED FOR PERMIT REVIEW	08/11/2015
4	ISSUED FOR PERMIT REVIEW	08/11/2015
5	ISSUED FOR PERMIT REVIEW	08/11/2015
6	ISSUED FOR PERMIT REVIEW	08/11/2015
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14	ISSUED FOR PERMIT REVIEW	08/11/2015
15	ISSUED FOR PERMIT REVIEW	08/11/2015
16	ISSUED FOR PERMIT REVIEW	08/11/2015
17	ISSUED FOR PERMIT REVIEW	08/11/2015
18	ISSUED FOR PERMIT REVIEW	08/11/2015
19	ISSUED FOR PERMIT REVIEW	08/11/2015
20	ISSUED FOR PERMIT REVIEW	08/11/2015

**LEGEND**

AREA	SQUARE FOOTAGE
EXTERIOR AREA (SHOWN FOR REFERENCE)	1,006 SF
EXTERIOR AREA (SHOWN FOR REFERENCE)	102 SF
LANDSCAPED AREA (SHOWN FOR REFERENCE)	1,103 SF
<b>TOTAL EXTERIOR AREA</b>	<b>1,103 SF</b>

REFER TO ARCHITECTURAL SHEET G0.01a FOR TOTAL OPEN SPACE INFORMATION

**PLANTING LEGEND: Shrubs/Groundcover Such As:**

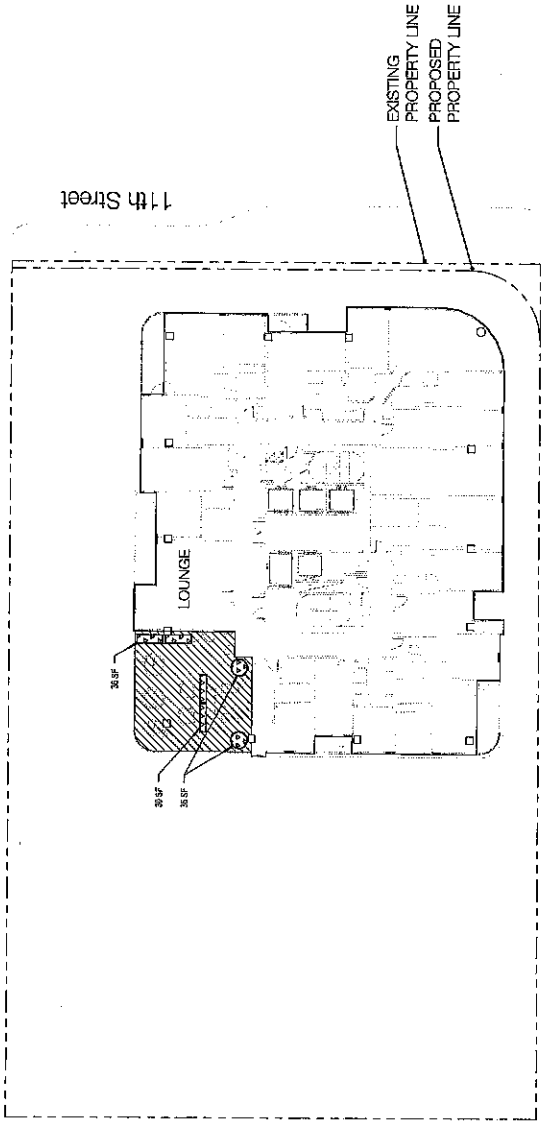
SYMBOL	NAME	QTY	SIZE
▽▽▽▽	AGAVE ATTENUATA		
▽▽▽▽	FOXTAIL AGAVE		
▽▽▽▽	AEDONUM JOLLY GREEN		
▽▽▽▽	AEDONUM		
▽▽▽▽	DIANELLA REVOLUTA CASSA BLUE		40%
▽▽▽▽	CASSA BLUE FLAX LILY		1 GAL @ 18" O.C.
▽▽▽▽	DIANELLA REVOLUTA LITTLE REV		
▽▽▽▽	LITTLE REV FLAX LILY		
▽▽▽▽	FESTUCA SISKIYOU BLUE		40%
▽▽▽▽	SISKIYOU BLUE FESODE	102 SF	5 GAL @ 30" O.C.
▽▽▽▽	LOMANORA LONGIFOLIA 'BREEZE		
▽▽▽▽	DWARF PINK BUSH		
▽▽▽▽	ROSMARINUS OFFICINALIS IRENE		
▽▽▽▽	TRAILING BLUE ROSEMARY		
▽▽▽▽	SEDUM 'BLUE SPRUCE		20%
▽▽▽▽	BLUE SPRUCE STONECROP		15 GAL @ 30" O.C.
▽▽▽▽	SENECIO CYLINDRICUS		
▽▽▽▽	NARROW-LEAF CHALKSTICKS		

South Park Commons

Margo Street

11th Street

Olive Street



EXISTING PROPERTY LINE  
PROPOSED PROPERTY LINE

SCALE: 1"=18'-0"

NOT FOR CONSTRUCTION

**DTLA South Park  
Properties Site 2**

Sheet No. [Redacted]

NO. 1	NO. 2	NO. 3	NO. 4	NO. 5	NO. 6	NO. 7	NO. 8	NO. 9	NO. 10	NO. 11	NO. 12	NO. 13	NO. 14	NO. 15	NO. 16	NO. 17	NO. 18	NO. 19	NO. 20	NO. 21	NO. 22	NO. 23	NO. 24	NO. 25	NO. 26	NO. 27	NO. 28	NO. 29	NO. 30	NO. 31	NO. 32	NO. 33	NO. 34	NO. 35	NO. 36	NO. 37	NO. 38	NO. 39	NO. 40	NO. 41	NO. 42	NO. 43	NO. 44	NO. 45	NO. 46	NO. 47	NO. 48	NO. 49	NO. 50	NO. 51	NO. 52	NO. 53	NO. 54	NO. 55	NO. 56	NO. 57	NO. 58	NO. 59	NO. 60	NO. 61	NO. 62	NO. 63	NO. 64	NO. 65	NO. 66	NO. 67	NO. 68	NO. 69	NO. 70	NO. 71	NO. 72	NO. 73	NO. 74	NO. 75	NO. 76	NO. 77	NO. 78	NO. 79	NO. 80	NO. 81	NO. 82	NO. 83	NO. 84	NO. 85	NO. 86	NO. 87	NO. 88	NO. 89	NO. 90	NO. 91	NO. 92	NO. 93	NO. 94	NO. 95	NO. 96	NO. 97	NO. 98	NO. 99	NO. 100
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**LEGEND**

- 1 Glass Railing
- 2 Fire Pit and Lounge Seating
- 3 Upgraded Tile Paving
- 4 Low Planter
- 5 Entertainment Wall with Lounge Furniture
- 6 Large Pots with Citrus Trees
- 7 Decorative Gravel
- 8 Private Patio

**Proposed Trees:**



SCALE: 1"=10'-0"  
NOT FOR CONSTRUCTION









**From:** [Nuri Cho](#)  
**To:** [Kim, Theresa](#)  
**Cc:** [Ned Baldwin](#); [Paul Garry](#); [markwareham@warehamconsultingllc.com](mailto:markwareham@warehamconsultingllc.com); [Andrew Dutton](#)  
**Subject:** [EXTERNAL] Re: Updated - WSA for DTLA South Park Properties Site 2 Scope Confirmation  
**Date:** Friday, April 16, 2021 10:05:04 AM

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EXTERNAL EMAIL! This email was generated from a non-LADWP address. If any links exist, do not click/open on them unless you are 100% certain of the associated site or source. ALWAYS hover over the link to preview the actual URL/site and confirm its legitimacy.

---

Hi Theresa,

I would like to confirm that the scope of work is accurate in this table, thank you.

On Fri, Apr 16, 2021 at 9:12 AM Kim, Theresa <[Theresa.Kim@ladwp.com](mailto:Theresa.Kim@ladwp.com)> wrote:

Dear Nuri,

We are in the process of completing the Water Supply Assessment (WSA) Board Package for the Downtown Los Angeles South Park Properties at Site 2 Project. The LADWP requests that the Department of City Planning confirm, by e-mail, the correct detail scope (shown in the table below) for the Proposed Project. Your scope confirming e-mail will be included as part of the WSA and the confirmed scope is used for calculating the water demand in the WSA.

LADWP received the WSA Request Letter for the Proposed Project on November 20, 2020. The scope considered in LADWP's water demand calculations, as received in the initial WSA Request Letter and subsequent information from the Project Team, is as follows:

Existing Use to be Removed <sup>1</sup>	Quantity
Surface Parking Lot	36,120 sf
Proposed Use <sup>1</sup>	Quantity
<b>RESIDENTIAL UNITS</b>	
Residential: Studios	89 du
Residential: 1 bd	266 du
Residential: 1 bd Apartment with den	2 du
Residential: 2 bd Apartment	176 du
Residential: 3 bd	3 du
<b>Residential Units Total</b>	<b>536 du</b>



RESIDENTIAL AMENITIES AND COMMERCIAL		
Synthetic Turf Ares (lvl 5 Outdoor Dog Run, Lvl 6 pool and fitness area)	1,600	sf
Dog Lounge (lvl 5)	1,749	sf
Fitness (lvl 5, 6)	3,518	sf
Office (lvl 5 "co-working")	2,860	sf
Lounge (lvl 6, 21, 41, 51) <sup>2</sup>	277	seats
Pool and Spa (lvl 6)	1,632	sf
Office (lvl 1)	1,470	sf
Restaurant-seating area (lvl 1) <sup>3</sup>	139	seats
		(Assume half the space of 4178 sf is for dining)
Restaurant- kitchen/storage/etc (lvl 1) <sup>3</sup>	2,089	sf
		(Assume half the space of 4178 sf is for dining)
<b>Landscaping</b>	<b>8,612</b>	<b>sf</b>
<b>Covered Parking</b>	<b>258,647</b>	<b>sf</b>
<b>Cooling Tower Total</b>		
Chiller Capacity	1,000	ton
Operating Hours	24hrs/day, 365	days/year

### Notes

1. Proposed Uses that do not have a water demand are not shown here.
2. Lounge Areas that contain a preparation area with plumbing fixtures were included in the water demand.
3. Restaurant area's water demand was calculated based on 50% dining and 50% kitchen area for water demand

Also, the Proposed Project is consistent with the demographic projections in both the 2012 and 2016 Regional Transportation Plan (RTP) by Southern California Association of Governments (SCAG) for the City of Los Angeles.

**If the above listed project scope information is accurate and consistent with the Proposed Project, please reply to this e-mail to confirm. If not, please edit the scope accordingly and send back to me by e-mail. If you have any questions, feel free to contact me.**

Theresa Vu Kim

Los Angeles Department of Water and Power

111 N. Hope Street, Room 314

Los Angeles, CA 90012

O: (213) 367-1491

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**Nuri Cho**

Pronouns: She, Her, Hers

City Planner

**Los Angeles City Planning**

200 N. Spring St., Room 620

Los Angeles, CA 90012

T: (213) 978-1177 | [Planning4LA.org](http://Planning4LA.org)



## Appendix B

Water Conservation Commitment Letter

**MREG 1105 Olive LLC**  
1150 S Olive Street  
Suite 2250  
Los Angeles, CA 90015

March 10, 2021

Richard F. Harasick  
Senior Assistant General Manager for Water Systems  
Los Angeles Department of Water & Power  
111 North Hope Street, Room 1455  
Los Angeles, CA 90012-5701

Re: WATER CONSERVATION COMMITMENTS FOR THE DOWNTOWN LOS ANGELES (DTLA) SOUTH PARK PROPERTY AT SITE 2 PROJECT  
1105 S. Olive Street  
City Planning Department Case No. VTT-82109, CPC-2018-2600-TDR-CUP-ZV-DD-SPR

Dear Mr. Harasick:

MREG 1105 Olive, LLC proposes to develop the DTLA South Park Property at Site 2 Project (Project) within the Central City Community Plan Area of the City of Los Angeles. The project site, which encompasses approximately 0.83 acres, is generally bounded by 11<sup>th</sup> Street to the north, Olive Street to the east, a commercial parking structure to the south, and an alley (Margo Street) to the west. The proposed project would develop approximately 4,178 square feet of retail/restaurant space and 536 residential units, The Project would also include approximately 258,647 square feet of covered parking and 8,612 square feet of landscaping. As part of the project, an existing surface parking lot would be removed.

The Applicant understands the City of Los Angeles' policy that future water needs shall be met by expanding water recycling and conservation. In order to reduce the Project's water demand, the Applicant has committed to implement the following water conservation measures that are in addition to those required by codes and ordinances for the entire Project:

- Fixtures
  - Showerheads with a flow rate of "1.75" gallons per minute, or less
- Landscape and irrigation
  - Artificial Turf
  - California Friendly® plants or native plants
  - Drip/ Subsurface Irrigation (Micro-Irrigation)
  - Micro-Spray
  - Proper Hydro-zoning/Zoned Irrigation-(groups plants with similar water requirements together).
- Pool
  - Install a sub-meter on the pool make-up line so water use can be monitored and leaks can be identified and repaired
  - Leak Detection System for swimming pools and Jacuzzi

- Pool splash troughs around the perimeter that drain back into the pool
- Pool/Spa recirculating filtration equipment
- Water-Saving Pool Filter
  
- Cooling Tower Plant
  - Ownership shall provide an approved Los Angeles County Health Department /Los Angeles City Department Building and Safety Gray Water System for 100% of Cooling Tower Make-up Water.
  
- Utilities
  - Individual metering and billing for water use for every commercial unit.
  - Leak detector at main building water boiler system.

The Applicant has also committed to comply with the City of Los Angeles Low Impact Development Ordinances (City Ordinance No. 181899 and No. 183833) and to implement Best Management Practices that have stormwater recharge or reuse benefits for the entire Project as applicable:

(Note: BMPs listed based on hierarchy established by City of Los Angeles Low Impact Development Handbook)

- Pretreatment BMPs – As appropriate, a combination of the following:
  - Catch Basin Insert – a device that can be inserted into an existing catch basin to provide some level of runoff contaminant removal.
  - Downspout Filter – a device that can be inserted into a downspout pipe to provide some level of runoff contaminant removal.
  - Hydrodynamic Separator – a prefabricated in-line chamber which removes debris and pollutants through screening and settlement of influent stormwater.
  - Pre-settling Chamber – a prefabricated in-line chamber which removes debris and pollutants through settlement and controlled discharge.
- Infiltration BMPs – If feasible for the Project
  - Drywell(s) – a vertical system which allows for stormwater infiltration deep beneath proposed foundations/surfaces.
- Capture and Re-use BMPs – If infiltration is considered infeasible
  - Cistern – captures stormwater runoff as it comes down through the roof gutter system to offset domestic water demand.

Should you have any questions, please do not hesitate to call at 213-542-4316.

Sincerely,

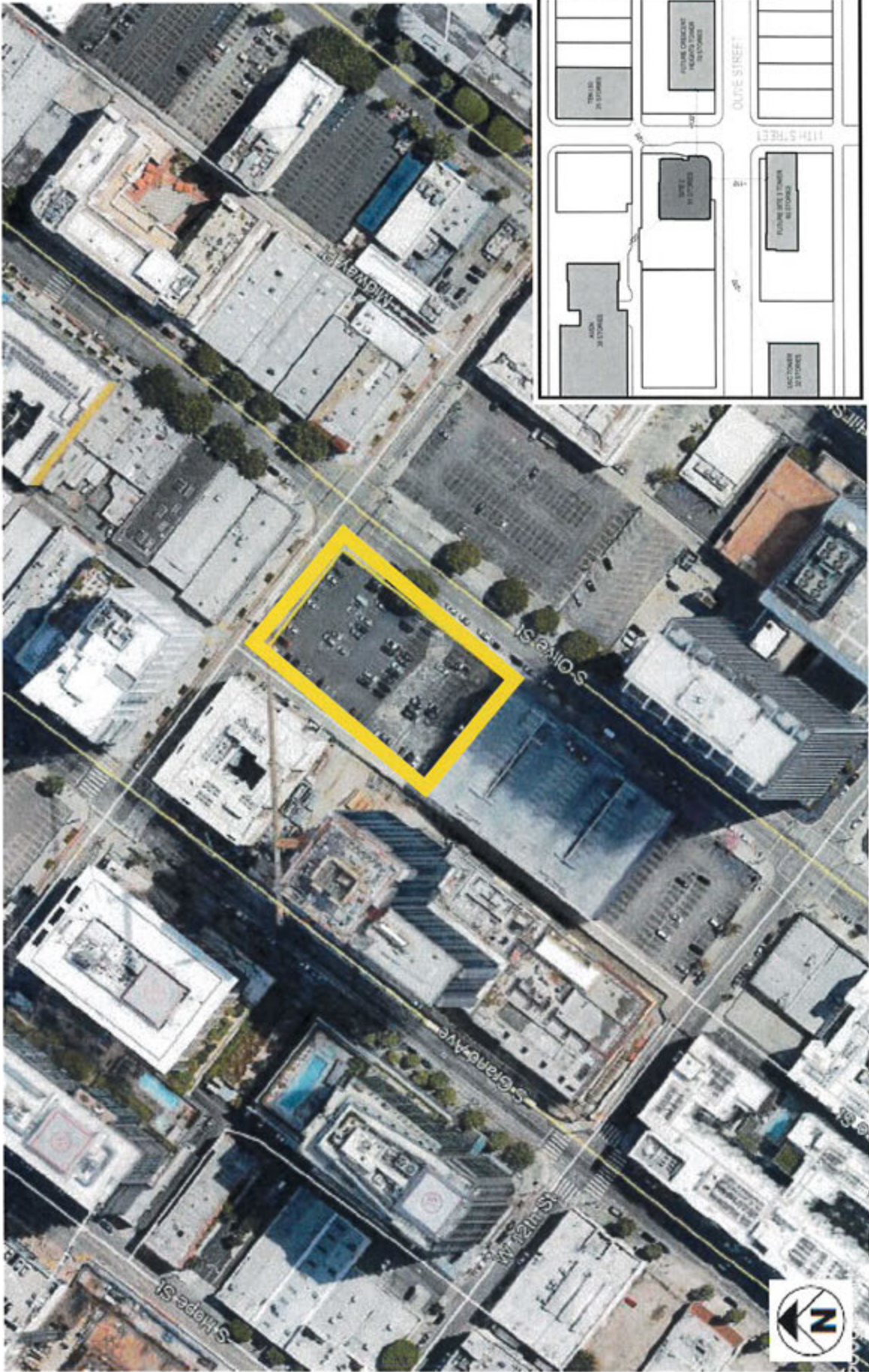


Kevin Lindquist  
 Authorized Signatory  
 MREG 1105 Olive LLC

## Appendix C

### Project Location Map





SOURCE: Google Earth - 2020; Meridian Consultants, LLC - February 2020

## Appendix D

### Adjudicated Groundwater Basin Judgments

- San Fernando Basin – Judgment No. 650079
- Sylmar Basin – Judgment No. 650079
- Central Basin – Judgment No, 786656

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SUPERIOR COURT OF THE STATE OF CALIFORNIA  
FOR THE COUNTY OF LOS ANGELES

THE CITY OF LOS ANGELES,

Plaintiff,

vs.

CITY OF SAN FERNANDO, ET AL.

Defendants.

No. 650079

JUDGMENT

There follows by consecutive paging Recitals (page 1), Definitions and List of Attachments (pages 1 to 6), Designation of Parties (page 6), Declaration re Geology and Hydrology (pages 6 to 12), Declaration of Rights (pages 12 to 21), Injunctions (pages 21 to 22), Continuing Jurisdiction (page 23), Watermaster (pages 23 to 29), Physical Solution (pages 29 to 34), and Miscellaneous Provisions (pages 34 to 35), and Attachments (pages 36 to 46). Each and all of said several parts constitute a single integrated Judgment herein.

1           4.2.3 Separate Ground Water Basins. The physical and geologic characteristics of each  
2 of the ground water basins, Eagle rock, Sylmar, Verdugo and San Fernando, cause impediments  
3 to inter-basin ground water flow whereby there is created separate underground reservoirs. Each  
4 of said basins contains a common source of water supply to parties extracting ground water from  
5 each of said basins. The amount of underflow from Sylmar Basin, Verdugo Basin and Eagle  
6 Rock Basin to San Fernando Basin is relatively small, and on the average has been  
7 approximately 540 acre feet per year from the Sylmar Basin; 80 acre feet per year from Verdugo  
8 Basin; and 50 acre feet per year from Eagle Rock Basin. Each has physiographic, geologic and  
9 hydrologic differences; one from the other, and each meets the hydrologic definition of "basin".  
10 The extractions of water in the respective basins affect the other water users within that basin but  
11 do not significantly or materially affect the ground water levels in any of the other basins. The  
12 underground reservoirs of Eagle Rock, Verdugo and Sylmar Basins are independent of one  
13 another and of the San Fernando Basin.

14           4.2.4 Safe Yield and Native Safe Yield. The safe yield and native safe yield, stated in  
15 acre feet, of the three largest basins for the year 1964-65 was as follows:

<u>Basin</u>	<u>Safe Yield</u>	<u>Native Safe Yield</u>
San Fernando	90,680	43,660
Sylmar	6,210	3,850
Verdugo	7,150	3,590

16  
17  
18  
19  
20 The safe yield of Eagle Rock Basin is derived from imported water delivered by Los Angeles.

21 There is no measurable native safe yield.

22           4.2.5 Separate Basins -- Separate Rights. The rights of the parties to extract ground  
23 water within ULARA are separate and distinct as within each of the several ground water basins  
24 within said watershed.

25           4.2.6 Hydrologic Condition of Basins. The several basins within ULARA are in varying  
26 hydrologic conditions, which result in different legal consequences.

27           4.2.6.1 San Fernando Basin. The first full year of overdraft in San Fernando  
28 Basin was 1954-55. It remained in overdraft continuously until 1968, when an injunction

1 LAGERLOF, SENICAL, DRESCHER & SWIFT

2 301 North Lake Avenue, 10th Floor

3 Pasadena, California 91101

4 (818) 793-9400 or (213) 385-4345

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7

8

SUPERIOR COURT OF THE STATE OF CALIFORNIA

9

FOR THE COUNTY OF LOS ANGELES

10

11 CENTRAL AND WEST BASIN WATER  
REPLENISHMENT DISTRICT, etc.,

) No. 786,656  
) SECOND AMENDED  
) JUDGMENT

12

Plaintiff,)

13

v.

) (Declaring and establishing water rights in  
) Central Basin and enjoining extractions  
) therefrom in excess of specified quantities.)

14

CHARLES E. ADAMS, et al.,

15

Defendants.)

16

CITY OF LAKEWOOD, a municipal  
corporation,

17

Cross-Complaint.)

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v.

19

CHARLES E. ADAMS, et al.,

20

Cross-Defendants.)

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The above-entitled matter duly and regularly came on for trial in Department 73 of the above-entitled Court (having been transferred thereto from Department 75 by order of the presiding Judge), before the Honorable Edmund M. Moor, specially assigned Judge, on May 17, 1965, at 10:00 a.m. Plaintiff was represented by its attorneys BEWLEY, KNOOP,



1 of the close of the water year ending September 30, 1978 in accordance with the Watermaster  
2 Reports on file with this Court and the records of the Plaintiff. This tabulation does not take into  
3 account additions or subtractions from any Allowed Pumping Allocation of a producer for the  
4 1978-79 water year, nor other adjustments not representing change in fee title to water rights,  
5 such as leases of water rights, nor does it include the names of lessees of landowners where the  
6 lessees are exercising the water rights. The exercise of all water rights is subject, however, to the  
7 provisions of this Judgment is hereinafter contained. All of said rights are of the same legal  
8 force and effect and are without priority with reference to each other. Each party whose name is  
9 hereinafter set forth in the tabulation set forth in Appendix "2" of this judgment, and after whose  
10 name there appears under the column "Total Water Right" the figure "0" owns no rights to  
11 extract any ground water from Central Basin, and has no right to extract any ground water from  
12 Central Basin.

13 (b) Defendant The City of Los Angeles is the owner of the right to extract fifteen  
14 thousand (15,000) acre feet per annum of ground water from Central Basin. Defendant  
15 Department of Water and Power of the City of Los Angeles has no right to extract ground water  
16 from Central Basin except insofar as it has the right, power, duty or obligation on behalf of  
17 defendant The City of Los Angeles to exercise the water rights in Central Basin of defendant The  
18 City of Los Angeles. The exercise of said rights are subject, however, to the provisions of this  
19 judgment hereafter contained, including but not limited to, sharing with other parties in any  
20 subsequent decreases or increases in the quantity of extractions permitted from Central Basin,  
21 pursuant to continuing jurisdiction of the Court, on the basis that fifteen thousand (15,000) acre  
22 feet bears to the Allowed Pumping Allocations of the other parties.

23 (c) No party to this action is the owner of or has any right to extract ground water  
24 from Central Basin except as herein affirmatively determined.

25 2. Parties Enjoined as Regards Quantities of Extractions.

26

27



## Appendix E

Water Supply Assessment Provisions  
California Water Code Section 10910-10915

**State of California**

**WATER CODE**

**Section 10910**

---

10910. (a) Any city or county that determines that a project, as defined in Section 10912, is subject to the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) under Section 21080 of the Public Resources Code shall comply with this part.

(b) The city or county, at the time that it determines whether an environmental impact report, a negative declaration, or a mitigated negative declaration is required for any project subject to the California Environmental Quality Act pursuant to Section 21080.1 of the Public Resources Code, shall identify any water system whose service area includes the project site and any water system adjacent to the project site that is, or may become as a result of supplying water to the project identified pursuant to this subdivision, a public water system, as defined in Section 10912, that may supply water for the project. If the city or county is not able to identify any public water system that may supply water for the project, the city or county shall prepare the water assessment required by this part after consulting with any entity serving domestic water supplies whose service area includes the project site, the local agency formation commission, and any public water system adjacent to the project site.

(c) (1) The city or county, at the time it makes the determination required under Section 21080.1 of the Public Resources Code, shall request each public water system identified pursuant to subdivision (b) to determine whether the projected water demand associated with a proposed project was included as part of the most recently adopted urban water management plan adopted pursuant to Part 2.6 (commencing with Section 10610).

(2) If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f), and (g).

(3) If the projected water demand associated with the proposed project was not accounted for in the most recently adopted urban water management plan, or the public water system has no urban water management plan, the water supply assessment for the project shall include a discussion with regard to whether the public water system's total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the public water system's existing and planned future uses, including agricultural and manufacturing uses.

(4) If the city or county is required to comply with this part pursuant to subdivision (b), the water supply assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry, and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses.

(d) (1) The assessment required by this section shall include an identification of any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, and a description of the quantities of water received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts.

(2) An identification of existing water supply entitlements, water rights, or water service contracts held by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall be demonstrated by providing information related to all of the following:

(A) Written contracts or other proof of entitlement to an identified water supply.

(B) Copies of a capital outlay program for financing the delivery of a water supply that has been adopted by the public water system.

(C) Federal, state, and local permits for construction of necessary infrastructure associated with delivering the water supply.

(D) Any necessary regulatory approvals that are required in order to be able to convey or deliver the water supply.

(e) If no water has been received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts, the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall also include in its water supply assessment pursuant to subdivision (c), an identification of the other public water systems or water service contractholders that receive a water supply or have existing water supply entitlements, water rights, or water service contracts, to the same source of water as the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has identified as a source of water supply within its water supply assessments.

(f) If a water supply for a proposed project includes groundwater, the following additional information shall be included in the water supply assessment:

(1) A review of any information contained in the urban water management plan relevant to the identified water supply for the proposed project.

(2) (A) A description of any groundwater basin or basins from which the proposed project will be supplied.

(B) For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the public water system, or the city

or county if either is required to comply with this part pursuant to subdivision (b), has the legal right to pump under the order or decree.

(C) For a basin that has not been adjudicated that is a basin designated as high- or medium-priority pursuant to Section 10722.4, information regarding the following:

(i) Whether the department has identified the basin as being subject to critical conditions of overdraft pursuant to Section 12924.

(ii) If a groundwater sustainability agency has adopted a groundwater sustainability plan or has an approved alternative, a copy of that alternative or plan.

(D) For a basin that has not been adjudicated that is a basin designated as low- or very low priority pursuant to Section 10722.4, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current bulletin of the department that characterizes the condition of the groundwater basin, and a detailed description by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), of the efforts being undertaken in the basin or basins to eliminate the long-term overdraft condition.

(3) A detailed description and analysis of the amount and location of groundwater pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), for the past five years from any groundwater basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(4) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), from any basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(5) An analysis of the sufficiency of the groundwater from the basin or basins from which the proposed project will be supplied to meet the projected water demand associated with the proposed project. A water supply assessment shall not be required to include the information required by this paragraph if the public water system determines, as part of the review required by paragraph (1), that the sufficiency of groundwater necessary to meet the initial and projected water demand associated with the project was addressed in the description and analysis required by paragraph (4) of subdivision (b) of Section 10631.

(g) (1) Subject to paragraph (2), the governing body of each public water system shall submit the assessment to the city or county not later than 90 days from the date on which the request was received. The governing body of each public water system, or the city or county if either is required to comply with this act pursuant to subdivision (b), shall approve the assessment prepared pursuant to this section at a regular or special meeting.

(2) Prior to the expiration of the 90-day period, if the public water system intends to request an extension of time to prepare and adopt the assessment, the public water

system shall meet with the city or county to request an extension of time, which shall not exceed 30 days, to prepare and adopt the assessment.

(3) If the public water system fails to request an extension of time, or fails to submit the assessment notwithstanding the extension of time granted pursuant to paragraph (2), the city or county may seek a writ of mandamus to compel the governing body of the public water system to comply with the requirements of this part relating to the submission of the water supply assessment.

(h) Notwithstanding any other provision of this part, if a project has been the subject of a water supply assessment that complies with the requirements of this part, no additional water supply assessment shall be required for subsequent projects that were part of a larger project for which a water supply assessment was completed and that has complied with the requirements of this part and for which the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has concluded that its water supplies are sufficient to meet the projected water demand associated with the proposed project, in addition to the existing and planned future uses, including, but not limited to, agricultural and industrial uses, unless one or more of the following changes occurs:

(1) Changes in the project that result in a substantial increase in water demand for the project.

(2) Changes in the circumstances or conditions substantially affecting the ability of the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), to provide a sufficient supply of water for the project.

(3) Significant new information becomes available that was not known and could not have been known at the time when the assessment was prepared.

(i) For the purposes of this section, hauled water is not considered as a source of water.

(Amended by Stats. 2016, Ch. 594, Sec. 2. (SB 1262) Effective January 1, 2017.)

**State of California**

**WATER CODE**

**Section 10911**

---

10911. (a) If, as a result of its assessment, the public water system concludes that its water supplies are, or will be, insufficient, the public water system shall provide to the city or county its plans for acquiring additional water supplies, setting forth the measures that are being undertaken to acquire and develop those water supplies. If the city or county, if either is required to comply with this part pursuant to subdivision (b), concludes as a result of its assessment, that water supplies are, or will be, insufficient, the city or county shall include in its water supply assessment its plans for acquiring additional water supplies, setting forth the measures that are being undertaken to acquire and develop those water supplies. Those plans may include, but are not limited to, information concerning all of the following:

(1) The estimated total costs, and the proposed method of financing the costs, associated with acquiring the additional water supplies.

(2) All federal, state, and local permits, approvals, or entitlements that are anticipated to be required in order to acquire and develop the additional water supplies.

(3) Based on the considerations set forth in paragraphs (1) and (2), the estimated timeframes within which the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), expects to be able to acquire additional water supplies.

(b) The city or county shall include the water supply assessment provided pursuant to Section 10910, and any information provided pursuant to subdivision (a), in any environmental document prepared for the project pursuant to Division 13 (commencing with Section 21000) of the Public Resources Code.

(c) The city or county may include in any environmental document an evaluation of any information included in that environmental document provided pursuant to subdivision (b). The city or county shall determine, based on the entire record, whether projected water supplies will be sufficient to satisfy the demands of the project, in addition to existing and planned future uses. If the city or county determines that water supplies will not be sufficient, the city or county shall include that determination in its findings for the project.

(Amended by Stats. 2001, Ch. 643, Sec. 5. Effective January 1, 2002.)



**State of California**

**WATER CODE**

**Section 10912**

---

10912. For the purposes of this part, the following terms have the following meanings:

- (a) "Project" means any of the following:
- (1) A proposed residential development of more than 500 dwelling units.
  - (2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.
  - (3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
  - (4) A proposed hotel or motel, or both, having more than 500 rooms.
  - (5) A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.
  - (6) A mixed-use project that includes one or more of the projects specified in this subdivision.
  - (7) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.
- (b) If a public water system has fewer than 5,000 service connections, then "project" means any proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of the public water system's existing service connections, or a mixed-use project that would demand an amount of water equivalent to, or greater than, the amount of water required by residential development that would represent an increase of 10 percent or more in the number of the public water system's existing service connections.
- (c) "Public water system" means a system for the provision of piped water to the public for human consumption that has 3,000 or more service connections. A public water system includes all of the following:
- (1) Any collection, treatment, storage, and distribution facility under control of the operator of the system that is used primarily in connection with the system.
  - (2) Any collection or pretreatment storage facility not under the control of the operator that is used primarily in connection with the system.
  - (3) Any person who treats water on behalf of one or more public water systems for the purpose of rendering it safe for human consumption.
- (d) This section shall become operative on January 1, 2018.

(Amended (as added by Stats. 2011, Ch. 588, Sec. 2) by Stats. 2016, Ch. 669, Sec. 2. (AB 2561) Effective September 26, 2016. Section operative January 1, 2018, by its own provisions.)

**State of California**

**WATER CODE**

**Section 10914**

---

10914. (a) Nothing in this part is intended to create a right or entitlement to water service or any specific level of water service.

(b) Nothing in this part is intended to either impose, expand, or limit any duty concerning the obligation of a public water system to provide certain service to its existing customers or to any future potential customers.

(c) Nothing in this part is intended to modify or otherwise change existing law with respect to projects which are not subject to this part.

(d) This part applies only to a project for which a notice of preparation is submitted on or after January 1, 1996.

(Added by Stats. 1995, Ch. 881, Sec. 4. Effective January 1, 1996.)

**State of California**

**WATER CODE**

**Section 10915**

---

10915. The County of San Diego is deemed to comply with this part if the Office of Planning and Research determines that all of the following conditions have been met:

(a) Proposition C, as approved by the voters of the County of San Diego in November 1988, requires the development of a regional growth management plan and directs the establishment of a regional planning and growth management review board.

(b) The County of San Diego and the cities in the county, by agreement, designate the San Diego Association of Governments as that review board.

(c) A regional growth management strategy that provides for a comprehensive regional strategy and a coordinated economic development and growth management program has been developed pursuant to Proposition C.

(d) The regional growth management strategy includes a water element to coordinate planning for water that is consistent with the requirements of this part.

(e) The San Diego County Water Authority, by agreement with the San Diego Association of Governments in its capacity as the review board, uses the association's most recent regional growth forecasts for planning purposes and to implement the water element of the strategy.

(f) The procedures established by the review board for the development and approval of the regional growth management strategy, including the water element and any certification process established to ensure that a project is consistent with that element, comply with the requirements of this part.

(g) The environmental documents for a project located in the County of San Diego include information that accomplishes the same purposes as a water supply assessment that is prepared pursuant to Section 10910.

(Amended by Stats. 2001, Ch. 643, Sec. 8. Effective January 1, 2002.)

## Appendix F

Metropolitan Water District of Southern California

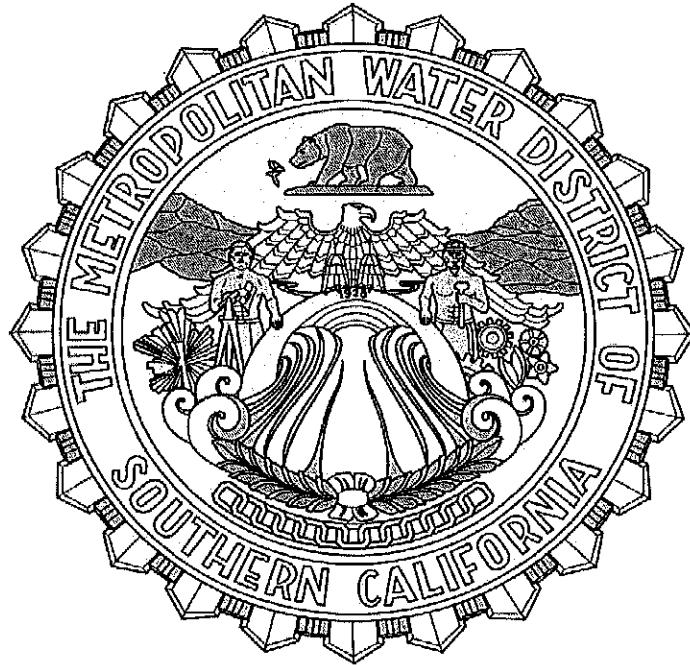
(APPENDIX A)

# APPENDIX A

---

## The Metropolitan Water District of Southern California

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## TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION .....	A-1
Formation and Purpose .....	A-1
Member Agencies .....	A-1
Service Area.....	A-2
COVID-19 Pandemic.....	A-3
GOVERNANCE AND MANAGEMENT.....	A-5
Board of Directors.....	A-5
Management.....	A-6
Employee Relations .....	A-8
Risk Management .....	A-8
Cybersecurity.....	A-8
METROPOLITAN’S WATER SUPPLY .....	A-8
General.....	A-8
Current Water Conditions .....	A-9
Integrated Water Resources Plan.....	A-10
State Water Project .....	A-12
Colorado River Aqueduct .....	A-21
Endangered Species Act and Other Environmental Considerations .....	A-27
Water Transfer, Storage and Exchange Programs .....	A-30
Storage Capacity and Water in Storage .....	A-36
CONSERVATION AND WATER SHORTAGE MEASURES .....	A-38
General.....	A-38
Water Surplus and Drought Management Plan.....	A-39
Water Supply Allocation Plan .....	A-39
Increased Drought Resiliency.....	A-39
REGIONAL WATER RESOURCES.....	A-40
Los Angeles Aqueduct.....	A-41
Local Water Supplies.....	A-42
METROPOLITAN’S WATER DELIVERY SYSTEM.....	A-45
Primary Facilities and Method of Delivery.....	A-45
Water Quality and Treatment.....	A-46
Seismic Considerations and Emergency Response Measures .....	A-49
Security Measures.....	A-51
CAPITAL INVESTMENT PLAN.....	A-52
General Description .....	A-52
Projection of Capital Investment Plan Expenditures .....	A-52
Capital Investment Plan Financing .....	A-53
Major Projects of Metropolitan’s Capital Investment Plan.....	A-53
METROPOLITAN REVENUES.....	A-55
General.....	A-55

**TABLE OF CONTENTS**  
**(Continued)**

	<u>Page</u>
Summary of Revenues by Source .....	A-56
Revenue Allocation Policy and Tax Revenues .....	A-56
Water Revenues .....	A-57
Principal Customers .....	A-58
Rate Structure .....	A-58
Member Agency Purchase Orders .....	A-60
Other Charges .....	A-61
Classes of Water Service .....	A-62
Water Rates .....	A-63
Financial Reserve Policy .....	A-64
California Ballot Initiatives .....	A-65
Preferential Rights .....	A-66
Litigation Challenging Rate Structure .....	A-66
Other Revenue Sources .....	A-72
Investment of Moneys in Funds and Accounts .....	A-72
<b>METROPOLITAN EXPENSES .....</b>	<b>A-74</b>
General .....	A-74
Revenue Bond Indebtedness and Other Obligations .....	A-74
Limitations on Additional Revenue Bonds .....	A-75
Variable Rate Exposure Policy .....	A-76
Outstanding Senior Revenue Bonds and Senior Parity Obligations .....	A-77
Outstanding Subordinate Revenue Bonds and Subordinate Parity Obligations .....	A-83
Other Junior Obligations .....	A-86
General Obligation Bonds .....	A-86
State Water Contract Obligations .....	A-87
Power Sources and Costs; Related Long-Term Commitments .....	A-90
Defined Benefit Pension Plan and Other Post-Employment Benefits .....	A-92
<b>HISTORICAL AND PROJECTED REVENUES AND EXPENSES .....</b>	<b>A-97</b>
<b>MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND</b>	
<b>EXPENSES .....</b>	<b>A-101</b>
Water Transactions Projections .....	A-101
Water Revenues .....	A-102
Projected Fiscal Year 2020-21 Results .....	A-102

## INTRODUCTION

*This Appendix A provides general information regarding The Metropolitan Water District of Southern California ("Metropolitan"), including information regarding Metropolitan's operations and finances. Certain statements included or incorporated by reference in this Appendix A constitute "forward-looking statements." Such statements are generally identifiable by the terminology used such as "plan," "project," "expect," "estimate," "budget" or other similar words. Such statements are based on facts and assumptions set forth in Metropolitan's current planning documents including, without limitation, its most recent biennial budget. The achievement of results or other expectations contained in such forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Actual results may differ from Metropolitan's forecasts. Metropolitan is not obligated to issue any updates or revisions to the forward-looking statements in any event.*

*Metropolitan maintains a website that may include information on programs or projects described in this Appendix A; however, none of the information on Metropolitan's website is incorporated by reference or intended to assist investors in making an investment decision or to provide any additional information with respect to the information included in this Appendix A. The information presented on Metropolitan's website is not part of the Official Statement and should not be relied upon in making investment decisions.*

### **Formation and Purpose**

Metropolitan is a metropolitan water district created in 1928 under authority of the Metropolitan Water District Act (California Statutes 1927, Chapter 429, as reenacted in 1969 as Chapter 209, as amended (herein referred to as the "Act")). The Act authorizes Metropolitan to: levy property taxes within its service area; establish water rates; impose charges for water standby and service availability; incur general obligation bonded indebtedness and issue revenue bonds, notes and short-term revenue certificates; execute contracts; and exercise the power of eminent domain for the purpose of acquiring property. In addition, Metropolitan's Board of Directors (the "Board") is authorized to establish terms and conditions under which additional areas may be annexed to Metropolitan's service area.

Metropolitan's primary purpose is to provide a supplemental supply of water for domestic and municipal uses at wholesale rates to its member public agencies. If additional water is available, such water may be sold for other beneficial uses. Metropolitan serves its member agencies as a water wholesaler and has no retail customers.

The mission of Metropolitan, as promulgated by the Board, is to provide its service area with adequate and reliable supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way.

Metropolitan's charges for water transactions and availability are fixed by its Board and are not subject to regulation or approval by the California Public Utilities Commission or any other state or federal agency. Metropolitan imports water from two principal sources: northern California via the Edmund G. Brown California Aqueduct (the "California Aqueduct") of the State Water Project owned by the State of California (the "State" or "California") and the Colorado River via the Colorado River Aqueduct ("CRA") owned by Metropolitan.

### **Member Agencies**

Metropolitan is comprised of 26-member public agencies, including 14 cities, 11 municipal water districts, and one county water authority, which collectively serve the residents and businesses of more than 300 cities and numerous unincorporated communities. Member agencies request water from Metropolitan at

various delivery points within Metropolitan’s system and pay for such water at uniform rates established by the Board for each class of water service. Metropolitan’s water is a supplemental supply for its member agencies, most of whom have other sources of water. See “METROPOLITAN REVENUES–Principal Customers” in this Appendix A for a listing of the ten-member agencies representing the highest level of water transactions and revenues of Metropolitan during the fiscal year ended June 30, 2020. Metropolitan’s member agencies may, from time to time, develop additional sources of water. See also “REGIONAL WATER RESOURCES.” No member is required to purchase water from Metropolitan, but all member agencies are required to pay readiness-to-serve charges whether or not they purchase water from Metropolitan. See “METROPOLITAN REVENUES–Rate Structure,” “–Member Agency Purchase Orders” and “–Other Charges” in this Appendix A.

The following table lists the 26-member agencies of Metropolitan.

Municipal Water Districts		Cities		County Water Authority
Calleguas	Las Virgenes	Anaheim	Los Angeles	San Diego <sup>(1)</sup>
Central Basin	Orange County	Beverly Hills	Pasadena	
Eastern	Three Valleys	Burbank	San Fernando	
Foothill	West Basin	Compton	San Marino	
Inland Empire Utilities Agency		Fullerton	Santa Ana	
Upper San Gabriel Valley		Glendale	Santa Monica	
Western of Riverside County		Long Beach	Torrance	

<sup>(1)</sup> The San Diego County Water Authority, currently Metropolitan’s largest customer based on water transactions, is a plaintiff in litigation challenging the allocation of costs to certain rates adopted by the Board and asserting other claims. See “METROPOLITAN REVENUES–Litigation Challenging Rate Structure” in this Appendix A.

**Service Area**

Metropolitan’s service area comprises approximately 5,200 square miles and includes all or portions of the six counties of Los Angeles, Orange, Riverside, San Bernardino, San Diego and Ventura. When Metropolitan began delivering water in 1941, its service area consisted of approximately 625 square miles. Its service area has increased by 4,575 square miles since that time. The expansion was primarily the result of annexation of the service areas of additional member agencies.

Metropolitan estimates that approximately 19 million people lived in Metropolitan’s service area in 2019, based on official estimates from the California Department of Finance and on population distribution estimates from the Southern California Association of Governments (“SCAG”) and the San Diego Association of Governments (“SANDAG”). Population projections prepared by SCAG in 2012 and SANDAG in 2013, as part of their planning process to update regional transportation and land use plans, and used as base data for Metropolitan’s 2015 Integrated Water Resources Plan update and subsequent water transactions forecasts, show expected population growth of about 18 percent in Metropolitan’s service area between 2010 and 2035, with the estimated population in the service area in 2020 then projected at approximately 19.35 million. The economy of Metropolitan’s service area is exceptionally diverse. In 2019, the economy of the six counties which contain Metropolitan’s service area had a gross domestic product larger than all but twelve nations of the world. Metropolitan has historically provided between 40 and 60 percent of the water used annually within its service area. For additional economic and demographic information concerning the six-county area containing Metropolitan’s service area, see Appendix E–“SELECTED DEMOGRAPHIC AND ECONOMIC INFORMATION FOR METROPOLITAN’S SERVICE AREA.”

The climate in Metropolitan’s service area ranges from moderate temperatures throughout the year in the coastal areas to hot and dry summers in the inland areas. Since 2000, annual rainfall has ranged from

approximately 4 to 27 inches along the coastal area, 6 to 38 inches in foothill areas, and 5 to 20 inches in inland areas.

### **COVID-19 Pandemic**

The spread of the novel strain of coronavirus and the disease it causes (now known as “COVID-19”) is having significant adverse health and financial impacts throughout the world, including in Southern California. The World Health Organization declared the COVID-19 outbreak to be a pandemic, and states of emergency have been declared in the United States (the “U.S.”), the State of California, and numerous counties throughout the State, including in the six counties all or portions of which comprise the service area of Metropolitan. On March 17, 2020, Metropolitan’s General Manager declared a state of emergency at Metropolitan. The purposes behind these declarations were to initiate emergency response protocols, coordinate and formalize emergency actions across federal, state and local governmental agencies, and to proactively prepare for and react to the anticipated wider spread of the virus.

In response to the COVID-19 outbreak, State and local governments implemented “stay-at-home” (or “safer-at-home”) orders for citizens to remain at home except for certain essential purposes, imposing restrictions on mass gatherings and resulting in the widespread temporary closure of businesses, universities and schools (including within the jurisdiction of Metropolitan and its member agencies). As a result, economic activity slowed considerably throughout the U.S. and the region. Employment data released since the imposition of the restrictions have shown a dramatic increase in unemployment rates. In addition, stock markets in the U.S. and globally experienced sharp declines in market value following the onset of the outbreak that were attributed to COVID-19 concerns, and although rebounds in the markets have since occurred, increased volatility in the financial markets continues.

The Governor of the State of California has taken a variety of actions and issued a number of executive orders addressing issues relating to the pandemic response. On May 4, 2020, the Governor issued an executive order informing local health jurisdictions and industry sectors that they could gradually re-open under modifications and guidance provided by the State. On August 28, 2020, the Governor announced a new, four-tiered color-coded statewide system (or “blueprint”) with revised criteria for loosening and tightening restrictions on activities based upon the prevalence of COVID-19 in each county and the extent of community spread. A phased re-opening of various sectors has been underway in accordance with the Governor’s four-tiered plan. Pursuant to the re-opening plan, some of the restrictions on activities have been eased; however, restrictions have been re-imposed in various jurisdictions (including in the six counties all or portions of which comprise the service area of Metropolitan) as local conditions warrant. Such restrictions may be modified, lifted, or reinstated, from time to time, as the COVID-19 pandemic continues. It is widely expected that global, national, and local economies will continue to be negatively affected by the pandemic, at least for some period of time.

Metropolitan has taken, and is taking, a number of steps to protect the health of its employees, maintain continuity of its critical and essential business functions and avoid widespread impacts to its workforce from the COVID-19 outbreak. Metropolitan’s Pandemic Action Plan is in effect. The following actions have been undertaken and are underway. A COVID-19 Task Force is meeting regularly to review and update plans, prepare and implement action plans and coordinate Metropolitan’s overall response activities. Metropolitan’s Emergency Operations Center Duty Officer is monitoring the status of COVID-19 and its effects in Metropolitan’s service area, and updating the Business Transition Team and COVID-19 Task Force regularly. The Duty Officer and Emergency Management staff are maintaining regular communications with State and county emergency operations centers and public health agencies to monitor the status of COVID-19. Metropolitan’s water system is in a federally designated critical infrastructure sector with exemptions under Governor Newsom’s Statewide “stay-at-home” order as needed to maintain continuity of operations. Personnel necessary to the operation and delivery of water supplies remain on-site, with staffing strategies being utilized to promote “social distancing.” Enhanced facility cleaning and disinfection practices have also been put in place to promote a safe and healthful workplace for these

employees. Telecommuting arrangements or paid administrative leave is being implemented for employees performing other functions, and non-essential business travel has been limited.

COVID-19 is not believed to present a threat to the safety of Metropolitan's treated water supplies. Metropolitan has also taken steps to ensure it has the necessary backup equipment, supplies and treatment chemicals in the event of disruptions to the supply chain for these items. To date, Metropolitan's ability to treat and deliver water has not been impaired.

Metropolitan continues to assess the effects the ongoing COVID-19 pandemic has had, and will have, on Metropolitan and its business and operations, as well as in the region, including the adverse financial impacts likely to be experienced by its member agencies. Metropolitan has experienced an increase in certain costs, primarily expenses for personal protective equipment, enhancing cleaning, technology costs to accommodate teleworking and other related expenditures. However, such increased expenses have been modest and are generally offset by reductions in travel and other office expenses. The COVID-19 pandemic has caused disruptions in certain supply chains and some construction activities. While Metropolitan initially paused certain construction work on non-essential capital projects at the onset of the COVID-19 outbreak, such activity has resumed and Metropolitan continues to advance a variety of infrastructure and system reliability projects. See also "CAPITAL INVESTMENT PLAN." More broadly, press reports and analyses have suggested that water service providers serving residential, commercial and industrial end-use customers (referred to herein as "retail water service providers"), which includes some Metropolitan member agencies and agencies that purchase water from them, anticipate their customers are likely to be adversely impacted financially. As a measure to help mitigate such financial impacts and assure access to water service, on April 2, 2020, Governor Newsom issued an executive order which, among other things, orders the restoration of water service to residential customers in occupied residences whose service was discontinued for nonpayment during the state of emergency, and suspends the authority of retail water service providers to discontinue water service to residential and qualifying small business customers for non-payment. Voluntary measures may also be taken by retail water service providers in the State to assist their customers facing financial hardship as a result of the COVID-19 outbreak. The financial impacts to retail water customers and measures taken to assist them may result in more non-payment of utility bills than normal and forecasted, which is likely to further create financial stress on retail water service providers, including some Metropolitan member agencies.

In recognition of the changed circumstances and the uncertainties created by the ongoing COVID-19 outbreak, in the weeks following the declaration of a pandemic by the World Health Organization on March 11, 2020, Metropolitan reviewed its preliminary biennial budget initially presented to the Board in February 2020, and modified certain assumptions previously made in the proposed budget. The biennial budget for fiscal years 2020-21 and 2021-22, and water rates and charges for calendar years 2021 and 2022 adopted by the Board on April 14, 2020, reflected these adjustments, which included (i) a reduction in the overall rate increases for calendar years 2021 and 2022 from those previously proposed; (ii) a reduction in capital expenditures for fiscal year 2020-21 in recognition of likely delays in scheduling of construction work as a result of COVID-19; (iii) a reduction in the internal funding objective for the funding of capital program expenditures from current revenues for fiscal year 2020-21; and (iv) to review the adopted budget and rates no later than September 2020 to consider further impacts resulting from the COVID-19 crisis. See "METROPOLITAN'S REVENUES--Water Rates" and "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES."

As contemplated by the Board's April 14, 2020 action, Metropolitan reviewed the impacts of the COVID-19 pandemic on Metropolitan's biennial budget for fiscal years 2020-21 and 2021-22, and water rates and charges for calendar years 2021 and 2022 at its September 15, 2020 Board meeting. The Board determined to maintain the previously adopted rates and charges for calendar years 2021 and 2022 and approved certain cost containment measures, estimated to reduce Metropolitan expenditures by approximately \$10.7 million in fiscal year 2020-21, and by approximately \$1.0 million in fiscal year



2021-22. The Board also directed staff to develop a payment deferral program for member agencies that record and report significant customer payment delinquencies and likewise grant deferrals to their customers; evaluate potential new revenue-generating programs; and place a moratorium on non-emergency unbudgeted spending.

At its December 8, 2020 meeting, Metropolitan's Board adopted the COVID-19 Member Agency Payment Deferral Program. Under the approved program, Metropolitan will provide up to a six-month deferral of a portion of a requesting member agency's payment obligations due to Metropolitan for water transactions equal to the percentage of the member agency's own customers' delinquency rates, but not to exceed 10 percent of each monthly obligation. Additionally, under the program, late payments, penalties, and interest will be waived to the deferred amount over a period of up to 12 months. The program is available to all member agencies that meet Board-approved eligibility criteria and will apply to invoices for water transactions occurring only from January 1, 2021 to June 30, 2021. All amounts deferred under the program will be due and payable no later than December 29, 2021. To the extent that member agencies participate in the program, the COVID-19 Member Agency Payment Deferral Program is expected to result in a shift of some revenue collections from fiscal year 2020-21 to fiscal year 2021-22.

The COVID-19 outbreak is ongoing and developments will continue. The degree of impact to Metropolitan's finances and operations is difficult to predict due to the evolving nature of the COVID-19 pandemic, including uncertainties relating thereto. The extent of the fiscal impacts on Metropolitan will depend on, among other things, (i) the duration of the outbreak and the imposed restrictions on activities; (ii) the extent of the disruption to or decline in the local and global economies and financial markets; (iii) the degree to which business closures, increased unemployment, housing foreclosures and/or other economic consequences may reduce water demands in the region and Metropolitan's water transactions, or negatively affect future property values in Metropolitan's service area and/or Metropolitan's property tax levy receipts, and reduce Metropolitan's revenues; (iv) the extent to which a protracted disruption in the manufacturing or construction industry may affect supply chains or delay construction schedules for, or the implementation of, Metropolitan's capital improvement programs and projects, or the costs of such programs or projects or Metropolitan's water system operations; and (v) the ramifications of future actions that may be taken or required by governmental authorities to contain and respond to the outbreak. If the COVID-19 pandemic and/or the economic recovery is prolonged, the likelihood or magnitude of potential adverse impacts to Metropolitan's finances or operations from the factors discussed herein or from other factors, could be increased. As a result, Metropolitan's finances and operations may be adversely impacted by COVID-19. To date, Metropolitan does not believe the impacts of the COVID-19 pandemic will have a material adverse impact on its ability to pay debt service on its bonds or other debt obligations.

## **GOVERNANCE AND MANAGEMENT**

### **Board of Directors**

Metropolitan is governed by a 38-member Board of Directors, made up of representatives from all of Metropolitan's member agencies. Each member public agency is entitled to have at least one representative on the Board, plus an additional representative for each full five percent of the total assessed valuation of property in Metropolitan's service area that is within the member public agency. Changes in relative assessed valuation do not terminate any director's term. In 2019, California Assembly Bill 1220 (Garcia) amended the Act to provide that "A member public agency shall not have fewer than the number of representatives the member public agency had as of January 1, 2019." Accordingly, the Board may, from time to time, have more than 38 directors.

The Board includes business, professional and civic leaders. Directors are appointed by member agencies in accordance with those agencies' processes and the Act. They serve on the Board without compensation from Metropolitan. Voting is based on assessed valuation, with each member agency being entitled to cast one vote for each \$10 million or major fractional part of \$10 million of assessed valuation of

property within the member agency, as shown by the assessment records of the county in which the member agency is located. The Board administers its policies through the Metropolitan Water District Administrative Code (the "Administrative Code"), which was adopted by the Board in 1977. The Administrative Code is periodically amended to reflect new policies or changes to existing policies that occur from time to time.

## Management

Metropolitan's day-to-day management is under the direction of its General Manager, who serves at the pleasure of the Board, as do Metropolitan's General Counsel, General Auditor and Ethics Officer. Following is a biographical summary of Metropolitan's principal executive officers.

*Jeffrey Kightlinger, General Manager* – Mr. Kightlinger was appointed as General Manager in February 2006, leaving the position of General Counsel, which he had held since February 2002. Before becoming General Counsel, Mr. Kightlinger was a Deputy General Counsel and then Assistant General Counsel, representing Metropolitan primarily on Colorado River matters, environmental issues, water rights and a number of Metropolitan's water transfer and storage programs. Prior to joining Metropolitan in 1995, Mr. Kightlinger worked in private practice representing numerous public agencies including municipalities, redevelopment agencies and special districts. Mr. Kightlinger earned his bachelor's degree in history from the University of California, Berkeley, and his law degree from Santa Clara University. At the March 2020 Board meeting, Mr. Kightlinger announced his plans to step down as General Manager. Metropolitan's Board will conduct a recruitment process for a successor General Manager with the intention of making a selection (subject to such delays in schedule as may result from prolonged limitations due to COVID-19 response actions) prior to Mr. Kightlinger's departure. It is anticipated that Mr. Kightlinger will continue in his position while Metropolitan's recruitment process is ongoing until a successor is named.

*Marcia Scully, General Counsel* – Ms. Scully assumed the position of General Counsel in March 2012. She previously served as Metropolitan's Interim General Counsel from March 2011 to March 2012. Ms. Scully joined Metropolitan in 1995, after a decade of private law practice, providing legal representation to Metropolitan on construction, employment, Colorado River and significant litigation matters. From 1981 to 1985 she was assistant city attorney for the City of Inglewood. Ms. Scully served as president of University of Michigan's Alumnae Club of Los Angeles and is a recipient of the 1996 State Bar of California, District 7 President's Pro Bono Service Award and the Southern California Association of Non-Profit Housing Advocate of the Year Award. She is also a member of the League of Women Voters for Whittier and was appointed for two terms on the City of Whittier's Planning Commission, three years of which were served as chair. Ms. Scully earned a bachelor's degree in liberal arts from the University of Michigan, a master's degree in urban planning from Wayne State University and her law degree from Loyola Law School.

*Gerald C. Riss, General Auditor* – Mr. Riss was appointed as Metropolitan's General Auditor in July 2002. As General Auditor, he is responsible for the independent evaluation of the policies, procedures and systems of control throughout Metropolitan. Mr. Riss is a certified fraud examiner, certified financial services auditor and certified risk professional with more than 25 years of experience in accounting, audit and risk management. Prior to joining Metropolitan, Mr. Riss was Vice President and Assistant Division Head of Risk Management Administration at United California Bank/Bank of the West. He also served as Senior Vice President, Director of Risk Management and General Auditor of Tokai Bank of California from 1988 until its reorganization as United California Bank in 2001. He earned a bachelor's degree in accounting and a master's degree in business administration from Wayne State University.

*Abel Salinas, Ethics Officer* – Mr. Salinas was appointed as Metropolitan's Ethics Officer in July 2019. He is responsible for making recommendations regarding rules and policies related to lobbying, conflicts of interest, contracts, campaign contributions and internal disclosures, while providing education and advice about these rules. Prior to joining Metropolitan, Mr. Salinas worked as the Special Agent in Charge in the U.S. Department of Labor's Office of Inspector General. Before joining that agency, he served

for three years in the U.S. Office of Personnel Management. Mr. Salinas holds a bachelor's degree in criminal justice from University of Texas – Pan American and a master's degree in policy management from Georgetown University.

*Katano Kasaine, Assistant General Manager/Chief Financial Officer* – Ms. Kasaine has been serving as the Assistant General Manager/Chief Financial Officer since August 2019. She is responsible for directing Metropolitan's financial activities, including accounting and financial reporting, debt issuance and management, financial planning and strategy, managing Metropolitan's investment portfolio, budget administration, financial analysis, financial systems, and developing rates and charges. In addition, she is responsible for risk management and business continuity activities. Prior to joining Metropolitan, Ms. Kasaine worked for the City of Oakland for nearly 25 years in various roles, including Finance Director/Treasurer. She holds a bachelor's degree in business administration from Dominican University in San Rafael, California and a master's degree in public health from Loma Linda University.

*Deven Upadhyay, Assistant General Manager/Chief Operating Officer* – Mr. Upadhyay was appointed to his current position in November 2017. In this capacity, he oversees the management of Metropolitan's Water System Operations, Engineering Services and Water Resource Management. In addition, following the retirement of Metropolitan's Assistant General Manager/Strategic Water Initiatives at the end of 2020, Mr. Upadhyay has assumed oversight responsibility for Metropolitan's Bay-Delta initiatives. Mr. Upadhyay has over 25 years of experience in the water industry. He joined Metropolitan in 1995, beginning as a Resource Specialist and then left Metropolitan in 2005 to work at the Municipal Water District of Orange County. In 2008, he returned to Metropolitan as a Budget and Financial Planning Section Manager and became a Water Resource Management Group Manager in 2010. Mr. Upadhyay has a Bachelor of Arts degree in economics from the California State University, Fullerton and a master's degree in public administration from the University of La Verne.

*Shane Chapman, Assistant General Manager/Chief Administrative Officer* – Mr. Chapman was appointed to his current position in January 2018 and is responsible for the strategic direction and management of Metropolitan's administrative functions. His primary responsibilities include managing human resources, information technology, real property, environmental planning, and administrative services. Mr. Chapman joined Metropolitan as a Resource Specialist in 1991, progressing to the level of Program Manager in 2001. He became the Revenue, Rates and Budget Manager in 2003 and Assistant Group Manager in Water System Operations in 2006. Mr. Chapman served as General Manager of the Upper San Gabriel Valley Municipal Water District for seven years. Mr. Chapman has a Bachelor of Arts degree in economics from Claremont McKenna College and a master's degree in public administration from the University of Southern California.

*Dee Zinke, Assistant General Manager/Chief External Affairs Officer* – Ms. Zinke was appointed to her current position in January 2016. She is responsible for Metropolitan's communications, business outreach, education and legislative matters. She joined Metropolitan in 2009 as Manager of the Legislative Services Section. Before coming to Metropolitan, Ms. Zinke was the Manager of Governmental and Legislative Affairs at the Calleguas Municipal Water District for nearly 10 years, where she received recognition for her significant contributions to the Association of California Water Agencies, the Ventura County Special Districts Association and the Association of Water Agencies of Ventura County. During her tenure at Calleguas, she was named Chair of the Ventura County Watersheds Coalition and appointed by then-Secretary of Resources Mike Chrisman to the State Watershed Advisory Committee. Prior to her public service, she worked in the private sector as the Executive Officer and Senior Legislative Advocate for the Building Industry Association of Greater Los Angeles and Ventura Counties and as Director of Communications for E-Systems, a defense contractor specializing in communication, surveillance and navigation systems in Washington, D.C. Ms. Zinke holds a Bachelor of Arts degree in communication and psychology from Virginia Polytechnic Institute and State University.

## **Employee Relations**

The total number of budgeted regular full-time Metropolitan employees on November 1, 2020 was 1,907 with 1,806 positions filled, and the remaining positions under recruitment or vacant. Of the filled positions, 1,249 were represented by AFSCME Local 1902, 94 by the Supervisors Association, 304 by the Management and Professional Employees Association and 127 by the Association of Confidential Employees. The remaining 32 employees are unrepresented. The four bargaining units represent 98 percent of Metropolitan's employees. The Memorandum of Understanding ("MOU") with each of AFSCME Local 1902, the Supervisors Association, the Management and Professional Employees Association and the Association of Confidential Employees were updated through negotiations and cover the period January 1, 2017 through December 31, 2021.

## **Risk Management**

Metropolitan is exposed to various risks of loss related to, among other things, the design and construction of facilities, and the treatment and delivery of water. With the assistance of third party claims administrators, Metropolitan is self-insured for property losses, liability, and workers' compensation. Metropolitan self-insures the first \$25 million per liability occurrence, with commercial general liability coverage of \$75 million in excess of the self-insured retention. The \$25 million self-insured retention is maintained as a separate restricted reserve. Metropolitan is also self-insured for loss or damage to its property, with the \$25 million self-insured retention also being accessible for emergency repairs and Metropolitan property losses. In addition, Metropolitan obtains other excess and specialty insurance coverages such as directors' and officers' liability, fiduciary liability and aircraft hull and liability coverage.

Metropolitan self-insures the first \$5 million for workers' compensation with statutory excess coverage. The self-insurance retentions and reserve levels currently maintained by Metropolitan may be modified by the Board at its sole discretion.

## **Cybersecurity**

Metropolitan has adopted and maintains an active Cybersecurity Program ("CSP") that includes policies reviewed by Metropolitan's Office of Enterprise Cybersecurity, Audit department and independent third-party auditors and consultants. Metropolitan has appointed an Information Security Officer who is responsible for overseeing the annual review of the CSP and its alignment with Metropolitan's Strategic Plan. Metropolitan's policies and procedures on information governance, risk management, and compliance are consistent with the U.S. Commerce Department's National Institute of Standards and Technology Cybersecurity Framework and are consistent with the requirements prescribed by the America's Water Infrastructure Act (AWIA) for risk assessment and emergency response. Metropolitan's Cybersecurity Team is responsible for identifying cybersecurity risks to Metropolitan, preventing, investigating, and responding to any cybersecurity incidents, and providing guidance and education on the implementation of new technologies at Metropolitan. All persons or entities authorized to use Metropolitan's computer resources are required to participate in Metropolitan's Cybersecurity Awareness Training.

## **METROPOLITAN'S WATER SUPPLY**

### **General**

Metropolitan's principal sources of water supplies are the State Water Project and the Colorado River. Metropolitan receives water delivered from the State Water Project under State Water Contract provisions, including contracted supplies, use of carryover storage in San Luis Reservoir, and surplus supplies. Metropolitan holds rights to a basic apportionment of Colorado River water and has priority rights to an additional amount depending on availability of surplus supplies. Water management programs supplement these Colorado River supplies. To secure additional supplies, Metropolitan also has groundwater banking partnerships and water transfer and storage arrangements within and outside its service area.

Metropolitan's principal water supply sources, and other supply arrangements and water management are more fully described herein.

Metropolitan faces a number of challenges in providing adequate, reliable and high-quality supplemental water supplies for Southern California. These include, among others: (1) population growth within the service area; (2) increased competition for low-cost water supplies; (3) variable weather conditions; (4) increased environmental regulations; and (5) climate change. Metropolitan's resources and strategies for meeting these long-term challenges are set forth in its Integrated Water Resources Plan, as updated from time to time. See "Integrated Water Resources Plan." In addition, Metropolitan manages water supplies in response to the prevailing hydrologic conditions by implementing its Water Surplus and Drought Management ("WSDM") Plan, and in times of prolonged or severe shortages, the Water Supply Allocation Plan (the "Water Supply Allocation Plan"). See "CONSERVATION AND WATER SHORTAGE MEASURES—Water Surplus and Drought Management Plan" and "Water Supply Allocation Plan" in this Appendix A.

Hydrologic conditions can have a significant impact on Metropolitan's imported water supply sources. For Metropolitan's State Water Project supplies, precipitation in California's northern Sierra Nevada during the fall and winter helps replenish storage levels in Lake Oroville, a key State Water Project facility. The subsequent runoff from the spring snowmelt helps satisfy regulatory requirements in the San Francisco Bay/Sacramento-San Joaquin River Delta ("Bay-Delta") bolstering water supply reliability in the same year. See "State Water Project – Bay-Delta Proceedings Affecting State Water Project." The source of Metropolitan's Colorado River supplies is primarily the watersheds of the Upper Colorado River Basin in the states of Colorado, Utah, and Wyoming. Although precipitation is primarily observed in the winter and spring, summer storms are common and can affect water supply conditions.

Uncertainties from potential future temperature and precipitation changes in a climate driven by increased concentrations of atmospheric carbon dioxide also present challenges. Areas of concern to California water planners identified by researchers include: reduction in Sierra Nevada and Colorado Basin snowpack; increased intensity and frequency of extreme weather events; and rising sea levels resulting in increased risk of damage from storms, high-tide events, and the erosion of levees and potential cutbacks of deliveries of imported water. While potential impacts from climate change remain subject to study and debate, climate change is among the uncertainties that Metropolitan seeks to address through its planning processes.

### **Current Water Conditions**

As of January 11, 2021, the northern Sierra precipitation was 41 percent of the 50-year average for the time of year, and northern Sierra snowpack measured at 60 percent of average for such time of year. On December 1, 2020, the California Department of Water Resources ("DWR") notified State Water Contractors (defined below) that its initial calendar year 2021 allocation estimate of State Water Project water is 10 percent, or 191,150 acre-feet for Metropolitan. (An acre-foot is the amount of water that will cover one acre to a depth of one foot and equals approximately 325,851 gallons, which represents the needs of three average families in and around the home for one year within Metropolitan's service area.) Changes to the 2021 allocation may occur and are dependent on the developing hydrologic conditions. See "State Water Project."

As of January 11, 2021, the Upper Colorado River Basin snowpack accumulation measured 70 percent of the 30-year average as of this date and the total system storage in the Colorado River Basin was 46 percent of capacity, a decrease of six percent or 3.8 million acre-feet from the same time the prior year. Because of the current storage level, no shortage will be declared in Colorado River water supply availability conditions for calendar year 2021, resulting in projected available supply of Colorado River water in calendar year 2021 of 1,007,700 acre-feet for Metropolitan. See "Colorado River Aqueduct."

See also “–Storage Capacity and Water in Storage.”

### **Integrated Water Resources Plan**

**Overview.** The Integrated Water Resources Plan (hereafter, “IRP”) is Metropolitan’s principal water resources planning document. Metropolitan, its member agencies, subagencies and groundwater basin managers developed their first IRP as a long-term planning guideline for resources and capital investments. The purpose of the IRP was the development of a portfolio of preferred resources to meet the water supply reliability and water quality needs for the region in a cost-effective and environmentally sound manner. The first IRP was adopted by the Board in January 1996 and has been subsequently updated in 2004, 2010 and 2015. As noted below, the 2020 IRP Update is under development. See “–2020 IRP Update.”

The last completed IRP update in 2015 (the “2015 IRP Update”) was adopted by Metropolitan’s Board on January 12, 2016, as a strategy to set goals and a framework for water resources development. This strategy enables Metropolitan and its member agencies to manage future challenges and changes in California’s water conditions and to balance investments with water reliability benefits. The 2015 IRP Update provides an adaptive management approach to address future uncertainty, including uncertainty from climate change. It was formulated with input from member agencies, retail water agencies, and other stakeholders including water and wastewater managers, environmental and business interests and the community.

The 2015 IRP Update seeks to provide regional reliability through 2040 by stabilizing Metropolitan’s traditional imported water supplies and continuing to develop additional conservation programs and local resources, with an increased emphasis on regional collaboration. It also advances long-term planning for potential future contingency resources, such as storm water capture and seawater desalination. The 2015 IRP Update and associated materials are available on Metropolitan’s website at: <http://www.mwdh2o.com/AboutYourWater/Planning/Planning-Documents/Pages/default.aspx>. The materials and other information set forth on Metropolitan’s website is not incorporated by reference.

Specific projects developed by Metropolitan in connection with the implementation of its IRP are subject to Board consideration and approval, as well as environmental and regulatory documentation and compliance.

**An Adaptive Management Strategy.** Adaptive water management, as opposed to a rigid set of planned actions over the coming decades, is the most nimble and cost-effective manner for Metropolitan and local water districts throughout Southern California to effectively prepare for the future. An adaptive management approach began to evolve with Metropolitan’s first IRP in 1996, after drought-related shortages in 1991 prompted a rethinking of Southern California’s long-term water strategy. Reliance on imported supplies to meet future water needs has decreased steadily over time, replaced by plans for local actions to meet new demands. The 2015 IRP Update continues to build a robust portfolio approach to water management.

The following paragraphs describe the goals, approaches and targets for each of the resource areas that are needed to ensure reliability under planned conditions.

**State Water Project.** The State Water Project is one of Metropolitan’s two major sources of water. The goal for State Water Project supplies is to adaptively manage flow and export regulations in the near term and to achieve a long-term Bay-Delta solution that addresses ecosystem and water supply reliability challenges. In furtherance of this goal, Metropolitan continues to participate and seek successful outcomes for a potential Bay-Delta conveyance project and the California EcoRestore efforts. See “–State Water Project” and “REGIONAL WATER RESOURCES–Local Water Supplies” in this Appendix A. The stated goal of the IRP is to manage State Water Project supplies in compliance with regulatory restrictions in the near-term for an average of 980,000 acre-feet of annual supplies, and to pursue an outcome for a potential



Bay-Delta conveyance project and California EcoRestore efforts aimed towards achieving long-term average supplies of approximately 1.2 million acre-feet annually from this resource. See “–State Water Project –Bay-Delta Proceedings Affecting State Water Project.”

Colorado River Aqueduct. The CRA delivers water from the Colorado River, Metropolitan’s original source of supply. Metropolitan has helped to fund and implement agricultural conservation programs, improvements to river operation facilities, land management programs and water transfers and exchanges through agreements with agricultural water districts in Southern California, entities in Arizona and Nevada that use Colorado River water, and the Bureau of Reclamation. See “–Colorado River Aqueduct” and “–Water Transfer, Storage and Exchange Programs – Colorado River Aqueduct Agreements and Programs.” The stated goal of the IRP for the CRA supplies is to maintain current levels of water supplies from existing programs, while also developing flexibility through dry-year programs and storage to ensure that a minimum of 900,000 acre-feet of CRA deliveries are available when needed, with a target of 1.2 million acre-feet in dry years.

Water Transfers and Exchanges. Under voluntary water transfer or exchange agreements, agricultural communities using irrigation water may periodically sell or conserve some of their water allotments for use in urban areas. The water may be delivered through existing State Water Project or CRA facilities or may be exchanged for water that is delivered through such facilities. Metropolitan’s policy toward potential transfers states that the transfers will be designed to protect and, where feasible, enhance environmental resources and avoid the mining of local groundwater supplies. See “–Water Transfer, Storage and Exchange Programs.” The stated goal of the IRP is to pursue transfers and exchanges to hedge against shorter-term water demand and supply imbalances while long-term water supply solutions are developed and implemented.

Water Conservation. Conservation and other water use efficiencies are integral components of Metropolitan’s IRP. Metropolitan has invested in conservation programs since the 1980s. Historically, most of the investments have been in water efficient fixtures in the residential sector. With outdoor water use comprising at least 50 percent of residential water demand, in more recent years, Metropolitan has increased its conservation efforts to target outdoor water use reduction in its service area. See “CONSERVATION AND WATER SHORTAGE MEASURES” in this Appendix A. The stated goal of the IRP is to pursue further water conservation savings of 485,000 acre-feet annually by 2040 through continued increased emphasis on outdoor water-use efficiency using incentives, outreach/education and other programs. The conservation program is regularly reviewed and revised in order to meet the stated goal of the IRP.

Local Water Supplies. Local supplies are a significant and growing component of the region’s diverse water portfolio. While the extent to which each member agency’s water supply is provided by imported water purchased from Metropolitan varies, in the aggregate, local supplies can provide over half of the region’s water in a given year, and the maintenance of these supplies remain an integral part of the IRP. Similar to water conservation, local supplies serve the important function of reducing demands for imported water supplies and thereby making regional water system capacity and storage available and accessible to meet the needs of the region. Local water supply projects may include, among other things, recycled water, groundwater recovery, conjunctive use, stormwater, and seawater desalination. Metropolitan offers financial incentives to member agencies to help fund the development of a number of these types of local supply projects. The stated goal of the IRP is to seek to develop 227,000 acre-feet of additional local supplies produced by existing and future projects, with the region reaching a target of 2.4 million acre-feet of total dependable local supplies by 2040. Additionally, in 2018, an interim Local Resources Program target was adopted to spur development of additional local supplies in furtherance of the stated goal of the IRP. See “REGIONAL WATER RESOURCES–Local Water Supplies” in this Appendix A.

**2020 IRP Update.** Development of Metropolitan’s 2020 IRP is underway. The year 2020 marks the conclusion of the 25-year planning cycle envisioned by the inaugural 1996 IRP. The 2020 IRP is anticipated

to build upon Metropolitan's adaptive management strategy utilizing a scenario planning approach. This approach will evaluate a variety of potential scenarios and therefore prepare the region for a wider range of potential outcomes by identifying solutions and policies that are robust across a variety of possible future conditions.

Metropolitan initiated the 2020 IRP process in February 2020. Crucial to scenario development for the 2020 IRP is determining how to describe and measure impacts of scenario drivers of change (that is, specific factors whose future values and outcomes are uncertain, but significantly impact future water supply reliability) on water resources and demands. Metropolitan developed an extensive array of drivers affecting water supply and demand by incorporating feedback from the Board, member agencies, retail agencies, and other stakeholders through multiple workshops hosted by Metropolitan as well as an online survey. A draft assessment was assembled with in-house area experts to establish and evaluate more than 80 relevant supply and demand links that covered all identified drivers. As of November 2020, Metropolitan staff was developing parameters and preliminary analyses of draft scenarios for member agency and Board review. A draft of the 2020 IRP Update is expected to be available in 2021.

## **State Water Project**

### **Background**

One of Metropolitan's two major sources of water is the State Water Project, which is owned by the State, and managed and operated by DWR. The State Water Project is the largest state-built, multipurpose, user-financed water project in the country. It was designed and built primarily to deliver water, but also provides flood control, generates power for pumping, is used for recreation, and enhances habitat for fish and wildlife. The State Water Project provides irrigation water to 750,000 acres of farmland, mostly in the San Joaquin Valley, and provides municipal and industrial water to approximately 27 million of California's estimated 39.9 million residents, including the population within the service area of Metropolitan.

The State Water Project's watershed encompasses the mountains and waterways around the Feather River, the principal tributary of the Sacramento River, in the Sacramento Valley of Northern California. Through the State Water Project, Feather River water stored in and released from Oroville Dam (located about 70 miles north of Sacramento, east of the city of Oroville, California) and unregulated flows diverted directly from the Bay-Delta are transported south through the Central Valley of California, over the Tehachapi Mountains and into Southern California, via the California Aqueduct, to four delivery points near the northern and eastern boundaries of Metropolitan's service area. The total length of the California Aqueduct is approximately 444 miles. See "METROPOLITAN'S WATER DELIVERY SYSTEM—Primary Facilities and Method of Delivery –State Water Project" in this Appendix A.

### **State Water Contract**

*Terms of the Contract.* In 1960, Metropolitan signed a water supply contract (as amended, the "State Water Contract") with DWR to receive water from the State Water Project. Metropolitan is one of 29 agencies and districts that have long-term contracts for water service from DWR (known collectively as the "State Water Contractors" and sometimes referred to herein as "Contractors"). Metropolitan is the largest of the State Water Contractors in terms of the number of people it serves (approximately 19 million), the share of State Water Project water that it has contracted to receive (approximately 46 percent), and the percentage of total annual payments made to DWR by agencies with State water supply contracts (approximately 50 percent for fiscal year 2019-20). Metropolitan received its first delivery of State Water Project water in 1972.

Pursuant to the terms of the State water supply contracts, all water-supply related expenditures for capital and operations, maintenance, power, and replacement costs associated with the State Water Project facilities are paid for by the State Water Contractors as components of their annual payment obligations to DWR. In exchange, Contractors have the right to participate in the system, with an entitlement to water

service from the State Water Project and the right to use the portion of the State Water Project conveyance system necessary to deliver water to them. Each year DWR estimates the total State Water Project water available for delivery to the State Water Contractors and allocates the available project water among the State Water Contractors in accordance with the State water supply contracts. Late each year, DWR announces an initial allocation estimate for the upcoming year, but periodically provides subsequent estimates throughout the year if warranted by developing precipitation and water supply conditions. Based upon the updated rainfall and snowpack values, DWR's total water supply availability projections are refined during each calendar year and allocations to the State Water Contractors are adjusted accordingly.

Metropolitan's State Water Contract has been amended a number of times since its original execution and delivery. Several of the amendments, entered into by DWR and various subsets of State Water Contractors, relate to the financing and construction of a variety of State Water Project facilities and improvements and impose certain cost responsibility therefor on the affected Contractors, including Metropolitan. For a description of Metropolitan's financial obligations under its State Water Contract, including with respect to such amendments, see "METROPOLITAN EXPENSES—State Water Contract Obligations" in this Appendix A.

Amendments, approved by Metropolitan's Board in 1995, and since executed by DWR and 27 of the State Water Contractors (collectively known as the "Monterey Amendment"), among other things, made explicit that the Contractors' rights to use the portion of the State Water Project conveyance system necessary to deliver water to them also includes the right to convey non-State Water Project water at no additional cost as long as capacity exists. These amendments also expanded the ability of the State Water Contractors to carry over State Water Project water in State Water Project storage facilities, allowed participating Contractors to borrow water from terminal reservoirs, and allowed Contractors to store water in groundwater storage facilities outside a Contractor's service area for later use. These amendments provided the means for individual Contractors to increase supply reliability through water transfers and storage outside their service area. Metropolitan has subsequently developed and actively manages a portfolio of water supplies to convey through the California Aqueduct pursuant to these contractual rights. See "—Water Transfer, Storage and Exchange Programs." The Monterey Amendment is the subject of ongoing litigation. See "—Related Litigation—Monterey Amendment" below.

Under its State Water Contract, Metropolitan has a contractual right to its proportionate share of the State Water Project water that DWR determines annually is available for allocation to the Contractors. This determination is made by DWR each year based on existing supplies in storage, forecasted hydrology, and other factors, including water quality and environmental flow obligations and other operational considerations. Available State Water Project water is then allocated to the Contractors in proportion to the amounts set forth in "Table A" of their respective State water supply contract (sometimes referred to herein as "Table A State Water Project water"). Pursuant to Table A of its State Water Contract, Metropolitan is entitled to approximately 46 percent of the total annual allocation made available to State Water Contractors each year. Metropolitan's State Water Contract, under a 100 percent allocation, provides Metropolitan 1,911,500 acre-feet of water. The 100 percent allocation is referred to as the contracted amount.

DWR operates the State Water Project in coordination with the federal Central Valley Project, which is operated by the Bureau of Reclamation. Since 1986, the coordinated operations have been undertaken pursuant to a Coordinated Operations Agreement for the Central Valley Project and State Water Project (the "COA"). The COA defines how the State and federal water projects share water quality and environmental flow obligations imposed by regulatory agencies. The agreement calls for periodic review to determine whether updates are needed in light of changed conditions. After completing a joint review process, DWR and the Bureau of Reclamation agreed to amend the COA to reflect water quality regulations, biological opinions and hydrology updated since the 1986 agreement was signed. On December 13, 2018, DWR and the Bureau of Reclamation executed an Addendum to the COA (the "COA Addendum"). Through the COA Addendum, DWR will adjust current State Water Project operations to modify pumping operations, as well

as project storage withdrawals to meet in-basin uses, pursuant to revised calculations based on water year types. The COA Addendum will shift responsibilities for meeting obligations between the Central Valley Project and the State Water Project, resulting in a shift of approximately 120,000 acre-feet in long-term average annual exports from the State Water Project to the Central Valley Project. In executing the COA Addendum, DWR found the agreement to be exempt from environmental review under the California Environmental Quality Act (“CEQA”) as an ongoing project and that the adjustments in operations are within the original scope of the project. On January 16, 2019, commercial fishing groups and a tribe (“petitioners”) filed a lawsuit against DWR alleging that entering into the COA Addendum violated CEQA, the Delta Reform Act, and the public trust doctrine. On April 11, 2019, Westlands Water District (“Westlands”) filed a motion to intervene, which was not opposed by any parties. The court granted Westlands’ motion on June 7, 2019. On October 7, 2019, the North Delta Water Agency filed a motion to intervene. On November 19, 2019, the court granted North Delta Water Agency’s motion. The petitioners are still in the process of preparing the administrative record and no date for a hearing on the merits has been set. The effect of this lawsuit on the COA Addendum and State Water Project operations cannot be determined at this time.

From calendar years 2005 through 2019, the amount of water received by Metropolitan from the State Water Project, including water from water transfer, groundwater banking and exchange programs delivered through the California Aqueduct (described under “Water Transfer, Storage and Exchange Programs” below), varied from a low of 593,000 acre-feet in calendar year 2015 to a high of 1,695,000 acre-feet in 2006. In calendar year 2019, DWR’s allocation to State Water Contractors was 75 percent of contracted amounts, or 1,433,625 acre-feet, for Metropolitan. In calendar year 2020, DWR’s allocation to State Water Contractors was 20 percent of contracted amounts, or 382,300 acre-feet, for Metropolitan.

On December 1, 2020, DWR announced an initial calendar year 2021 allocation of 10 percent. Changes to the 2021 allocation may occur and are dependent on the developing hydrologic conditions.

The term of Metropolitan’s State Water Contract currently extends to December 31, 2035 or until all DWR bonds issued to finance construction of project facilities are repaid, whichever is longer. Upon expiration of the State Water Contract term, Metropolitan has the option to continue service under substantially the same terms and conditions. Metropolitan and other State Water Contractors have undertaken negotiations with DWR to extend their State water supply contracts. In June 2014, DWR and the State Water Contractors reached an Agreement in Principle (the “Agreement in Principle”) on an amendment to the State water supply contract to extend the contract and to make certain changes related to financial management of the State Water Project in the future. DWR and 25 of the State Water Contractors, including Metropolitan, have signed the Agreement in Principle. Under the Agreement in Principle, the term of the State water supply contract for each Contractor that signs an amendment would be extended until December 31, 2085. The Agreement in Principle served as the “proposed project” for purposes of environmental review under CEQA. In August 2016, DWR released for public comment a draft Environmental Impact Report (“EIR”) for the proposed project. The public review period on the draft EIR ended in October 2016. State law requires DWR to make a presentation to the State Legislature at an informational hearing at least 60 days prior to final approval of a State water supply contract extension. That hearing occurred on September 11, 2018. DWR released the final EIR on November 16, 2018 and certified the final EIR and issued a Notice of Determination on December 11, 2018. Concurrently, Metropolitan considered the certified final EIR and approved the water supply contract extension amendment at its December 11, 2018 Board meeting. That same day, DWR filed a lawsuit seeking to validate the contract extension. In January 2019, North Coast Rivers Alliance and others separately filed two petitions for writ of mandate and a complaint for declaratory and injunctive relief challenging DWR’s final EIR and approval of the State water supply contract extension amendment under CEQA, the Delta Reform Act, and public trust doctrine. Mandatory CEQA settlement conferences were held on February 22, 2019. On June 18, 2019, the validation and CEQA cases were deemed related, and on August 20, 2019, they were assigned to a single judge. On August 28, 2020, DWR certified the CEQA administrative record. On September 28, 2020, DWR filed answers in the two CEQA

cases. No date for a hearing on the merits has been set and no briefing has occurred in any of the three actions. Any adverse impact of this litigation and rulings on Metropolitan's State Water Project supplies cannot be determined at this time. DWR has yet to execute the contract extension amendment. To date, 22 of the 29 State Water Contractors have executed the amendment, exceeding the DWR established threshold needed for it to be fully executed. DWR is awaiting a decision at the trial court on the validation litigation described above before moving forward with implementation of the amendments with individual State Water Contractors. Unless the contract extension amendment is implemented, the amortization period for any future State Water Project bonds will end in 2035.

In a process separate from the State Water Contract extension amendment described above, Metropolitan and other State Water Contractors undertook negotiations with DWR to amend their State water supply contracts to clarify how costs would be allocated for the California WaterFix project approved by DWR in 2017, as well as to clarify the criteria applicable to certain water management tools including single and multi-year water transfers and exchanges. In 2018, DWR and the State Water Contractors reached an agreement in principle (the "2018 AIP") and DWR subsequently issued a draft EIR. On April 29, 2019, Governor Newsom issued an executive order directing State agencies to develop a comprehensive statewide strategy to build a climate-resilient water system that included consideration of a potential single-tunnel Bay-Delta conveyance facility ("Delta Conveyance Project") instead of the approved California WaterFix project. Following its rescission of all project approvals for the California WaterFix project, DWR removed the California WaterFix cost provisions from the 2018 AIP and, on February 28, 2020, recirculated the draft EIR for only the 2018 AIP's water management provisions. DWR certified a Final EIR for the revised 2018 AIP in August 2020, and finalized the form of the amendment to implement the 2018 AIP in October 2020. The water management provisions would allow for greater flexibility for transfers and exchanges among the State Water Contractors. Specifically, it would confirm existing practices for exchanges, allow more flexibility for non-permanent water transfers, and allow for the transfer and exchange of certain portions of Article 56 carry over water.

In light of the State's change in direction from California WaterFix to a potential single tunnel Delta Conveyance Project, Metropolitan and other State Water Contractors embarked on a third public process to further negotiate proposed amendments to their State water supply contracts related to cost allocation for the potential Delta Conveyance Project. In March of 2020, DWR and the State Water Contractors reached an Agreement in Principle (the "Delta Conveyance AIP") that would be the basis for amendment of the State water supply contracts to provide a mechanism that would allow for the costs related to any Delta Conveyance Project to be allocated for and collected by DWR. The Delta Conveyance AIP also provides for the allocation of benefits for any Delta Conveyance Project in proportion to each State Water Contractor's participation. Contract language for the proposed amendments is under development. Consideration of the amendments for approval by DWR and the State Water Contractors would not occur until after DWR's completion of the Delta Conveyance Project environmental review, which is not expected before 2024. See "Bay-Delta Planning Activities; Delta Conveyance" under "Bay Delta Proceedings Affecting State Water Project," below.

**Related Litigation—Monterey Amendment.** On May 4, 2010, DWR completed an EIR and concluded a remedial CEQA review for the Monterey Amendment (described under " – Terms of the Contract" above), which reflects the settlement of certain disputes regarding the allocation of State Water Project water. Central Delta Water Agency, South Delta Water Agency, California Water Impact Network, California Sportfishing Protection Alliance, and the Center For Biological Diversity filed a lawsuit against DWR in Sacramento County Superior Court challenging the validity of the EIR under CEQA and the validity of underlying agreements under a reverse validation action (the "Central Delta I" case). In January 2013, the Court ruled that the validation cause of action in Central Delta I was time barred by the statute of limitations. The court also held that DWR must complete a limited scope remedial CEQA review addressing the potential impacts of the Kern Water Bank, a portion of the Monterey Amendment that does not directly affect Metropolitan. The court also ruled that the State Water Project may continue to be operated under the terms of the

Monterey Amendment while the remedial CEQA review is prepared and leaves in place the underlying project approvals while DWR prepares the remedial CEQA review. Plaintiffs appealed. Briefing by the parties was completed, but no date for oral argument has been set.

In September 2016, DWR certified the Final Revised Draft EIR for the Monterey Amendment, recorded a Notice of Determination, and filed papers in the trial demonstrating compliance with the court's order for remedial CEQA review. On October 21, 2016, the petitioner group from Central Delta I and a new lead petitioner, Center for Food Safety, filed litigation against DWR challenging this EIR and named Metropolitan and the other State Water Project contractors as respondent parties. On October 2, 2017, the court denied Center for Food Safety's petition. Plaintiffs appealed. Briefing in this appeal has been completed. No date for oral argument has been set. Any adverse impact of any of the litigation and rulings relating to the Monterey Amendment on Metropolitan's State Water Project supplies cannot be determined at this time.

### **2017 Oroville Dam Spillway Incident**

Oroville Dam, the earthfill embankment dam on the Feather River which impounds Lake Oroville, is operated by DWR as a facility of the State Water Project. On February 7, 2017, the main flood control spillway at Oroville Dam, a gated and concrete lined facility, experienced significant damage as DWR released water to manage higher inflows driven by continued precipitation in the Feather River basin. The damaged main spillway impaired DWR's ability to manage lake levels causing water to flow over the emergency spillway structure, an ungated, 1,730-foot-long concrete barrier located adjacent to and north of the main flood control spillway structure. Use of the emergency spillway structure resulted in erosion that threatened the stability of the emergency spillway structure. This concern prompted the Butte County Sheriff, on February 12, 2017, to issue an evacuation order for approximately 200,000 people living in Oroville and the surrounding communities.

On November 1, 2018, DWR completed reconstruction of the main spillway to its original design capacity of approximately 270,000 cubic feet per second ("cfs"), a capacity almost twice its highest historical outflow. Work on the emergency spillway was substantially completed in April 2019. Mitigation measures such as slope revegetation are expected to be completed in 2021. Although the full extent of the costs of the response and recovery efforts are unknown at this time, DWR has indicated that the total costs of the recovery and restoration project prior to any federal or other reimbursement are estimated to be approximately \$1.2 billion. Cost estimates are based on actual and projected work and may be adjusted further as work continues through completion of the project in 2021. Funding from the Federal Emergency Management Agency ("FEMA") is generally available under FEMA's Public Assistance Program to recover 75 percent of eligible costs to restore facilities damaged as a result of natural disasters to their pre-disaster condition. As of October 1, 2020, DWR estimates that repair costs will total \$1.2 billion and has submitted \$815 million to FEMA as eligible costs for reimbursement. FEMA has provided \$259 million in reimbursement funding through October 1, 2020 as its 75 percent share of eligible costs. FEMA has determined that costs associated with the upper portion of the main spillway are eligible for reimbursement, and has approved, or is expected to authorize approximately \$371 in additional reimbursements for such costs. FEMA denied claims for reimbursement of \$278 million of emergency spillway costs; however, DWR is seeking partial reimbursement of these costs through the FEMA's hazard mitigation grant funding program. FEMA's review of those costs is underway. Any unrecovered costs to be paid for by the State Water Contractors under the State water contracts are expected to be financed long-term with DWR bonds. Metropolitan's potential share of the cost for the unreimbursed work totals about \$243 million. About \$22 million of this amount has already been paid through the State Water Project annual statement of charges.

Various lawsuits have been filed against DWR asserting claims for property damage, economic losses, environmental impacts and civil penalties related to this incident. Neither Metropolitan nor any other State Water Contractor was named as a defendant in any of these lawsuits. These cases, which have been coordinated in Sacramento Superior Court (Case No. JCCP 4974), include a lawsuit filed by the Butte



County District Attorney (“DA”) that seeks up to \$51 billion in civil penalties. This lawsuit asserts a single claim under California Fish and Game Code section 5650, *et seq.*, which makes it unlawful to deposit or place certain substances into the waters of the State, including lime, slag and “any substance or material deleterious to fish, plant life, mammals, or bird life.” Among other things, the statute provides for the assessment of civil penalties of up to \$25,000 a day and \$10 per pound of material deposited in violation of its strictures.

The State water supply contracts provide that Metropolitan and the other State Water Contractors are not liable for any claim of damage of any nature arising out of or connected the control, carriage, handling, use, disposal or distribution of State Water Project water prior to the point where it reaches their turnouts. However, DWR recently has asserted that regardless of legal liability all costs of the State Water Project system must be borne by State Water Contractors. Thus, DWR has indicated that it intends to bill the State Water Contractors for any expenditures related to this litigation (cost of litigation, settlements, damages awards/verdicts).

In light of DWR’s position, Metropolitan, the State Water Contractors, Santa Clara Valley Water District, Mojave Water Agency, and Kern County Water Agency filed a motion to intervene in the Butte County DA case on September 3, 2020, in order to protect their contractual rights and interests in the State Water Project. A hearing on that motion had been scheduled for January 8, 2021.

DWR filed a motion for summary judgment in the Butte County DA case on September 3, 2020. On December 18, 2020, the Sacramento Superior Court issued a ruling granting DWR’s motion. In its ruling, the court determined that, as a matter of law, DWR is not a person subject to the penalty provisions of the California Fish and Game Code section at issue, and therefore the Butte County DA’s complaint failed to state a cause of action. As a result of the granting of the motion, the matter will be dismissed by the trial court. The Butte County DA has 60 days to file an appeal after the court enters the judgment. The judgment was entered on January 11, 2021. At this time, Metropolitan cannot predict the outcome of this litigation or the amount of civil penalties that might be assessed in the event the Butte County DA prevails on an appeal of the decision.

#### **Bay-Delta Proceedings Affecting State Water Project**

**General.** In addition to being a source of water for diversion into the State Water Project, the Bay-Delta is the source of water for local agricultural, municipal and industrial needs, and also supports significant resident and anadromous fish and wildlife resources and important recreational uses of water. Both the State Water Project’s upstream reservoir operations and its Bay-Delta diversions can at times affect these other uses of Bay-Delta water directly, or indirectly, through impacts on Bay-Delta water quality. A variety of proceedings and other activities are ongoing with the participation of various State and federal agencies, as well as California’s environmental, urban and agricultural communities, in an effort to develop long-term, collectively-negotiated solutions to the environmental and water management issues concerning the Bay-Delta, and Metropolitan actively participates in these proceedings. Metropolitan cannot predict the ultimate outcome of any of the litigation or regulatory processes described below but believes that a materially adverse impact on the operation of State Water Project pumps, Metropolitan’s State Water Project deliveries or Metropolitan’s water reserves could result.

**SWRCB Regulatory Activities and Decisions.** The State Water Resources Control Board (the “SWRCB”) is the agency responsible for setting water quality standards and administering water rights throughout California. The SWRCB exercises its regulatory authority over the Bay-Delta by means of public proceedings leading to regulations and decisions that can affect the availability of water to Metropolitan and other users of State Water Project water. These include the Water Quality Control Plan (“WQCP”) for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary, which establishes the water quality objectives and proposed flow regime of the estuary, and water rights decisions, which assign responsibility for

implementing the objectives of the WQCP to users throughout the system by adjusting their respective water rights permits.

Since 2000, SWRCB's Water Rights Decision 1641 ("D-1641") has governed the State Water Project's ability to export water from the Bay-Delta for delivery to Metropolitan and other agencies receiving water from the State Water Project. D-1641 allocated responsibility for meeting flow requirements and salinity and other water quality objectives established earlier by the WQCP.

The WQCP gets reviewed periodically and new standards and allocations of responsibility can be imposed on the State Water Project as a result. The last review was completed in 2006, and the current review has been ongoing since approximately 2010.

The SWRCB's current review and update of the WQCP is being undertaken in phased proceedings. In December 2018, the SWRCB completed Phase 1 of the WQCP proceedings, adopting the plan amendments and environmental documents to support new flow standards for San Joaquin River tributaries and revised southern Delta salinity objectives. Various stakeholders filed suit against the SWRCB challenging these amendments. As part of Phase 2 proceedings, a framework document for the second plan amendment process, focused on the Sacramento River and its tributaries, Delta eastside tributaries, Delta outflows, and interior Delta flows, was released in July 2018. The framework describes changes that will likely be proposed by the SWRCB through formal proposed amendments and supporting environmental documents. The proposed changes include certain unimpaired flow requirements for the Sacramento River and its salmon-bearing tributaries. The SWRCB has also encouraged all stakeholders to work together to reach one or more voluntary agreements for consideration by the SWRCB that could implement the proposed amendments to the WQCP through a variety of tools, while seeking to protect water supply reliability. Metropolitan is participating in the Phase 2 proceedings and voluntary agreement negotiations.

***Bay-Delta Planning Activities; Delta Conveyance.*** In 2000, several State and federal agencies released the CALFED Bay-Delta Programmatic Record of Decision and Environmental Impact Report/Environmental Impact Statement ("EIR/EIS") that outlined and disclosed the environmental impacts of a 30-year plan to improve the Bay-Delta's ecosystem, water supply reliability, water quality, and levee stability. The CALFED Record of Decision remains in effect and many of the State, federal, and local projects begun under CALFED continue.

Building on CALFED and other Bay-Delta planning activities, in 2006 multiple State and federal resource agencies, water agencies, and other stakeholder groups entered into a planning agreement for the Bay-Delta Conservation Plan ("BDCP"). The BDCP was originally conceived as a comprehensive conservation strategy for the Bay-Delta designed to restore and protect ecosystem health, water supply, and water quality within a stable regulatory framework to be implemented over a 50-year time frame with corresponding long-term permit authorizations from fish and wildlife regulatory agencies. The BDCP includes both alternatives for new water conveyance infrastructure and extensive habitat restoration in the Bay-Delta. The existing State Water Project Delta water conveyance system needs to be improved and modernized to address operational constraints on pumping in the south Delta as well as risks to water supplies and water quality from climate change, earthquakes, and flooding. Operational constraints are largely due to biological opinions and incidental take permits to which the State Water Project is subject that substantially limit the way DWR operates the State Water Project.

In 2015, the State and federal lead agencies proposed an alternative implementation strategy and new alternatives to the BDCP to provide for the protection of water supplies conveyed through the Bay-Delta and the restoration of the ecosystem of the Bay-Delta, termed "California WaterFix" and "California EcoRestore," respectively. In this alternative approach, DWR and the Bureau of Reclamation would implement planned water conveyance improvements (California WaterFix) as a stand-alone project with the required habitat restoration limited to that directly related to construction mitigation. The associated costs of

such mitigation would be underwritten by the public water agencies participating in the conveyance project. Ecosystem improvements and habitat restoration more generally (California EcoRestore) would be undertaken under a more phased approach than previously contemplated by the BDCP and would not be linked with the conveyance project or permits.

As part of California EcoRestore, which was initiated in 2015, the State is pursuing more than 30,000 acres of Delta habitat restoration. Work on a number of EcoRestore projects is ongoing. Among other things, EcoRestore was undertaken to implement restoration projects required by the biological opinions to which the State Water Project has been and is subject. EcoRestore is estimated to cost approximately \$500 million in the first five years (which is 2015-2020) for implementation and planning costs. This includes certain amounts being paid by the State Water Contractors, including Metropolitan, for the costs of habitat restoration required to mitigate State and federal water project impacts pursuant to the biological opinions. See also “–Endangered Species Act and Other Environmental Considerations – Endangered Species Act Considerations – State Water Project.”

In July 2017, DWR certified a final EIR and approved the California WaterFix as an improvement to the State Water Project. The California Water Fix, as then approved, would have included new north Bay-Delta water diversion facilities with a total maximum capacity of 9,000 cfs and two tunnels for the transportation of State Water Project and Central Valley Project water from the north Delta.

In July 2018, Metropolitan’s Board approved Metropolitan’s funding in the aggregate of up to 64.6 percent of the overall capital cost of the California WaterFix, including its share as a State Water Contractor and through various forms of additional financial support Metropolitan would contribute to the project.

On February 12, 2019, in his first State of the State address, then recently elected Governor Gavin Newsom announced a conceptual proposal supporting a single-tunnel configuration for new Bay-Delta conveyance instead of the two-tunnel California WaterFix. Subsequently, on April 29, 2019, Governor Newsom issued an executive order directing identified State agencies to develop a comprehensive statewide strategy to build a climate-resilient water system. Among other things, the Governor’s executive order directed the State agencies to inventory and assess the current planning for modernizing conveyance through the Bay-Delta with a new single tunnel project. Following the Governor’s executive order, in May 2019, DWR withdrew approval of the California WaterFix project and decertified the EIR. In August 2019, DWR rescinded the last permit application associated with the project. Between mid-2017 and mid-2019, California WaterFix was subject to several lawsuits primarily related to DWR’s powers to finance and construct the project and various environmental approvals and related matters. The lawsuits, administrative proceedings, and other matters were dismissed as a result of the cancellation of the California WaterFix project.

Consistent with the Governor’s direction, DWR is pursuing a new environmental review and planning process for a proposed single tunnel project to modernize the State Water Project’s Bay-Delta conveyance, commonly referred to as the Delta Conveyance Project. The formal environmental review process for a proposed single tunnel Delta Conveyance Project commenced with the issuance by DWR of a Notice of Preparation under CEQA on January 15, 2020. The new conveyance facilities being reviewed would include intake structures on the Sacramento River, with a total capacity of 6,000 cfs, and a single tunnel to convey water to the existing pumping plants in the south Delta. Planning, environmental review and conceptual design work by DWR is expected to be completed in the 2023-2024 timeframe.

On August 20, 2020, the U.S. Army Corps of Engineers, the lead agency for the Delta Conveyance Project under NEPA, issued a notice of intent of the development of the environmental impact statement for the Delta Conveyance Project. The draft environmental impact statement is currently anticipated to be available for public review and comment in mid-2021.

Metropolitan's Board has previously authorized Metropolitan's participation in two joint powers agencies relating to a Bay-Delta conveyance project (originally formed in connection with California WaterFix): the Delta Conveyance Design and Construction Authority (the "DCA"), formed by the participating water agencies to actively participate with DWR in the design and construction of the conveyance project in coordination with DWR and under the control and supervision of DWR; and the Delta Conveyance Finance Authority (the "Financing JPA"), formed by the participating water agencies to facilitate financing for the conveyance project. The DCA is providing engineering and design activities to support the DWR's planning and environmental analysis for the potential new Delta Conveyance Project.

In August 2020, the DCA released preliminary cost information for the proposed Delta Conveyance Project based on an early cost assessment prepared by the DCA. The DCA's early assessment is based on preliminary engineering, not a full conceptual engineering report, and includes project costs for construction, management, oversight, mitigation, planning, soft costs, and contingencies. Based on these assumptions, the DCA's early assessment estimated a project cost of approximately \$15.9 billion in 2020 non-discounted dollars, which includes a 44 percent overall contingency applied to the preliminary construction costs. The DCA noted that such estimate has been developed at an early stage in the proposed project and will be revised over time.

The preliminary cost assessment information was prepared to inform various public water agencies' decisions on whether to participate in funding the environmental review, planning, preliminary design and engineering, and other pre-construction activities, for the proposed Delta Conveyance Project, and if so, at what level. Approximately \$340.7 million of investment is estimated to be needed over four years (2021 through 2024) to fund these costs. At its December 8, 2020 Board meeting, Metropolitan's Board authorized the General Manager to execute a funding agreement with DWR and commit funding for a Metropolitan participation level of 47.2 percent of such costs of preliminary design, environmental planning and other pre-construction activities to assist in the environmental process for the proposed Delta Conveyance Project. Metropolitan's 47.2 percent share amounts to an estimated funding commitment of \$160.8 million over the next four years. Eighteen other State Water Contractors also have approved funding a share of the planning and pre-construction costs. The funding agreement includes funding environmental and pre-construction activities for DWR and work that is authorized by DWR under the DCA joint exercise of powers agreement. Similar to prior agreements for BDCP and California WaterFix, the funding agreement provides that funds would be reimbursed to Metropolitan if the project is approved and when the first bonds, if any, for the project are issued. In connection with approving the funding agreement, at its December 2020 Board meeting, the Board also authorized the General Manager to execute an amendment to the DCA joint exercise of powers agreement. The amendment was developed to address changes in the anticipated participation structure for the proposed Delta Conveyance Project from that contemplated for California WaterFix. The amendment revises the board composition and voting procedures to align with public water agencies' participation in the environmental review, planning, design and engineering of the proposed Delta Conveyance Project as described above.

Metropolitan's December 8, 2020 action to approve fund planning and pre-construction costs does not commit Metropolitan to participate in the Delta Conveyance Project. Any final decision to commit to the project and incur final design and construction costs would require Board approval following completion of the environmental review for the proposed Delta Conveyance Project, which is not expected to occur until 2024 or later.

On August 6, 2020, DWR adopted certain resolutions to authorize the issuance of bonds to finance costs of Delta Conveyance Project environmental review, planning, design and, if and when such a project is approved, the costs of acquisition and construction thereof. The same day, it filed a complaint in Sacramento County Superior Court seeking to validate its authority to issue the bonds. Fourteen answers have been filed in the validation action, and one related case was filed in the same court alleging that DWR violated CEQA by adopting the bond resolutions before completing environmental review of the Delta Conveyance Project.

Additional lawsuits could be filed in the future with respect to any new Bay-Delta conveyance project and may impact the anticipated timing and costs of any proposed new single tunnel Delta Conveyance Project.

## **Colorado River Aqueduct**

### **Background**

The Colorado River was Metropolitan's original source of water after Metropolitan's establishment in 1928. Metropolitan has a legal entitlement to receive water from the Colorado River under a permanent service contract with the Secretary of the Interior. Water from the Colorado River and its tributaries is also available to other users in California, as well as users in the states of Arizona, Colorado, Nevada, New Mexico, Utah, and Wyoming (collectively, the "Colorado River Basin States"), resulting in both competition and the need for cooperation among these holders of Colorado River entitlements. In addition, under a 1944 treaty, Mexico has right to delivery of 1.5 million acre-feet of Colorado River water annually except as provided under shortage conditions described in Treaty Minute 323. The United States and Mexico agreed to conditions for reduced deliveries of Colorado River water to Mexico in Treaty Minute 323, adopted in 2017. That Minute established the rules under which Mexico agreed to take shortages and create reservoir storage in Lake Mead. Those conditions are in parity with the requirements placed on the Lower Basin States (defined below) in the Lower Basin Drought Contingency Plan (described under "– Colorado River Operations: Surplus and Storage Guidelines – Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead" in this Appendix A). Mexico can also schedule delivery of an additional 200,000 acre-feet of Colorado River water per year if water is available in excess of the requirements in the United States and the 1.5 million acre-feet allotted to Mexico.

Construction of the CRA, which is owned and operated by Metropolitan, was undertaken by Metropolitan to provide for the transportation of its Colorado River water entitlement to its service area. The CRA originates at Lake Havasu on the Colorado River and extends approximately 242 miles through a series of pump stations and reservoirs to its terminus at Lake Mathews in Riverside County. Up to 1.25 million acre-feet of water per year may be conveyed through the CRA to Metropolitan's member agencies, subject to availability of Colorado River water for delivery to Metropolitan as described below. Metropolitan first delivered CRA water to its member agencies in 1941.

### **Colorado River Water Apportionment and Seven-Party Agreement**

Pursuant to the federal Boulder Canyon Project Act of 1928, California is apportioned the use of 4.4 million acre-feet of water from the Colorado River each year plus one-half of any surplus that may be available for use collectively in Arizona, California and Nevada (the "Lower Basin States"). Under an agreement entered into in 1931 among the California entities that expected to receive a portion of California's apportionment of Colorado River water (the "Seven-Party Agreement") and which has formed the basis for the distribution of Colorado River water made available to California, Metropolitan holds the fourth priority right to 550,000 acre-feet per year. This is the last priority within California's basic apportionment. In addition, Metropolitan holds the fifth priority right to 662,000 acre-feet of water, which is in excess of California's basic apportionment. Until 2003, Metropolitan had been able to take full advantage of its fifth priority right as a result of the availability of surplus water and water apportioned to Arizona and Nevada that was not needed by those states. However, during the 1990s Arizona and Nevada increased their use of water from the Colorado River, and by 2002 no unused apportionment was available for California. As a result, California has limited its annual use to 4.4 million acre-feet since 2003, not including supplies made available under water supply programs such as intentionally-created surplus and certain conservation and storage agreements. In addition, a severe drought in the Colorado River Basin from 2000-2004 reduced storage in system reservoirs, ending the availability of surplus deliveries to Metropolitan. Prior to 2003, Metropolitan could divert over 1.25 million acre-feet in any year. Since 2003, Metropolitan's net diversions of Colorado River water have ranged from a low of 537,607 acre-feet in 2019 to a high of approximately 1,179,000 acre-feet in 2015. Average annual net diversions for 2010 through 2019 were nearly 900,291 acre-feet, with annual volumes dependent primarily on programs to augment supplies, including transfers of

conserved water from agriculture. See “– Quantification Settlement Agreement” and “– Colorado River Operations: Surplus and Shortage Guidelines.” See also “–Water Transfer, Storage and Exchange Programs – Colorado River Aqueduct Agreements and Programs.” In 2019, total available Colorado River supply was just over one million acre-feet. A portion of the available supply that was not diverted was stored in Lake Mead for future usage. See also “–Storage Capacity and Water in Storage.”

The following table sets forth the existing priorities of the California users of Colorado River water established under the 1931 Seven-Party Agreement.

**PRIORITIES UNDER THE 1931 CALIFORNIA SEVEN-PARTY AGREEMENT<sup>(1)</sup>**

Priority	Description	Acre-Feet Annually
1	Palo Verde Irrigation District gross area of 104,500 acres of land in the Palo Verde Valley	3,850,000
2	Yuma Project in California not exceeding a gross area of 25,000 acres in California	
3(a)	Imperial Irrigation District and other lands in Imperial and Coachella Valleys <sup>(2)</sup> to be served by All-American Canal	
3(b)	Palo Verde Irrigation District - 16,000 acres of land on the Lower Palo Verde Mesa	
4	Metropolitan Water District of Southern California for use on the coastal plain	550,000
	<b>SUBTOTAL</b>	4,400,000
5(a)	Metropolitan Water District of Southern California for use on the coastal plain	550,000
5(b)	Metropolitan Water District of Southern California for use on the coastal plain <sup>(3)</sup>	112,000
6(a)	Imperial Irrigation District and other lands in Imperial and Coachella Valleys to be served by the All-American Canal	300,000
6(b)	Palo Verde Irrigation District - 16,000 acres of land on the Lower Palo Verde Mesa	
	<b>TOTAL</b>	5,362,000
7	Agricultural use in the Colorado River Basin in California	Remaining surplus

Source: Metropolitan.

(1) Agreement dated August 18, 1931, among Palo Verde Irrigation District, Imperial Irrigation District, Coachella Valley County Water District, Metropolitan, the City of Los Angeles, the City of San Diego and the County of San Diego. These priorities were memorialized in the agencies’ respective water delivery contracts with the Secretary of the Interior.

(2) The Coachella Valley Water District serves Coachella Valley.

(3) In 1946, the City of San Diego, the San Diego County Water Authority, Metropolitan and the Secretary of the Interior entered into a contract that merged and added the City and County of San Diego’s rights to storage and delivery of Colorado River water to the rights of Metropolitan.



### **Quantification Settlement Agreement**

The Quantification Settlement Agreement (“QSA”), executed by the Coachella Valley Water District (“CVWD”), Imperial Irrigation District (“IID”), Metropolitan, and others in October 2003, establishes Colorado River water use limits for IID and CVWD, and provides for specific acquisitions of conserved water and water supply arrangements. The QSA and related agreements provide a framework for Metropolitan to enter into other cooperative Colorado River supply programs and set aside several disputes among California’s Colorado River water agencies.

Specific programs under the QSA and related agreements include lining portions of the All-American and Coachella Canals, which were completed in 2009 and conserve over 98,000 acre-feet annually. Metropolitan receives this water and delivers over 77,000 acre-feet of exchange water annually to San Diego County Water Authority (“SDCWA”), and provides 16,000 acre-feet of water annually by exchange to the United States for use by the La Jolla, Pala, Pauma, Rincon and San Pasqual Bands of Mission Indians, the San Luis Rey River Indian Water Authority, the City of Escondido and the Vista Irrigation District. Water became available for exchange with the United States following a May 17, 2017 notice from the Federal Energy Regulatory Commission (“FERC”) satisfying the last requirement of Section 104 of the San Luis Rey Indian Water Rights Settlement Act (Title I of Public Law 100-675, as amended). The QSA and related agreements also authorized the transfer of conserved water annually by IID to SDCWA (up to a maximum expected amount in 2021 of 205,000 acre-feet, then stabilizing to 200,000 acre-feet per year). Metropolitan also receives this water and delivers an equal amount of exchange water annually to SDCWA. See description under “– Metropolitan and San Diego County Water Authority Exchange Agreement” below; see also “METROPOLITAN REVENUES–Principal Customers” in this Appendix A. Also included under the QSA related agreements is a delivery and exchange agreement between Metropolitan and CVWD that provides for Metropolitan, when requested, to deliver annually up to 35,000 acre-feet of Metropolitan’s State Water Project contractual water to CVWD by exchange with Metropolitan’s available Colorado River supplies.

### **Metropolitan and San Diego County Water Authority Exchange Agreement**

No facilities exist to deliver conserved water acquired by SDCWA from IID and water allocated to SDCWA that has been conserved as a result of the lining of the All-American and Coachella Canals. See “– Quantification Settlement Agreement.” Accordingly, in 2003, Metropolitan and SDCWA entered into an exchange agreement (the “Exchange Agreement”), pursuant to which SDCWA makes available to Metropolitan at its intake at Lake Havasu on the Colorado River the conserved Colorado River water SDCWA receives under the QSA related agreements. Metropolitan delivers an equal volume of water from its own sources of supply through its delivery system to SDCWA. The Exchange Agreement limits the amount of water that Metropolitan delivers to 277,700 acre-feet per year, except that an additional 5,000 acre-feet and an additional 2,500 acre-feet will be exchanged in years 2021 and 2022, respectively. In consideration for the conserved water made available to Metropolitan by SDCWA, SDCWA pays the agreement price for the exchange water delivered by Metropolitan. The price payable by SDCWA is calculated using the charges set by Metropolitan’s Board from time to time to be paid by its member agencies for the conveyance of water through Metropolitan’s facilities. See “METROPOLITAN REVENUES–Litigation Challenging Rate Structure” in this Appendix A for a description of Metropolitan’s charges for the conveyance of water through Metropolitan’s facilities and litigation in which SDCWA is challenging such charges. The term of the Exchange Agreement, as it relates to conserved water transferred by IID to SDCWA, extends through 2047, and as it relates to water allocated to SDCWA that has been conserved as a result of the lining of the All-American and Coachella Canals, extends through 2112; subject, in each case, to the right of SDCWA, upon a minimum of five years’ advance written notice to Metropolitan, to permanently reduce the aggregate quantity of conserved water made available to Metropolitan under the Exchange Agreement to the extent SDCWA decides continually and regularly to transport such conserved water to SDCWA through alternative facilities (which do not presently exist). In 2019, approximately 237,711 acre-feet were delivered to Metropolitan by SDCWA for exchange, consisting of 160,000 acre-feet

of IID conservation plus 77,711 acre-feet of conserved water from the Coachella Canal and All-American Canal lining projects.

### **Colorado River Operations: Surplus and Shortage Guidelines**

**General.** The Secretary of the Interior is vested with the responsibility of managing the mainstream waters of the lower Colorado River pursuant to federal law. Each year, the Secretary of the Interior is required to declare the Colorado River water supply availability conditions for the Lower Basin States in terms of “normal,” “surplus” or “shortage” and has adopted operations criteria in the form of guidelines to determine the availability of surplus or potential shortage allocations among the Lower Basin States and reservoir operations for such conditions.

**Interim Surplus Guidelines.** In January 2001, the Secretary of the Interior adopted guidelines (the “Interim Surplus Guidelines”), initially for use through 2016, in determining the availability and quantity of surplus Colorado River water available for use in California, Arizona and Nevada. The Interim Surplus Guidelines were amended in 2007 and now extend through 2026. The purpose of the Interim Surplus Guidelines was to provide mainstream users of Colorado River water, particularly those in California and Nevada who had been utilizing surplus flows, a greater degree of predictability with respect to the availability and quantity of surplus water. Under the Interim Surplus Guidelines, Metropolitan initially expected to divert up to 1.25 million acre-feet of Colorado River water annually under foreseeable runoff and reservoir storage scenarios from 2004 through 2016. However, an extended drought in the Colorado River Basin reduced these initial expectations, and Metropolitan has not received any surplus water since 2002.

**Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead.** In May 2005, the Secretary of the Interior directed the Bureau of Reclamation to develop additional strategies for improving coordinated management of the reservoirs of the Colorado River system. In November 2007, the Bureau of Reclamation issued a Final EIS regarding new federal guidelines concerning the operation of the Colorado River system reservoirs, particularly during drought and low reservoir conditions. These guidelines provide water release criteria from Lake Powell and water storage and water release criteria from Lake Mead during shortage and surplus conditions in the Lower Basin, provide a mechanism for the storage and delivery of conserved system and non-system water in Lake Mead and extend the Interim Surplus Guidelines through 2026 (as noted above). The Secretary of the Interior issued the final guidelines through a Record of Decision signed in December 2007. The Record of Decision and accompanying agreement among the Colorado River Basin States protect reservoir levels by reducing deliveries during low inflow periods, encourage agencies to develop conservation programs and allow the Colorado River Basin States to develop and store new water supplies. The Colorado River Basin Project Act of 1968 insulates California from shortages in all but the most extreme hydrologic conditions. Consistent with these legal protections, under the guidelines, Arizona and Nevada are first subject to the initial annual shortages identified by the Secretary up to 500,000 acre-feet.

The guidelines also created the Intentionally Created Surplus (“ICS”) program, which allows water contractors in the Lower Basin States to store conserved water in Lake Mead. Under this program, ICS water (water that has been conserved through an extraordinary conservation measure, such as land fallowing) is eligible for storage in Lake Mead by Metropolitan. ICS can be created through 2026 and delivered through 2036. See the table entitled “Metropolitan’s Water Storage Capacity and Water in Storage” under “Storage Capacity and Water in Storage.” Under the guidelines and the Colorado River Drought Contingency Plan Authorization Act, California is able to create and deliver up to 400,000 acre-feet of extraordinary conservation ICS (“EC ICS”) annually and accumulate up to 1.7 million acre-feet of EC ICS in Lake Mead. In December 2007, California contractors for Colorado River water executed the California Agreement for the Creation and Delivery of Extraordinary Conservation Intentionally Created Surplus (the “California ICS Agreement”), which established terms and conditions for the creation, accumulation, and delivery of EC ICS by California contractors receiving Colorado River water. Under the California ICS Agreement, the State’s EC ICS creation, accumulation, and delivery limits provided to California under the 2007 Interim Surplus

Guidelines are apportioned between IID and Metropolitan. No other California contractors were permitted to create or accumulate ICS. Under the terms of the agreement, IID is allowed to store up to 25,000 acre-feet per year of EC ICS in Lake Mead with a cumulative limit of 50,000 acre-feet. Metropolitan is permitted to use the remaining available EC ICS creation, delivery, and accumulation limits provided to California.

The Secretary of the Interior delivers the stored ICS water to Metropolitan in accordance with the terms of December 13, 2007, January 6, 2010, and November 20, 2012 Delivery Agreements between the United States and Metropolitan. As of January 1, 2021, Metropolitan had an estimated 1,308,000 acre-feet in its ICS accounts. These ICS accounts include water conserved by fallowing in the Palo Verde Valley, projects implemented with IID in its service area, groundwater desalination, the Warren H. Brock Reservoir Project, and international agreements that converted water conserved by Mexico to the United States.

Since the 2007 Lower Basin shortage guidelines were issued for the coordinated operations of Lake Powell and Lake Mead, the Colorado River has continued to experience drought conditions. The seven Colorado River Basin States, the U.S. Department of Interior through the Bureau of Reclamation, and water users in the Colorado River basin, including Metropolitan, began developing Drought Contingency Plans (“DCPs”) to reduce the risk of Lake Powell and Lake Mead declining below critical elevations through 2026.

In April 2019, the President signed legislation directing the Secretary of the Interior to sign and implement four DCP agreements related to the Upper and Lower Basin DCPs without delay. The agreements were executed and the Upper and Lower Basin DCPs became effective on May 20, 2019. The Lower Basin Drought Contingency Plan Agreement requires California, Arizona and Nevada to store defined volumes of water in Lake Mead at specified lake levels. California would begin making contributions if Lake Mead’s elevation is projected to be 1,045 feet above sea level or below on January 1. Lake Mead elevation in January 2020 was 1,090 feet. Depending on the lake’s elevation, California’s contributions would range from 200,000 to 350,000 acre-feet a year (“DCP Contributions”). Pursuant to intrastate implementation agreements, Metropolitan will be responsible for 93 percent of California’s DCP Contributions under the Lower Basin DCP. CVWD will be responsible for 7 percent of California’s required DCP Contributions.

Implementation of the Lower Basin DCP enhances Metropolitan’s ability to store water in Lake Mead and ensures that water in storage can be delivered at a later date. The Lower Basin DCP increases the total volume of water that California may store in Lake Mead by 200,000 acre-feet, which Metropolitan will have the right to use. Water stored as ICS will be available for delivery as long as Lake Mead’s elevation remains above 1,025 feet. Previously, that water would likely have become inaccessible below a Lake Mead elevation of 1,075 feet. DCP Contributions may be made through conversion of existing ICS. These types of DCP Contributions become DCP ICS. DCP Contributions may also be made by leaving water in Lake Mead that there was a legal right to have delivered. This type of DCP Contribution becomes system water and may not be recovered. Rules are set for delivery of DCP ICS through 2026 and between 2027-2057.

The Lower Basin DCP will be effective through 2026. Before the DCP and 2007 Lower Basin shortage guidelines terminate in 2026, the U.S. Department of Interior through the Bureau of Reclamation, the seven Colorado River Basin States, and water users in the Colorado River basin, including Metropolitan, will begin work on the development of new shortage guidelines for the management and operation of the Colorado River.

On April 22, 2019, Metropolitan was served notice of a CEQA lawsuit filed by IID against Metropolitan. In this lawsuit, IID is seeking to vacate Metropolitan’s Board actions taken on December 11, 2018 and March 12, 2019 authorizing Metropolitan’s entering into the agreements implementing the Lower Basin DCP under CEQA and to block Metropolitan from implementing the Lower Basin DCP and any related agreements. The trial for this matter occurred on January 4, 2021. On January 5, 2021, the court issued its final order denying IID’s writ petition. In its ruling, the court held that IID’s petition was barred because IID did not exhaust its administrative remedies. The court further found that Metropolitan provided

adequate public notice of the grounds of its CEQA exemption determination and that substantial evidence supported such determination. IID has 60 days to file an appeal after the court enters the judgment. Metropolitan is unable to assess at this time the likelihood of success of this litigation in the event IID appeals the ruling, or of any future claims, or their potential effect on future implementation of the Lower Basin DCP.

***Related Litigation—Navajo Nation Suit.*** The Navajo Nation filed litigation against the Department of the Interior, specifically the Bureau of Reclamation and the Bureau of Indian Affairs, in 2003, alleging that the Bureau of Reclamation has failed to determine the extent and quantity of the water rights of the Navajo Nation in the Colorado River and that the Bureau of Indian Affairs has failed to otherwise protect the interests of the Navajo Nation. The complaint challenges the adequacy of the environmental review for the Interim Surplus Guidelines (described under “–Colorado River Operations: Surplus and Shortage Guidelines – Interim Surplus Guidelines”) and seeks to prohibit the Department of the Interior from allocating any “surplus” water until such time as a determination of the rights of the Navajo Nation is completed. Metropolitan and other California water agencies filed motions to intervene in this action. In October 2004 the court granted the motions to intervene and stayed the litigation to allow negotiations among the Navajo Nation, federal defendants, Central Arizona Water Conservation District (“CAWCD”), State of Arizona and Arizona Department of Water Resources. After years of negotiations, a tentative settlement was proposed in 2012 that would provide the Navajo Nation with specified rights to water from the Little Colorado River and groundwater basins under the reservation, along with federal funding for development of water supply systems on the tribe’s reservation. The proposed agreement was rejected by tribal councils for both the Navajo and the Hopi, who were seeking to intervene. On May 16, 2013, the stay of proceedings was lifted. On June 3, 2013, the Navajo Nation moved for leave to file a first amended complaint, which the court granted on June 27, 2013. The amended complaint added a legal challenge to the Lower Basin Shortage Guidelines adopted by the Secretary of the Interior in 2007 that allow Metropolitan and other Colorado River water users to store water in Lake Mead (described under “– Colorado River Operations: Surplus and Shortage Guidelines – Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead”). Metropolitan has used these new guidelines to store over 1,000,000 acre-feet of water in Lake Mead, a portion of which has been delivered, and the remainder of which may be delivered at Metropolitan’s request in future years. On July 22, 2014, the district court dismissed the lawsuit in its entirety, ruling that the Navajo Nation lacked standing and that the claim was barred against the federal defendants. The district court denied a motion by the Navajo Nation for leave to amend the complaint further after the dismissal. On September 19, 2014, the Navajo Nation appealed the dismissal of its claims related to the Interim Surplus Guidelines, the Lower Basin Shortage Guidelines, and breach of the federal trust obligation to the tribe. On December 4, 2017, the Ninth Circuit Court of Appeals held that the Navajo Nation lacked standing for its National Environmental Policy Act claims, but that the breach of trust claim was not barred against the federal defendants.

The matter was remanded to the district court in January 2018 to consider the Navajo Nation’s breach of trust claim on its merits. The Navajo Nation sought leave to file an amended complaint on its breach of trust claim twice. On August 23, 2019, the district court issued its order denying the motion to amend, entered judgment against the Navajo Nation, and dismissed the action. On October 18, 2019, the Navajo Nation filed its notice of appeal in the Ninth Circuit. The Navajo Nation filed its opening brief on February 26, 2020. Defendants and Intervenor answering briefs were due April 27, 2020. Metropolitan filed a joint answering brief with several other Defendant-Intervenor, including, among others, the State of Arizona, the State of Nevada, CVWD, and IID. The case was fully briefed as of July 1, 2020. Oral argument was held on October 16, 2020 before the Ninth Circuit. No ruling has yet been issued. Metropolitan is unable to assess at this time the likelihood of success of this litigation or any future claims, or their potential effect on Colorado River water supplies.

## **Endangered Species Act and Other Environmental Considerations**

### **Endangered Species Act Considerations - State Water Project**

*General.* DWR has altered the operations of the State Water Project to accommodate species of fish listed as threatened or endangered under the federal Endangered Species Act (“ESA”) and/or California ESA. Currently, three species (the winter-run and spring-run Chinook salmon and the Delta smelt) are listed under both ESAs. The Central Valley steelhead, the North American green sturgeon and the killer whale are listed under the federal ESA, and the Longfin smelt is listed as a threatened species under the California ESA.

The federal ESA requires that before any federal agency authorizes, funds, or carries out an action that may affect a listed species or designated critical habitat, it must consult with the appropriate federal fishery agency (either the National Marine Fisheries Service (“NMFS”) or the U.S. Fish and Wildlife Service (“USFWS”) depending on the species) to determine whether the action would jeopardize the continued existence of any threatened or endangered species, or adversely modify habitat critical to the species’ needs. The result of the consultation is known as a “biological opinion.” In a biological opinion, a federal fishery agency determines whether the action would cause jeopardy to a threatened or endangered species or adverse modification to critical habitat; and if jeopardy or adverse modification is found, recommends reasonable and prudent alternatives that would allow the action to proceed without causing jeopardy or adverse modification. If no jeopardy or adverse modification is found, the fish agency issues a “no jeopardy opinion.” The biological opinion also includes an “incidental take statement.” The incidental take statement allows the action to go forward even though it will result in some level of “take,” including harming or killing some members of the species, incidental to the agency action, provided that the agency action does not jeopardize the continued existence of any threatened or endangered species and complies with reasonable mitigation and minimization measures recommended by the federal fishery agency or as incorporated into the project description.

The California ESA generally requires an incidental take permit or consistency determination for any action that may cause take of a State-listed species of fish or wildlife. To issue an incidental take permit or consistency determination, the California Department of Fish and Wildlife (“CDFW”) must determine that the impacts of the authorized take will be minimized and fully mitigated and will not cause jeopardy.

On August 2, 2016, DWR and the Bureau of Reclamation requested that USFWS and NMFS reinstate federal ESA consultation on the coordinated operations of the State Water Project and the federal Central Valley Project to update them with the latest best available science and lessons learned operating under the prior 2008 and 2009 biological opinions. In January 2019, the Bureau of Reclamation submitted the initial biological assessment to USFWS and NMFS. The biological assessment contains a description of the Bureau of Reclamation’s and DWR’s proposed long-term coordinated operations plan (the “2019 Long-Term Operations Plan”). On October 22, 2019, USFWS and NMFS issued new federal biological opinions (the “2019 biological opinions”) that provide incidental take coverage for the 2019 Long-Term Operations Plan. On February 18, 2020, the Bureau of Reclamation signed a Record of Decision, pursuant to the National Environmental Policy Act, completing its environmental review and adopting the 2019 Long-Term Operations Plan.

The 2019 Long-Term Operations Plan incorporates and updates many of the requirements contained in the previous 2008 and 2009 biological opinions. It also includes over \$1 billion over a ten-year period in conservation, monitoring and new science, some of which is in the form of commitments carried forward from the previous biological opinions. Those costs are shared by the State Water Project and the federal Central Valley Project. The prior 2008 and 2009 biological opinions resulted in an estimated reduction in State Water Project deliveries of 0.3 million acre-feet during critically dry years to 1.3 million acre-feet in above normal water years as compared to the previous baseline. The 2019 Long-Term Operations Plan and 2019 biological opinions are expected to increase State Water Project deliveries by an annual average of 200,000 acre-feet as compared to the previous biological opinions.

On December 2, 2019, a group of non-governmental organizations, including commercial fishing groups and the Natural Resources Defense Council (the “NGOs”), sued USFWS and NMFS, alleging the 2019 biological opinions were arbitrary and capricious, later amending the lawsuit to include claims under the federal ESA and the National Environmental Policy Act related to decisions made by the Bureau of Reclamation. On February 20, 2020, the California Natural Resources Agency (“Natural Resources”), the California Environmental Protection Agency, and the Attorney General (collectively, the “State Petitioners”) sued the federal agencies, making similar allegations. The State Water Contractors intervened in both cases to defend the 2019 biological opinions. The NGOs filed for a temporary restraining order on April 2, 2020, which the Court overruled. The NGOs and the State Petitioners filed a preliminary injunction seeking a court order imposing interim operations consistent with the prior 2008 and 2009 biological opinions pending rulings on the merits of plaintiffs’ challenges to the two 2019 biological opinions. On May 11, 2020, the court granted, in part, the motions for preliminary injunction, thereby requiring the Central Valley Project to operate to one of the reasonable and prudent alternatives (referred to as the “inflow-to-export ratio”) in the 2009 biological opinion through May 31, 2020. DWR is not a party in this litigation, and other legal requirements governed the operation of the State Water Project during the relevant time period in May, and therefore the State Water Project was not be impacted by this order. USFWS and NMFS have produced their respective administrative records. Once the administrative records are finalized, the parties anticipate stipulating to a briefing schedule to resolve the merits of the cases. Metropolitan is unable to predict the outcome of any litigation relating to the federal 2019 biological opinions or any potential effect on Metropolitan’s State Water Project water supplies.

On January 20, 2021, President Joseph R. Biden Jr. issued an Executive Order on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis directing all executive departments and agencies to immediately review, and, as appropriate and consistent with applicable law, take action to address the promulgation of Federal regulations and other actions during the last four years for consistency with the new administration’s policies. Among numerous actions identified for review, the United States Department of Commerce and United States Department of Interior heads were directed to review the 2019 biological opinions. At this point it is unclear if the review will result in any changes to the 2019 biological opinions.

As described above, operations of the State Water Project require both federal ESA and California ESA authorizations. DWR described and analyzed its proposed State Water Project long-term operations plan for purposes of obtaining a new California ESA permit in its November 2019 Draft EIR under CEQA. Its 2019 Draft EIR proposed essentially the same operations plan as for the federal 2019 biological opinions, with the addition of operations for the State-only listed species, Longfin smelt. In December 2019, DWR submitted its application for an incidental take permit under the California ESA to CDFW, with a modified State operations plan that added new outflow and environmental commitments. On March 27, 2020, DWR released its final EIR and Notice of Determination, describing and adopting a State operations plan with additional operational restrictions and additional conservation commitments. On March 31, 2020, CDFW issued an incidental take permit for the State Water Project that included further operational restrictions and outflow. As issued, the incidental take permit reduces State Water Project deliveries by more than 200,000 acre-feet on average annually, and adds another \$218 million over a ten-year period in environmental commitments for the State Water Project.

On April 28, 2020, Metropolitan and Mojave Water Agency (“Mojave”) jointly sued CDFW and DWR, and Natural Resources, alleging that the new California ESA permit and Final EIR violate CEQA and the California ESA. Metropolitan and Mojave also allege that DWR breached the State Water Contract and the implied covenant of good faith and fair dealing by, among other things, accepting an incidental take permit containing mitigation requirements in excess of that required by law. Subsequently, CVWD, San Geronio Pass Water Agency (both State Water Contractors), and Municipal Water District of Orange County (a Metropolitan member agency) joined with Metropolitan and Mojave in a first amended complaint. The State Water Contractors and the Kern County Water Agency also filed CEQA and CESA actions, in



which the Antelope Valley-East Kern Water Agency, Central Coast Water Authority, Dudley Ridge Water District, County of Kings, Oak Flat Water District, Palmdale Water District, Santa Clarita Valley Water Agency, San Gabriel Valley Municipal Water District, and Tulare Lake Basin Water Storage District subsequently joined in a first amended complaint in which the individual water contractors allege causes of action for breach of contract and the implied covenant of good faith and fair dealing. In addition, another State Water Contractor, the San Bernardino Valley Municipal Water District, filed a complaint alleging violations of CEQA and CESA, as well as breach of contract and the implied covenant of good faith and fair dealing, unconstitutional takings, and anticipatory repudiation of contract. Several federal CVP water contractors also filed a CEQA challenge. Four other lawsuits have been filed by certain commercial fishing groups and a tribe, several environmental groups, and two in-Delta water agencies challenging the Final EIR as inadequate under CEQA and alleging violations of the Delta Reform Act, public trust doctrine and, in one of the cases, certain water right statutes. All eight cases have been coordinated in Sacramento County Superior Court, and a stay on discovery was issued until a coordination trial judge is assigned and addresses the stay. The presiding judge in Sacramento has not yet assigned a coordination trial judge. Metropolitan is unable to assess at this time the likelihood of success of any litigation relating to the California ESA permit, including any future litigation or any future claims that may be filed, or any potential effect on Metropolitan's State Water Project water supplies.

#### **Endangered Species Act Considerations - Colorado River**

Federal and state environmental laws protecting fish species and other wildlife species have the potential to affect Colorado River operations. A number of species that are on either "endangered" or "threatened" lists under the ESAs are present in the area of the Lower Colorado River, including among others, the bonytail chub, razorback sucker, southwestern willow flycatcher and Yuma clapper rail. To address this issue, a broad-based state/federal/tribal/private regional partnership that includes water, hydroelectric power and wildlife management agencies in Arizona, California and Nevada have developed a multi-species conservation program for the main stem of the Lower Colorado River (the Lower Colorado River Multi-Species Conservation Program or "MSCP"). The MSCP allows Metropolitan to obtain federal and state permits for any incidental take of protected species resulting from current and future water and power operations of its Colorado River facilities and to minimize any uncertainty from additional listings of endangered species. The MSCP also covers operations of federal dams and power plants on the river that deliver water and hydroelectric power for use by Metropolitan and other agencies. The MSCP covers 27 species and habitat in the Lower Colorado River from Lake Mead to the Mexican border for a term of 50 years (commencing in 2005). Over the 50-year term of the program, the total cost to Metropolitan will be about \$88.5 million (in 2003 dollars), and annual costs will range between \$0.8 million and \$4.7 million (in 2003 dollars).

#### **Invasive Species - Mussel Control Programs**

Zebra and quagga mussels are established in many regions of the United States. Mussels can reproduce quickly and, if left unmanaged, can reduce flows by clogging intakes and raw water conveyance systems, alter or destroy fish habitats, and affect lakes and beaches. Mussel management activities may require changes in water delivery protocols to reduce risks of spreading mussel populations and increase operation and maintenance costs.

In January 2007, quagga mussels were discovered in Lake Mead. All pipelines and facilities that transport raw Colorado River water are considered to be infested with quagga mussels. Metropolitan has a quagga mussel control plan, approved by the CDFW to address the presence of mussels in the CRA system and limit further spread of mussels. Year-round routine monitoring for mussel larvae has been conducted at Lake Havasu, selected locations in the CRA system, and non-infested areas of Metropolitan's system and some southern locations in the State Water Project. Shutdown inspections have demonstrated that control activities effectively limit mussel infestation in the CRA and prevent the further spread of mussels to other

bodies of water and water systems. Metropolitan's costs for controlling quagga mussels in the CRA system over the past 12 years has been approximately \$5 million per year.

Established mussel populations are located within ten miles of the State Water Project. A limited number of mussels have also been detected in State Water Project supplies but there is currently no evidence of established mussel populations, nor have they impacted Metropolitan's State Water Project deliveries. To prevent the introduction and further spread of mussels into the State Water Project, the Bay-Delta, and other uninfested bodies of water and water systems, DWR has also developed quagga mussel control plans and has partnered with other State and federal agencies on a number of related activities. Metropolitan coordinates mussel monitoring and control activities with these agencies.

## **Water Transfer, Storage and Exchange Programs**

### **General**

To supplement its State Water Project and Colorado River water supplies, Metropolitan has developed and actively manages a portfolio of water supply programs, including water transfer, storage and exchange agreements, the supplies created by which are conveyed through the California Aqueduct of the State Water Project, utilizing Metropolitan's rights under its State Water Contract to use the portion of the State Water Project conveyance system necessary to deliver water to it, or through available CRA capacity. Consistent with its IRP, Metropolitan will continue to pursue voluntary water transfer and exchange programs with State, federal, public and private water districts and individuals to help mitigate supply/demand imbalances and provide additional dry-year supply sources. A summary description of certain of Metropolitan's supply programs are set forth below. In addition to the arrangements described below, Metropolitan is entitled to storage and access to stored water in connection with various other storage programs and facilities. See "--Colorado River Aqueduct" above, as well as the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "--Storage Capacity and Water in Storage" below.

### **State Water Project Agreements and Programs**

In addition to the basic State Water Project contract provisions, Metropolitan has other contract rights that accrue to the overall value of the State Water Project. Because each Contractor is paying for physical facilities, they also have the right to use the facilities to move water supplies associated with agreements, water transfers and water exchanges. Metropolitan has entered into agreements and exchanges that provide additional water supplies.

Existing and potential water transfers and exchanges are an important element for improving the water supply reliability within Metropolitan's service area and accomplishing the reliability goal set by Metropolitan's Board. California's agricultural activities consume approximately 34 million acre-feet of water annually, which is approximately 80 percent of the total water used in the State for agricultural and urban uses and 40 percent of the water used for all consumptive uses, including environmental demands. Voluntary water transfers and exchanges with agricultural users can make a portion of this agricultural water supply available to support the State's urban areas. The portfolio of supplemental supplies that Metropolitan has developed to be conveyed through the California Aqueduct extend from north of the Bay-Delta to Southern California. Certain of these arrangements are also described below.

***Castaic Lake and Lake Perris.*** Metropolitan has contractual rights to withdraw up to 65,000 acre-feet of water in Lake Perris (East Branch terminal reservoir) and 153,940 acre-feet of water in Castaic Lake (West Branch terminal reservoir). This storage provides Metropolitan with additional options for managing State Water Project deliveries to maximize yield from the project. Any water used must be returned to the State Water Project within five years or it is deducted from allocated amounts in the sixth year.

**Metropolitan Article 56 Carryover.** Metropolitan has the right to store its allocated contract amount for delivery in subsequent years. Metropolitan can store between 100,000 and 200,000 acre-feet, depending on the final water supply allocation percentage.

**Yuba River Accord.** Metropolitan entered into an agreement with DWR in December 2007 to purchase a portion of the water released by the Yuba County Water Agency ("YCWA"). YCWA was involved in a SWRCB proceeding in which it was required to increase Yuba River fishery flows. Within the framework of agreements known as the Yuba River Accord, DWR entered into an agreement for the long-term purchase of water from YCWA. The agreement permits YCWA to transfer additional supplies at its discretion. Metropolitan, other State Water Contractors, and the San Luis & Delta-Mendota Water Authority entered into separate agreements with DWR for the purchase of portions of the water made available. Metropolitan's agreement allows Metropolitan to purchase, in dry years through 2025, available water supplies which have ranged from approximately 6,555 acre-feet to 67,068 acre-feet per year.

In addition to water made available under the Yuba River Accord, Metropolitan has developed groundwater storage agreements that allow Metropolitan to store available supplies in the Central Valley for return later. See "METROPOLITAN'S WATER DELIVERY SYSTEM—Water Quality and Treatment" in this Appendix A for information regarding recent water quality regulations and developments that impact or may impact certain of Metropolitan's groundwater storage programs.

Metropolitan has also developed other groundwater storage and exchange programs, certain of which are described below.

**Arvin-Edison/Metropolitan Water Management Program.** In December 1997, Metropolitan entered into an agreement with the Arvin-Edison Water Storage District ("Arvin-Edison"), an irrigation agency located southeast of Bakersfield, California. Under the program, Arvin-Edison stores water on behalf of Metropolitan. In January 2008, Metropolitan and Arvin-Edison amended the agreement to enhance the program's capabilities and to increase the delivery of water to the California Aqueduct. To facilitate the program, new wells, spreading basins and a return conveyance facility connecting Arvin-Edison's existing facilities to the California Aqueduct have been constructed. The agreement also provides Metropolitan priority use of Arvin-Edison's facilities to convey high-quality water available on the east side of the San Joaquin Valley to the California Aqueduct. Up to 350,000 acre-feet of Metropolitan's water may be stored and Arvin-Edison is obligated to return up to 75,000 acre-feet of stored water in any year to Metropolitan, upon request. The agreement will terminate in 2035 unless extended. Metropolitan's estimated storage account balance under the Arvin-Edison/Metropolitan Water Management Program as of January 1, 2021 is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "—Storage Capacity and Water in Storage" below. As a result of detecting 1,2,3-trichloropropane ("TCP") in Arvin-Edison wells, Metropolitan has temporarily suspended operation of the program until the water quality concerns can be further evaluated and managed.

**Semitropic/Metropolitan Groundwater Storage and Exchange Program.** In 1994, Metropolitan entered into an agreement with the Semitropic Water Storage District ("Semitropic"), located adjacent to the California Aqueduct north of Bakersfield, to store water in the groundwater basin underlying land within Semitropic. The minimum annual yield available to Metropolitan from the program is 39,700 acre-feet of water and the maximum annual yield is 231,200 acre-feet of water depending on the available unused capacity and the State Water Project allocation. Metropolitan's estimated storage account balance under the Semitropic program as of January 1, 2021 is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "—Storage Capacity and Water in Storage" below.

**Kern Delta Storage Program.** Metropolitan entered into an agreement with Kern Delta Water District ("Kern Delta") in May 2003, for a groundwater banking and exchange transfer program to allow Metropolitan to store up to 250,000 acre-feet of State Water Contract water in wet years and to permit

Metropolitan, at Metropolitan's option, a return of up to 50,000 acre-feet of water annually during hydrologic and regulatory droughts. Metropolitan's estimated storage account balance under this program as of January 1, 2021 is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "--Storage Capacity and Water in Storage" below.

***Mojave Storage Program.*** Metropolitan entered into a groundwater banking and exchange transfer agreement with Mojave Water Agency ("Mojave") in October 2003. The agreement allows for Metropolitan to store water in an exchange account for later return. The agreement allows Metropolitan to annually withdraw Mojave State Water Project contractual amounts, after accounting for local needs. Under a 100 percent allocation, the State Water Contract provides Mojave 82,800 acre-feet of water. This agreement was amended in 2011 to allow for the cumulative storage of up to 390,000 acre-feet. Metropolitan's estimated storage account balance under this program as of January 1, 2021 is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "--Storage Capacity and Water in Storage" below.

***Antelope Valley-East Kern Storage and Exchange Program.*** In 2016, Metropolitan entered into an agreement with the Antelope Valley-East Kern Water Agency ("AVEK"), the third largest State Water Contractor, to both exchange supplies and store water in the Antelope Valley groundwater basin. Under the exchange, AVEK would provide at least 30,000 acre-feet over ten years of its unused Table A State Water Project water to Metropolitan. For every two acre-feet provided to Metropolitan as part of the exchange, AVEK would receive back one acre-foot in the future. For the one acre-foot that is retained by Metropolitan, Metropolitan would pay AVEK under a set price schedule based on the State Water Project allocation at the time. Under this agreement, AVEK also provides Metropolitan up to 30,000 acre-feet of storage. Metropolitan's estimated storage account balance under this program as of January 1, 2021 is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "--Storage Capacity and Water in Storage" below.

***Antelope Valley-East Kern High Desert Water Bank Program.*** In April 2019, Metropolitan's Board authorized the General Manager to enter into an agreement with AVEK for a groundwater banking program referred to as the High Desert Water Bank Program. The estimated costs of construction of the facilities to implement the program is \$131 million. Following completion of construction, which is expected to take approximately five years, Metropolitan would have the right to store up to 70,000 acre-feet per year of its unused Table A State Water Project water or other supplies in the Antelope Valley groundwater basin for later return. The maximum storage capacity for Metropolitan supplies would be 280,000 acre-feet. At Metropolitan's direction, up to 70,000 acre-feet of stored water annually would be available for return by direct pump back into the East Branch of the California Aqueduct. Upon completion, this program would provide additional flexibility to store and recover water for emergency or water supply needs through 2057.

***San Gabriel Valley Municipal Water District and Other Exchange Programs.*** In 2013, Metropolitan entered into an agreement with the San Gabriel Valley Municipal Water District ("SGVMWD"). Under this agreement, Metropolitan delivers treated water to a SGVMWD subagency in exchange for twice as much untreated water in the groundwater basin. Metropolitan's member agencies can then use the groundwater supplies to meet their needs. Metropolitan can exchange and purchase at least 5,000 acre-feet per year. This program has the potential to increase Metropolitan's reliability by providing 115,000 acre-feet through 2035.

Metropolitan has been negotiating, and will continue to pursue, water purchase, storage and exchange programs with other agencies in the Sacramento and San Joaquin Valleys. These programs involve the storage of both State Water Project supplies and water purchased from other sources to enhance Metropolitan's dry-year supplies and the exchange of normal year supplies to enhance Metropolitan's water reliability and water quality, in view of dry conditions and potential impacts from the ESA considerations

discussed above under the heading “–Endangered Species Act and Other Environmental Considerations – Endangered Species Act Considerations - State Water Project.”

The Sites Reservoir is a proposed reservoir project of approximately 1.3 to 1.5 million acre-feet, being analyzed by the Sites Reservoir Authority, to be located in Colusa County. The water stored in the proposed project would be diverted from the Sacramento River. As currently proposed, the Sites Reservoir project would have dedicated water storage and yield that would be used for fishery enhancement, water quality, and other environmental purposes. The proposed project could also provide additional water supply that could be used for dry-year benefits. Metropolitan is a member of the Sites Reservoir Committee, a group of 30 agencies that are participating in certain planning activities in connection with the proposed development of the project, including the development of environmental planning documents, a federal feasibility report and project permitting. In October 2020, Metropolitan’s Board approved \$5.0 million in funding for Metropolitan’s continued participation in such planning activities through then end of 2021. Metropolitan’s agreement to participate in funding of this phase of project development activities does not commit Metropolitan to participate in any actual reservoir project that may be undertaken in the future.

### **Colorado River Aqueduct Agreements and Programs**

Metropolitan has taken steps to augment its share of Colorado River water through agreements with other agencies that have rights to use such water, including through cooperative programs with other water agencies to conserve and develop supplies and through programs to exchange water with other agencies. These supplies are conveyed through the CRA. Metropolitan determines the delivery schedule of these supplies throughout the year based on changes in the availability of State Water Project and Colorado River water. Under certain of these programs, water may be delivered to Metropolitan’s service area in the year made available or in a subsequent year as ICS water from Lake Mead storage. See “–Colorado River Aqueduct –Colorado River Operations: Surplus and Shortage Guidelines – Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead.”

***IID/Metropolitan Conservation Agreement.*** Under a 1988 water conservation agreement, as amended in 2003 and 2007 (the “1988 Conservation Agreement”) between Metropolitan and IID, Metropolitan provided funding for IID to construct and operate a number of conservation projects that have conserved up to 109,460 acre-feet of water per year that has been provided to Metropolitan. As amended, the agreement’s initial term has been extended to at least 2041 or 270 days after the termination of the QSA. In 2019, 105,000 acre-feet of conserved water was made available by IID to Metropolitan. Under the QSA and related agreements, Metropolitan, at the request of CVWD, forgoes up to 20,000 acre-feet of this water each year for diversion by CVWD from the Coachella Canal. In each of 2018 and 2019, CVWD’s requests were for 0 acre-feet, leaving 105,000 acre-feet in 2018 and 2019 for Metropolitan. In December 2019, Metropolitan signed a revised agreement with CVWD in which CVWD will limit its annual request of water from this program to 15,000 acre-feet through 2026. See “–Colorado River Aqueduct –Quantification Settlement Agreement.”

***Palo Verde Land Management, Crop Rotation and Water Supply Program.*** In August 2004, Metropolitan and PVID signed the program agreement for a Land Management, Crop Rotation and Water Supply Program. Under this program, participating landowners in the PVID service area are compensated for reducing water use by not irrigating a portion of their land. This program provides up to 133,000 acre-feet of water to be available to Metropolitan in certain years. The term of the program is 35 years. Following began on January 1, 2005. The following table shows annual volumes of water saved and made available to Metropolitan during the last 10 calendar years under the Land Management, Crop Rotation and Water Supply Program with PVID:

**WATER AVAILABLE FROM PVID LAND MANAGEMENT,  
CROP ROTATION AND WATER SUPPLY PROGRAM**

Calendar Year	Volume (acre-feet)
2010 <sup>(1)</sup>	148,600
2011	122,200
2012	73,700
2013	32,800
2014	43,000
2015	94,500
2016	125,400
2017	111,800
2018	95,800
2019	44,500

*Source: Metropolitan.*

<sup>(1)</sup> Includes water from a supplemental fallowing program entered into with PVID in March 2009 that provided for fallowing of additional acreage in 2009 and 2010 and resulted in an additional 32,300 acre-feet of water in 2010 made available under the program.

***Bard Water District Seasonal Fallowing Program.*** In January 2020, Metropolitan and Bard Water District signed a seven-year agreement for a seasonal fallowing program. Under this program, each year farmers in Bard Water District have the opportunity to be compensated for reducing water use by not irrigating a portion of their land between April 1 and August 1 each year. During this period, farmers typically plant low-value, high water use crops, and this program incentivizes them to fallow the land instead. This program provides up to 6,000 acre-feet of water per year to be available to Metropolitan. The term of the program is through 2026, and during that time the water can either be delivered to Metropolitan or stored in Lake Mead as described below.

***Lake Mead Storage Program.*** As described under “Colorado River Aqueduct –Colorado River Operations: Surplus and Shortage Guidelines – Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead,” Metropolitan has entered into agreements to set forth the guidelines under which ICS water is developed and stored in and delivered from Lake Mead. The amount of water stored in Lake Mead must be created through extraordinary conservation, system efficiency, tributary, imported, or binational conservation methods. Metropolitan has participated in projects to create ICS as described below:

***Drop 2 (Warren H. Brock) Reservoir.*** In May 2008, Metropolitan provided \$28.7 million to join the CAWCD and the Southern Nevada Water Authority (“SNWA”) in funding the Bureau of Reclamation’s construction of an 8,000 acre-foot off-stream regulating reservoir near Drop 2 of the All-American Canal in Imperial County (officially named the Warren H. Brock Reservoir). Construction was completed in October 2010 and the Bureau of Reclamation refunded approximately \$3.71 million in unused contingency funds to Metropolitan. The Warren H. Brock Reservoir conserves about 70,000 acre-feet of water per year by capturing and storing water that would otherwise be lost from the system. In return for its funding, Metropolitan received 100,000 acre-feet of water that was stored in Lake Mead for its future use and has the ability to receive up to 25,000 acre-feet of water in any single year. Besides the additional water supply, the addition of the Warren H. Brock reservoir adds to the flexibility of Colorado River operations by storing underutilized Colorado River water orders caused by unexpected canal outages, changes in weather conditions, and high tributary runoff into the Colorado River. As of January 1, 2021, Metropolitan had taken delivery of 35,000 acre-feet of this water and had 65,000 acre-feet remaining in storage.



International Water Treaty Minutes 319 and 323. In November 2012, as part of the implementation of Minute 319, Metropolitan executed agreements in support of a program to augment Metropolitan's Colorado River supply between 2013 through 2017 through an international pilot project in Mexico. Metropolitan's total share of costs was \$5 million for 47,500 acre-feet of project supplies. In December 2013, Metropolitan and IID executed an agreement under which IID has paid half of Metropolitan's program costs, or \$2.5 million, in return for half of the project supplies, or 23,750 acre-feet. As such, 23,750 acre-feet of Intentionally Created Mexican Allocation was converted to Binational ICS and credited to Metropolitan's binational ICS water account in 2017. See "--Colorado River Aqueduct --Colorado River Operations: Surplus and Shortage Guidelines -- Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead." In September 2017, as part of the implementation of Minute 323, Metropolitan agreed to fund additional water conservation projects in Mexico that will yield approximately 24,000 acre-feet of additional supply for Metropolitan by 2026 at a cost of approximately \$3.3 million.

***Storage and Interstate Release Agreement with Nevada.*** In May 2002, SNWA and Metropolitan entered into an Agreement Relating to Implementation of Interim Colorado River Surplus Guidelines, in which SNWA and Metropolitan agreed to the allocation of unused apportionment as provided in the Interim Surplus Guidelines and on the priority of SNWA for interstate banking of water in Arizona. SNWA and Metropolitan entered into a storage and interstate release agreement on October 21, 2004. Under this agreement, SNWA can request that Metropolitan store unused Nevada apportionment in California. The amount of water stored through 2014 under this agreement was approximately 205,000 acre-feet. In October 2015, SNWA and Metropolitan executed an additional amendment to the agreement under which Metropolitan paid SNWA approximately \$44.4 million and SNWA stored an additional 150,000 acre-feet with Metropolitan during 2015. Of that amount, 125,000 acre-feet has been added to SNWA's storage account with Metropolitan, increasing the total amount of water stored to approximately 330,000 acre-feet. In subsequent years, SNWA may request recovery of the stored water. When SNWA requests the return of any of the stored 125,000 acre-feet, SNWA will reimburse Metropolitan for an equivalent proportion of the \$44.4 million plus inflation based on the amount of water returned. It is expected that SNWA will not request return of any of the water stored with Metropolitan before 2022.

***California ICS Agreement Intrastate Storage Provisions.*** As described under "--Colorado River Aqueduct --Colorado River Operations: Surplus and Shortage Guidelines -- Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead," in 2007, IID, Metropolitan and other Colorado River contractors in California executed the California ICS Agreement, which divided California's ICS storage space in Lake Mead between Metropolitan and IID. It also allowed IID to store up to 50,000 acre-feet of conserved water in Metropolitan's system. In 2015, the California ICS Agreement was amended to allow IID to store additional amounts of water in Metropolitan's system during 2015-2017. Under the 2015 amendment, IID was permitted to store up to 100,000 acre-feet per year of conserved water within Metropolitan's system with a cumulative limit of 200,000 acre-feet, for the three-year term. When requested by IID, Metropolitan has agreed to return to IID the lesser of either 50,000 acre-feet per year, or in a year in which Metropolitan's member agencies are under a shortage allocation, 50 percent of the cumulative amount of water IID has stored with Metropolitan under the 2015 amendment. IID currently has 162,000 acre-feet of water stored with Metropolitan pursuant to the terms of the California ICS Agreement.

In 2018, IID had reached the limit on the amount of water it was able to store in Metropolitan's system under the California ICS Agreement, and entered into discussions with Metropolitan to further amend the Agreement, but no such agreement was reached. On December 4, 2020, IID filed a complaint against Metropolitan alleging that Metropolitan breached the California ICS Agreement, breached the implied covenant of good faith and fair dealing, and that Metropolitan converted IID's intentionally created surplus for its own use. IID's complaint seeks the imposition of a constructive trust over 87,594 acre-feet of water in Lake Mead or Metropolitan's system and a judgment against Metropolitan for \$20,896,640. Metropolitan is unable to assess at this time the likelihood of success of this litigation or any future claims.

## **State Water Project and Colorado River Aqueduct Arrangements**

***Metropolitan/CVWD/Desert Water Agency Exchange and Advance Delivery Agreement.*** Metropolitan has agreements with CVWD and the Desert Water Agency (“DWA”) in which Metropolitan exchanges its Colorado River water for those agencies’ State Water Project contractual water and other State Water Project water acquisitions on an annual basis. Because CVWD and DWA do not have a physical connection to the State Water Project, Metropolitan takes delivery of CVWD’s and DWA’s State Water Project supplies and delivers a like amount of Colorado River water to the agencies. In accordance with an advance delivery agreement executed by Metropolitan, CVWD and DWA, Metropolitan may deliver Colorado River water in advance of receiving State Water Project supplies to these agencies for storage in the Upper Coachella Valley groundwater basin. In years when it is necessary to augment available supplies to meet local demands, Metropolitan may meet the exchange delivery obligation through drawdowns of the advance delivery account, rather than deliver Colorado River water in that year. Metropolitan’s estimated storage account under the CVWD/DWA program as of January 1, 2021 is shown in the table entitled “Metropolitan’s Water Storage Capacity and Water in Storage” under “–Storage Capacity and Water in Storage” below. In addition to the storage benefits of the program, Metropolitan receives water quality benefits with increased deliveries of lower salinity water from the State Water Project in lieu of delivering higher saline Colorado River water. In December 2019, the exchange agreements were amended to provide more flexibility and operational certainty for the parties involved. Additionally, under the amended agreements, CVWD and DWA pay a portion of Metropolitan’s water storage management costs in wet years, up to a combined total of \$4 million per year.

### **Storage Capacity and Water in Storage**

Metropolitan’s storage capacity, which includes reservoirs, conjunctive use and other groundwater storage programs within Metropolitan’s service area and groundwater and surface storage accounts delivered through the State Water Project or CRA, is approximately 6.0 million acre-feet. In 2020, approximately 750,000 acre-feet of total stored water in Metropolitan’s reservoirs and other storage resources was emergency storage that was reserved for use in the event of supply interruptions from earthquakes or similar emergencies (see “METROPOLITAN’S WATER DELIVERY SYSTEM–Seismic Considerations and Emergency Response Measures” in this Appendix A), as well as extended drought. Metropolitan’s emergency storage requirement is established periodically to provide a six-month water supply at 75 percent of member agencies’ retail demand under normal hydrologic conditions. Metropolitan’s ability to replenish water storage, both in the local groundwater basins and in surface storage and banking programs, has been limited by Bay-Delta pumping restrictions under the biological opinions issued for listed species. See “–Endangered Species Act and Other Environmental Considerations –Endangered Species Act Considerations – State Water Project – Delta Smelt and Salmon Federal ESAs Biological Opinions and California ESA Consistency Determinations and Incidental Take Permit.” Metropolitan replenishes its storage accounts when available imported supplies exceed demands. Effective storage management is dependent on having sufficient years of excess supplies to store water so that it can be used during times of shortage. See “CONSERVATION AND WATER SHORTAGE MEASURES–Water Supply Allocation Plan” in this Appendix A. Metropolitan’s storage as of January 1, 2021 is estimated to be 3.95 million acre-feet. As a result of a collaborative process with its member agencies, Metropolitan completed an evaluation of its Emergency Storage Objective in 2019 that resulted in the increase the emergency storage from 626,000 acre-feet to 750,000 acre-feet by January 1, 2020. As a result, the portion of the emergency storage in Metropolitan’s reservoirs was increased from 298,000 acre-feet to 369,000 acre-feet. The following table shows three years of Metropolitan’s water in storage as of January 1, including emergency storage.

**METROPOLITAN'S WATER STORAGE CAPACITY AND WATER IN STORAGE<sup>(1)</sup>**  
(in Acre-Feet)

<u>Water Storage Resource</u>	<u>Storage Capacity</u>	<u>Water in Storage January 1, 2021<sup>(2)</sup></u>	<u>Water in Storage January 1, 2020</u>	<u>Water in Storage January 1, 2019</u>
<b><u>Colorado River Aqueduct</u></b>				
DWA / CVWD Advance Delivery Account	800,000	330,000	296,000	235,000
Lake Mead ICS	<u>1,739,000</u>	<u>1,308,000</u>	<u>980,000</u>	<u>625,000</u>
<b>Subtotal</b>	<b>2,539,000</b>	<b>1,638,000</b>	<b>1,276,000</b>	<b>860,000</b>
<b><u>State Water Project</u></b>				
Arvin-Edison Storage Program <sup>(3)</sup>	350,000	143,000	143,000	154,000
Semitropic Storage Program	350,000	260,000	265,000	187,000
Kern Delta Storage Program	250,000	177,000	189,000	138,000
Mojave Storage Program	330,000 <sup>(6)</sup>	19,000 <sup>(6)</sup>	19,000 <sup>(6)</sup>	19,000 <sup>(6)</sup>
AVEK Storage Program	30,000	27,000	27,000	9,000
Castaic Lake and Lake Perris <sup>(4)</sup>	219,000	219,000	219,000	219,000
State Water Project Carryover <sup>(5)</sup>	350,000 <sup>(7)</sup>	221,000	331,000	93,000
Emergency Storage	<u>381,000</u>	<u>381,000</u>	<u>381,000</u>	<u>328,000</u>
<b>Subtotal</b>	<b>2,260,000</b>	<b>1,447,000</b>	<b>1,574,000</b>	<b>1,147,000</b>
<b><u>Within Metropolitan's Service Area</u></b>				
Diamond Valley Lake	810,000	703,000	796,000	702,000
Lake Mathews	182,000	82,000	152,000	141,000
Lake Skinner	<u>44,000</u>	<u>37,000</u>	<u>38,000</u>	<u>37,000</u>
<b>Subtotal<sup>(8)</sup></b>	<b>1,036,000</b>	<b>822,000</b>	<b>986,000</b>	<b>880,000</b>
<b><u>Member Agency Storage Programs</u></b>				
Conjunctive Use <sup>(9)</sup>	<u>210,000</u>	<u>40,000</u>	<u>59,000</u>	<u>47,000</u>
<b>Total</b>	<b><u>6,045,000</u></b>	<b><u>3,947,000</u></b>	<b><u>3,895,000</u></b>	<b><u>2,934,000</u></b>

Source: Metropolitan

- (1) Water storage capacity and water in storage are measured based on engineering estimates and are subject to change.
- (2) Preliminary estimated January 1, 2021 storage; subject to change.
- (3) Metropolitan has temporarily suspended operation of the Arvin-Edison storage program. See "METROPOLITAN'S WATER SUPPLY—Water Transfer, Storage and Exchange Programs – Arvin-Edison/Metropolitan Water Management Program" and "METROPOLITAN'S WATER DELIVERY SYSTEM—Water Quality and Treatment" in this Appendix A.
- (4) Flexible storage allocated to Metropolitan under its State Water Contract. Withdrawals must be returned within five years.
- (5) Includes Article 56 Carryover of Metropolitan, Coachella Valley Water District, and Desert Water Agency, prior-year carryover, non-project carryover, and carryover of curtailed deliveries pursuant to Article 14(b) and Article 12(e) of Metropolitan's State Water Contract.
- (6) The Mojave Storage agreement was amended in 2011 to allow for cumulative storage of up to 390,000 acre-feet. Since January 1, 2011, Metropolitan has stored 60,000 acre-feet, resulting in a remaining balance of storage capacity of 330,000 acre-feet. 41,000 acre-feet of the 60,000 acre-feet stored has been returned, leaving a remaining balance in storage of 19,000 acre-feet.
- (7) A capacity of 350,000 acre-feet is estimated to be the practical operational limit for carryover storage considering Metropolitan's capacity to take delivery of carryover supplies before San Luis Reservoir fills.
- (8) Includes 298,000 acre-feet of emergency storage in Metropolitan's reservoirs in 2019, and 369,000 acre-feet of emergency storage in Metropolitan's reservoirs in 2020 and 2021.
- (9) Cyclic Storage water removed from this line item and is now categorized a pre-delivery.

## CONSERVATION AND WATER SHORTAGE MEASURES

### General

The central objective of Metropolitan's water conservation program is to help ensure adequate, reliable and affordable water supplies for Southern California by actively promoting efficient water use. The importance of conservation to the region has increased in recent years because of drought conditions in the State Water Project watershed and court-ordered restrictions on Bay-Delta pumping, as described under "METROPOLITAN'S WATER SUPPLY-State Water Project -Bay-Delta Proceedings Affecting State Water Project" and "-Endangered Species Act and Other Environmental Considerations -Endangered Species Act Considerations-State Water Project - Delta Smelt and Salmon Federal ESAs Biological Opinions and California ESA Consistency Determinations and Incidental Take Permit" in this Appendix A. Conservation reduces the need to import water to deliver to member agencies through Metropolitan's system. Water conservation is an integral component of Metropolitan's IRP, WSDM Plan and Water Supply Allocation Plan.

Metropolitan's conservation program has largely been developed to assist its member agencies in meeting the conservation goals of the 2015 IRP Update. See "METROPOLITAN'S WATER SUPPLY-Integrated Water Resources Plan" in this Appendix A. All users of Metropolitan's system benefit from the reduced infrastructure costs and system capacity made available by investments in demand management programs like the Conservation Credits Program. Under the terms of Metropolitan's Conservation Credits Program, Metropolitan administers regional conservation programs and also co-funds member agency conservation programs designed to achieve greater water use efficiency in residential, commercial, industrial, institutional and landscape uses. Direct spending by Metropolitan on active conservation incentives, including rebates for water-saving plumbing fixtures, appliances and equipment totaled about \$18.9 million in fiscal year 2019-20. The 2015 IRP Update estimates that Metropolitan's conservation efforts will result in 1,197,000 acre-feet of water being conserved annually in Southern California by 2025. See also "METROPOLITAN'S WATER SUPPLY-Integrated Water Resources Plan" in this Appendix A and "-Increased Drought Resiliency" below.

Historically, revenues collected by Metropolitan's Water Stewardship Rate and available grant funds have funded conservation incentives, local resource development incentives, and other water demand management programs. The Water Stewardship Rate was charged on every acre-foot of water conveyed by Metropolitan, except on water delivered to SDCWA pursuant to the Exchange Agreement (see "METROPOLITAN REVENUES-Water Rates" and "-Litigation Challenging Rate Structure" in this Appendix A) in calendar years 2018, 2019, and 2020. The Water Stewardship Rate has not been incorporated into Metropolitan's rates and charges for 2021 and 2022. See "METROPOLITAN REVENUES-Rate Structure -Water Stewardship Rate" in this Appendix A.

In addition to ongoing conservation, Metropolitan has developed a WSDM Plan, which splits resource actions into two major categories: Surplus Actions and Shortage Actions. See "-Water Surplus and Drought Management Plan." Conservation and water efficiency programs are part of Metropolitan's resource management strategy which makes up these Surplus and Shortage actions.

Metropolitan's Water Supply Allocation Plan allocates Metropolitan's water supplies among its member agencies, based on the principles contained in the WSDM Plan, to reduce water use and drawdowns from water storage reserves. See "-Water Supply Allocation Plan." Metropolitan's member agencies and retail water suppliers in Metropolitan's service area also have the ability to implement water conservation and allocation programs, and some of the retail suppliers in Metropolitan's service area have initiated conservation measures. The success of conservation measures in conjunction with the implementation of the Water Supply Allocation Plan in fiscal years 2009-10, 2010-11, 2011-12 and 2015-16 is evidenced as a contributing factor in the lower than budgeted water transactions during such drought periods.

Legislation approved in November 2009 set a statewide conservation target for urban per capita potable water use of 20 percent reductions (from a baseline per capita use determined utilizing one of four State-approved methodologies) by 2020 (with credits for existing conservation) at the retail level, providing an additional catalyst for conservation by member agencies and retail suppliers. Metropolitan's water transactions projections incorporate an estimate of conservation savings that will reduce retail demands. Current projections include an estimate of additional water use efficiency savings that would result from Metropolitan's IRP goals that included the reduction of overall regional per capita water use by 20 percent by 2020 from a baseline of average per capita water use from 1996-2005 in Metropolitan's service area. As of calendar year 2019, per capita water use in Metropolitan's service area had reached the 20 percent reduction by 2020 target.

### **Water Surplus and Drought Management Plan**

In addition to the long-term planning guidelines and strategy provided by its IRP, Metropolitan has developed its WSDM Plan for the on-going management of its resources and water supplies in response to hydrologic conditions. The WSDM Plan, which was adopted by Metropolitan's Board in April 1999, evolved from Metropolitan's experiences during the droughts of 1976-77 and 1987-92. The WSDM Plan is a planning document that Metropolitan uses to guide inter-year and intra-year storage operations, and splits resource actions into two major categories: surplus actions and shortage actions. The surplus actions emphasize storage of surplus water inside the region, followed by storage of surplus water outside the region. The shortage actions emphasize critical storage programs and facilities and conservation programs that make up part of Metropolitan's response to shortages. Implementation of the plan is directed by a WSDM team, made up of Metropolitan staff, that meets regularly throughout the year and more frequently between November and April as hydrologic conditions develop. The WSDM team develops and recommends storage actions to senior management on a regular basis and provides updates to the Board on hydrological conditions, storage levels and planned storage actions through detailed reports.

### **Water Supply Allocation Plan**

In times of prolonged or severe water shortages, Metropolitan manages its water supplies through the implementation of its Water Supply Allocation Plan. The Water Supply Allocation Plan was originally approved by Metropolitan's Board in February 2008, and has been implemented three times since its adoption, including most recently in April 2015. The drought of 2012-2016 was one of the driest periods in the hydrological record since 1931-1934. The Board declared a Water Supply Condition 3 on April 14, 2015, and the implementation of the Water Supply Allocation Plan at a Level 3 Regional Shortage Level, effective July 1, 2015 through June 30, 2016. On May 10, 2016, the Board rescinded the implementation of the Water Supply Allocation Plan due to improved hydrological conditions. The Water Supply Allocation Plan provides a formula for equitable distribution of available water supplies in case of extreme water shortages within Metropolitan's service area and if needed is typically approved in the month of April with implementation beginning in the month of July. In December 2014, the Board approved certain adjustments to the formula for calculating member agency supply allocations during subsequent periods of implementation of the Water Supply Allocation Plan. Although the Act gives each of Metropolitan's member agencies a preferential entitlement to purchase a portion of the water served by Metropolitan (see "METROPOLITAN REVENUES-Preferential Rights" in this Appendix A), historically, these rights have not been used in allocating Metropolitan's water. Metropolitan's member agencies and retail water suppliers in Metropolitan's service area also may implement water conservation and allocation programs within their respective service territories in times of shortage. See also "Increased Drought Resiliency." Based upon current hydrologic conditions and current DWR State Water Project allocation estimates, implementation of the Water Supply Allocation Plan for fiscal year 2020-21 is not expected.

### **Increased Drought Resiliency**

Metropolitan has worked proactively with its member agencies to conserve water supplies in its service area, and significantly expanded its water conservation and outreach programs and increased funding

for conservation incentive programs. In May 2017, the Alliance for Water Efficiency presented a peer review report of Metropolitan’s conservation programs. Program modifications were adopted in April 2018 to reflect the peer review recommendations as well as feedback from member agencies. See “CONSERVATION AND WATER SHORTAGE MEASURES–General.” Metropolitan has also taken other actions to improve drought resiliency that include increasing water recycling by providing incentives for on-site recycled water hook-ups, improving return capability of storage programs, and modifying Metropolitan’s distribution system to enhance Colorado River water delivery to mitigate limitations in State Water Project supply.

## REGIONAL WATER RESOURCES

The water supply for Metropolitan’s service area is provided in part by Metropolitan and in part by non-Metropolitan sources available to members. Non-Metropolitan sources include water imported by the City of Los Angeles (the “City”) from the Owens Valley/Mono Basin east of the Sierra Nevada through the City’s Los Angeles Aqueduct to serve customers of the City. See “–Los Angeles Aqueduct.” The balance of water within the region is produced locally, from sources that include groundwater and surface water production, recycled water and recovery of contaminated or degraded groundwater, and seawater desalination. Programs to develop these local resources include projects funded by Metropolitan’s Local Resources Program, as well as local agency funded programs. See “–Local Water Supplies.

Based on a ten-year average from 2010 through 2019, non-Metropolitan sources met about 52 percent of the region’s water needs. These non-Metropolitan sources of supply fluctuate in response to variations in rainfall. During prolonged periods of below normal rainfall, local water supplies decrease. Conversely, prolonged periods of above-normal rainfall increase local supplies. Sources of groundwater basin replenishment include local precipitation, runoff from the coastal ranges, and artificial recharge with imported water supplies. In addition to runoff, recycled water provides an increasingly important source of replenishment water for the region.

Metropolitan’s member agencies are not required to purchase or use any of the water available from Metropolitan. Some agencies depend on Metropolitan to supply nearly all of their water needs, regardless of the weather. Other agencies, with local surface reservoirs or aqueducts that capture rain or snowfall, rely on Metropolitan more in dry years than in years with heavy rainfall, while others, with ample groundwater supplies, purchase Metropolitan water only to supplement local supplies and to recharge groundwater basins. Consumer demand and locally supplied water vary from year to year, resulting in variability in the volume of Metropolitan’s water transactions.

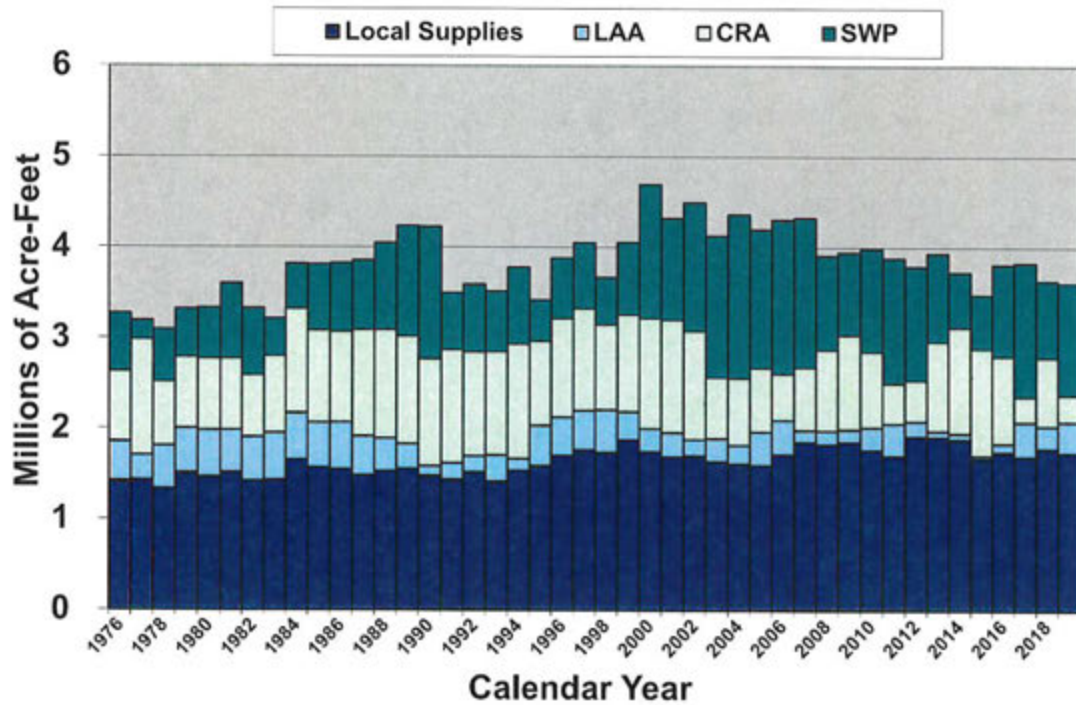
In recent years, supplies and demands have been affected by drought, water use restrictions, economic conditions, weather conditions and environmental laws, regulations and judicial decisions, as described in this Appendix A under “METROPOLITAN’S WATER SUPPLY.” The demand for supplemental supplies provided by Metropolitan is dependent on water use at the retail consumer level and the amount of locally supplied and conserved water. See “CONSERVATION AND WATER SHORTAGE MEASURES” in this Appendix A and “–Local Water Supplies” below.

Future reliance on Metropolitan supplies will depend on, among other things, current and future local projects that may be developed and the amount of water that may be derived from sources other than Metropolitan. For information on Metropolitan’s water revenues, see “METROPOLITAN REVENUES” and “MANAGEMENT’S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES” in this Appendix A.

The following graph shows a summary of the regional sources of water supply for the years 1976 to 2019.



## Sources of Water Supply in the Metropolitan Service Area (1976-2019)



Source: Metropolitan.

The major sources of water available to some or all of Metropolitan’s member agencies in addition to supplies provided by Metropolitan are described below.

### Los Angeles Aqueduct

The City of Los Angeles, through its Department of Water and Power (“LADWP”), operates its Los Angeles Aqueduct system to import water from the Owens Valley and the Mono Basin on the eastern slopes of the Sierra Nevada in eastern California. Water imported by the City on the Los Angeles Aqueduct system comes primarily from surface water rights of the City in eastern Sierra Nevada watersheds along various streams, creeks and rivers in the Mono Basin, Long Valley and Owens Valley, and groundwater resources in the Owens Valley from the City’s ownership of approximately 330,000 acres of land and associated water rights. This water supply of the City, which serves LADWP’s customers, currently meets about 5.25 percent of the region’s water needs based on a ten-year average from 2010 through 2019.

Surface runoff (snowmelt) is subject to substantial annual variability, which influences the amount of water delivered by the Los Angeles Aqueduct. In addition, the City is subject to several environmental commitments in the Mono Basin and Owens Valley which impact the availability of water to the City for import on the Los Angeles Aqueduct. These include: the SWRCB’s Mono Lake Basin Water Rights Decision 1631, which limits on the City’s water exports from the Mono Basin based on Mono Lake’s surface

elevation; and (ii) the City's legal obligations under a long-term groundwater management plan relating to the City's groundwater resources in the Owens Valley.

Since 1989, Los Angeles Aqueduct water deliveries to the City have varied from as little as 57,716 acre-feet in fiscal year 2014-15 to as much as 467,000 acre-feet of water in fiscal year 1995-96. Average water deliveries to the City from the Los Angeles Aqueduct were approximately 238,960 acre-feet per fiscal year between fiscal years 2015-16 and 2019-20 (approximately 48.0% of the City's annual water supply). However, during fiscal year 2015-16 (one of the worst years of the recent drought), water deliveries to the City from the Los Angeles Aqueduct were only 57,853 acre-feet (approximately 11.8% of the City's water supply for fiscal year 2015-16). Consequently, the amount of water purchased by the City from Metropolitan varies (sometimes substantially) from one year to the next. During the past five fiscal years 2015-16 through 2019-20, the City's water purchases from Metropolitan (billed water transactions) ranged from a low of 141,866 in fiscal year 2018-19 to a high of 332,528 in fiscal year 2015-16.

### **Local Water Supplies**

Local water supplies are made up of groundwater, groundwater recovery, surface runoff, recycled water, and seawater desalination. Metropolitan supports local resources development through its Local Resources Program, which provides financial incentives up to \$340 per acre-foot of water production from local water recycling, groundwater recovery and seawater desalination projects. Metropolitan utilizes conjunctive use of groundwater to encourage storage in groundwater basins. Member agencies and other local agencies have also independently funded and developed additional local supplies, including groundwater clean-up, recycled water and desalination of brackish or high salt content water. See also "METROPOLITAN'S WATER DELIVERY SYSTEM--Water Quality and Treatment" in this Appendix A for information regarding recent water quality regulations and developments that impact or may impact certain local groundwater supplies.

Metropolitan's water transaction projections are based in part on projections of locally-supplied water. Projections of future local supplies are based on estimated yields from sources and projects that are currently producing water or are under construction at the time a water transaction projection is made. Additional reductions in Metropolitan's water transaction projections are made to account for future local supply augmentation projects, based on the IRP Update goals. See "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES--Water Transactions Projections" and "METROPOLITAN'S WATER SUPPLY--Integrated Water Resources Plan" in this Appendix A.

**Groundwater.** Demands for about 1.1 million acre-feet per year, about one-third of the annual water demands for approximately 19 million residents of Metropolitan's service area, are met from groundwater production. Local groundwater supplies are supported by recycled water, which is blended with imported water and recharged into groundwater basins, and also used for creating seawater barriers that protect coastal aquifers from seawater intrusion.

**Member Agency Storage Programs.** Metropolitan has developed a number of local programs to work with its member agencies to increase storage in groundwater basins. Metropolitan has encouraged storage through its cyclic and conjunctive use storage programs. These programs allow Metropolitan to deliver water into a groundwater basin in advance of agency demands. Metropolitan has drawn on dry-year supply from nine contractual conjunctive use storage programs to address shortages from the State Water Project and the CRA.

Cyclic storage agreements allow pre-delivery of imported water for recharge into groundwater basins in excess of an agency's planned and budgeted deliveries making best use of available capacity in conveyance pipelines, use of storm channels for delivery to spreading basins, and use of spreading basins. This water is then purchased at a later time when the agency has a need for groundwater replenishment deliveries.

Conjunctive use agreements provide for storage of imported water that can be called for use by Metropolitan during dry, drought, or emergency conditions. During a dry period, Metropolitan has the option to call water stored in the groundwater basins pursuant to its contractual conjunctive use agreements. At the time of the call, the member agency pays Metropolitan the prevailing rate for that water. Nine conjunctive use projects provide about 210,000 acre-feet of groundwater storage and have a combined extraction capacity of about 70,000 acre-feet per year. See the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "METROPOLITAN'S WATER SUPPLY—Storage Capacity and Water in Storage" in this Appendix A.

**Recovered Groundwater.** Contamination of groundwater supplies is a growing threat to local groundwater production. Metropolitan has been supporting increased groundwater production and improved regional supply reliability by offering financial incentives to agencies for production and treatment of degraded groundwater since 1991. Metropolitan has executed agreements with local agencies to provide financial incentives to 27 projects that recover contaminated groundwater with total contract yields of about 124,000 acre-feet per year. During fiscal year 2019-20, Metropolitan provided incentives for approximately 50,000 acre-feet of recovered water under these agreements. Additionally, 62,000 acre-feet of recovered groundwater was produced by local agencies through other independently funded and developed sources. Total groundwater recovery use under executed agreements with Metropolitan is expected to grow to 58,000 acre-feet in 2021.

**Surface Runoff.** Local surface water resources consist of runoff captured in storage reservoirs and diversions from streams. Since 1980, agencies have used an average of 110,000 acre-feet per calendar year of local surface water. Local surface water supplies are heavily influenced by year to year local weather conditions, varying from a high of 188,000 acre-feet in calendar year 1998 to a low of 37,000 acre-feet in calendar year 2016.

**Recycled Water-Local Agency Projects.** Metropolitan has supported recycled water use to offset water demands and improve regional supply reliability by offering financial incentives to agencies for production and sales of recycled water since 1982. Metropolitan has executed agreements with local agencies to provide financial incentives to 83 recycled water projects with total expected contract yields of about 315,000 acre-feet per year. During fiscal year 2019-20, Metropolitan provided incentives for approximately 71,000 acre-feet of recycled water under these agreements. Additionally, 370,000 acre-feet of recycled water (including wastewater discharged to the Santa Ana River that percolates into downstream groundwater basins) was produced by local agencies through other independently funded and developed sources. Total recycled water use under executed agreements with Metropolitan currently in place is expected to be approximately 56,000 acre-feet annually by 2021. On December 10, 2019, Metropolitan's Board authorized the General Manager to enter into a Local Resources Program agreement with SDCWA and the City of San Diego to provide financial incentives in connection with the first phase of a proposed recycling project (the San Diego Pure Water North City Project Phase 1) being developed by the City of San Diego. Phase 1 of the project, if completed, would provide up to 33,600 acre-feet annually of recycled water for surface water augmentation, and Local Resource Program financial incentives of up to \$285.6 million could be provided by Metropolitan for the project over a 25-year period. As noted above, Local Resources Program agreements provide incentives of up to \$340 per acre-foot of water production (based on actual project unit costs that exceed Metropolitan's water rates) from local water supply projects developed by local and member agencies. Agreement terms are for 25 years and terminate automatically if construction does not commence within two full fiscal years of agreement execution or if recycled water deliveries are not realized within four full fiscal years of agreement execution.

**Recycled Water-Metropolitan Regional Recycled Water Program.** Since 2010, Metropolitan has been evaluating the potential and feasibility of implementing a regional recycled water program (the "RRWP"). Chronic drought conditions have resulted in significant reductions in local surface supplies and groundwater production and have increased the need for recharge supplies to groundwater and surface water

reservoirs to improve their sustainable yields and operating integrity. In 2015, Metropolitan executed an agreement with the Sanitation Districts of Los Angeles County ("LACSD") to implement a demonstration project and to establish a framework of terms and conditions of the RRWP. The objectives of the RRWP are to enable the potential reuse of up to 150 million gallons per day ("mgd") of treated effluent from LACSD's Joint Water Pollution Control Plant ("JWPCP"). Purified water from a new advanced treatment facility could be delivered through pipelines to the region's groundwater basins, industrial facilities, and two of Metropolitan's treatment plants. Construction of a 0.5-mgd advanced water treatment demonstration plant was approved in 2017 and was completed in September 2019. Testing and operation of the plant began in October 2019 to confirm treatment costs and provide the basis for regulatory approval of the proposed treatment process. The initial phase of testing is scheduled for completion in 2021 with future testing phases planned that will form the basis for the design, operation, and optimization of, and will inform Metropolitan's Board decision whether to move forward with, a full-scale advanced water treatment facility. Finally, the RRWP will have the flexibility to be expanded in the future to implement Direct Potable Reuse ("DPR") through raw water augmentation at two of Metropolitan's treatment plants. The SWRCB Division of Drinking Water ("DDW") is in the process of developing regulations for DPR in California, with the current anticipated date for promulgation by the end of 2023. The fiscal year 2020-21 and 2021-22 biennial budget includes \$30 million for the preparation of a programmatic environment impact report for the RRWP. Metropolitan's financial projections for the fiscal years ending June 30, 2020 through 2024 do not include any future capital costs associated with a potential full-scale RRWP. On November 10, 2020, Metropolitan's Board voted to begin environmental planning work on the RRWP. In December 2020, Metropolitan and SNWA executed a funding agreement under which SNWA will contribute up to \$6 million for the environmental planning costs for the RRWP. In the event either SNWA or Metropolitan decides not to proceed or participate in the RRWP in the future, SNWA's financial contribution to the RRWP's environmental planning would be returned by Metropolitan.

***Seawater Desalination.*** Metropolitan's IRP embraces seawater desalination as a part of the region's supply portfolio that could help increase supply reliability in Southern California.

In 2015, Poseidon Resources LLC ("Poseidon") began operating the 56,000 acre-foot capacity Carlsbad Desalination Project ("Carlsbad Project") and associated pipeline. The San Diego County Water Authority has a purchase agreement with Poseidon for a minimum of 48,000 acre-feet per year with an option to purchase an additional 8,000 acre-feet per year.

In October 2014, seawater desalination projects became eligible for funding under Metropolitan's Local Resources Program (LRP). There are three local seawater desalination projects in the permitting stages which could receive LRP incentives. These include South Coast Water District's proposed 5,000 to 15,000 acre-feet per year Doheny Ocean Desalination project in south Orange County; Orange County Water District's proposed 56,000 acre-feet per year Huntington Beach Seawater Desalination project in north Orange County; and West Basin Municipal Water District's proposed 20,000 to 60,000 acre-feet per year project in Los Angeles County. LRP applications for the potential projects could be considered by Metropolitan's Board after they are permitted, free of litigation, and authorized to proceed by their developing agencies.

Metropolitan had previously maintained Seawater Desalination Program (SDP) agreements with three member agencies for their projects. The agreements were signed in 2006 and included off-ramps triggered by project development milestones. On June 30, 2020, the SDP agreements reached a termination milestone and expired automatically. As a result, the three member agency SDP agreements are no longer in effect.

In 2007, the Board approved Metropolitan's role as a regional facilitator for seawater desalination. This includes supporting local projects during permitting and providing technical assistance when requested. Metropolitan's regional facilitation includes active participation in organizations advocating for desalination

and salinity management, including CalDesal within California and the Multi-State Salinity Coalition nationally. Metropolitan also participates in the National Alliance for Water Innovation ("NAWI"). NAWI is a DOE-led, five-year, \$100 million research effort focused on accelerating the commercialization of early-stage desalination technologies. New technologies developed by NAWI could reduce cost and environmental barriers to seawater desalination in California.

## **METROPOLITAN'S WATER DELIVERY SYSTEM**

### **Primary Facilities and Method of Delivery**

Metropolitan's water delivery system is made up of three basic components: the CRA, the California Aqueduct of the State Water Project and Metropolitan's water distribution system. Metropolitan's delivery system is integrated and designed to meet the differing needs of its member agencies. Metropolitan seeks redundancy in its delivery system to assure reliability in the event of an outage. Improvements are designed to increase the flexibility of the system. Since local sources of water are generally used to their maximum each year, growth in the demand for water is partially met by Metropolitan. The operation of Metropolitan's water system is being made more reliable through the rehabilitation of key facilities as needed, improved preventive maintenance programs and the upgrading of Metropolitan's operational control systems. See "CAPITAL INVESTMENT PLAN" in this Appendix A.

*Colorado River Aqueduct.* Work on the CRA commenced in 1933 and water deliveries started in 1941. Additional facilities were completed by 1961 to meet additional requirements of Metropolitan's member agencies. The CRA is 242 miles long, starting at the Lake Havasu intake and ending at the Lake Mathews terminal reservoir. Metropolitan owns all of the components of the CRA, which include five pumping plants, 64 miles of canal, 92 miles of tunnels, 55 miles of concrete conduits, four reservoirs, and 144 underground siphons totaling 29 miles in length. The pumping plants lift the water approximately 1,617 feet over several mountain ranges to Metropolitan's service area. See "METROPOLITAN'S WATER SUPPLY-Colorado River Aqueduct" in this Appendix A.

*State Water Project.* The initial portions of the State Water Project serving Metropolitan were completed in 1973. The State Water Project, managed and operated by DWR, is one of the largest water supply projects undertaken in the history of water development. The State Water Project facilities dedicated to water delivery consist of a complex system of dams, reservoirs, power plants, pumping plants, canals and aqueducts to deliver water. Water from rainfall and snowmelt runoff is captured and stored in State Water Project conservation facilities and then delivered through State Water Project transportation facilities to water agencies and districts located throughout the Upper Feather River, Bay Area, Central Valley, Central Coast, and Southern California. Metropolitan receives water from the State Water Project through the main stem of the aqueduct system, the California Aqueduct, which is 444 miles long and includes 381 miles of canals and siphons, 49 miles of pipelines or tunnels and 13 miles of channels and reservoirs.

As described herein, Metropolitan is the largest (in terms of number of people it serves, share of State Water Project water it has contracted to receive, and percentage of total annual payments made to DWR therefor) of twenty-nine agencies and districts that have entered into contracts with DWR to receive water from the State Water Project. Contractors pay all costs of the facilities in exchange for participation rights in the system. Thus, Contractors also have the right to use the portion of the State Water Project conveyance system necessary to deliver water to them at no additional cost as long as capacity exists. See "METROPOLITAN'S WATER SUPPLY-State Water Project" in this Appendix A.

*Distribution System.* Metropolitan's distribution system is a complex network of facilities which routes water from the CRA and State Water Project to Metropolitan's member agencies. The water distribution system includes components that were built beginning in the 1930s and through the present. Metropolitan owns all of these components, including 16 reservoirs, five regional treatment plants, over 800

miles of transmission pipelines, feeders and canals, and 16 hydroelectric plants with an aggregate capacity of 130 megawatts.

***Diamond Valley Lake.*** Diamond Valley Lake, a man-made reservoir, built, owned and operated by Metropolitan, is located southwest of the city of Hemet, California. It covers approximately 4,410 acres and has capacity to hold approximately 810,000 acre-feet or 265 billion gallons of water. Diamond Valley Lake was constructed to serve approximately 90 percent of Metropolitan's service area by gravity flow. Imported water is delivered to Diamond Valley Lake during surplus periods. The reservoir provides more reliable delivery of imported water from the State Water Project during summer months, droughts and emergencies. In addition, Diamond Valley Lake is capable of providing more than one-third of Southern California's water needs from storage for approximately six months after a major emergency (assuming that there has been no impairment of Metropolitan's internal distribution network). See the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "METROPOLITAN'S WATER SUPPLY-Storage Capacity and Water in Storage" in this Appendix A for the amount of water in storage at Diamond Valley Lake. Excavation at the project site began in May 1995. Diamond Valley Lake was completed in March 2000, at a total cost of \$2 billion, and was in full operation in December 2001.

***Inland Feeder.*** Metropolitan's Inland Feeder is a 44-mile-long conveyance system that connects the State Water Project to Diamond Valley Lake and the CRA. The Inland Feeder provides greater flexibility in managing Metropolitan's major water supplies and allows greater amounts of State Water Project water to be accepted during wet seasons for storage in Diamond Valley Lake. In addition, the Inland Feeder increases the conveyance capacity from the East Branch of the State Water Project by 1,000 cfs, allowing the East Branch to operate up to its full capacity. Construction of the Inland Feeder was completed in September 2009 at a total cost of \$1.14 billion.

***Operations Control Center.*** Metropolitan's water conveyance and distribution system operations are coordinated from the Operations Control Center ("OCC") centrally located in Los Angeles County. The OCC plans, balances and schedules daily water and power operations to meet member agencies' demands, taking into consideration the operational limits of the entire system.

## **Water Quality and Treatment**

Metropolitan filters and disinfects water at five water treatment plants: the F.E. Weymouth Treatment Plant, the Joseph Jensen Treatment Plant, the Henry J. Mills Treatment Plant, the Robert B. Diemer Treatment Plant, and the Robert A. Skinner Treatment Plant. In recent years, the plants typically treat between 0.8 billion and 1.0 billion gallons of water per day and have a maximum capacity of approximately 2.4 billion gallons per day. Approximately 50 percent of Metropolitan's water deliveries are treated water.

Federal and state regulatory agencies continually identify potential contaminants and establish new water quality standards. New water quality standards could affect availability of water and impose significant compliance costs on Metropolitan. The federal Safe Drinking Water Act ("SDWA") establishes drinking water quality standards, monitoring, and public notification and enforcement requirements for public water systems. To achieve these objectives, the U.S. Environmental Protection Agency (the "USEPA"), as the lead regulatory authority, promulgates national drinking water regulations and develops the mechanism for individual states to assume primary enforcement responsibilities. The SWRCB DDW, formerly the Drinking Water Program under the California Department of Public Health, has primary responsibility for the regulation of public water systems in the State. Drinking water delivered to customers must comply with statutory and regulatory water quality standards designed to protect public health and safety. Metropolitan operates its five water treatment plants under a domestic water supply permit issued by DDW, which is amended, as necessary, such as when significant facility modifications occur. Metropolitan operates and maintains water storage, treatment and conveyance facilities, implements watershed management and protection activities, performs inspections, monitors drinking water quality, and submits monthly and annual compliance reports. In addition, public water system discharges to state and federal waters are regulated



under general National Pollutant Discharge Elimination System (“NPDES”) permits. These NPDES permits, which the SWRCB issued to Metropolitan, contain numerical effluent limitations, monitoring, reporting, and notification requirements for water discharges from the facilities and pipelines of Metropolitan’s water supply and distribution system.

As described herein, Metropolitan has established five groundwater storage programs with other water agencies that allow Metropolitan to store available supplies in the Central Valley for return later. These programs help manage supplies by putting into storage surplus water in years when it is available and converting that to dry year supplies to be returned when needed. These programs can also provide emergency supplies. See “METROPOLITAN’S WATER SUPPLY–Water Transfer, Storage and Exchange Programs – State Water Project Agreements and Programs” and “–Storage Capacity and Water in Storage” in this Appendix A. Generally, water returned to Metropolitan under these groundwater storage programs (“return water”) may be made available in one of two ways: by direct pump back from a groundwater well to the California Aqueduct or, when available, by an exchange with a supply already in the aqueduct. Water quality issues can arise in water returned by direct pumping as a result of the presence of a water quality contaminant in the groundwater storage basin and due to the imposition of stricter water quality standards by federal or State regulation.

In 2017, the SWRCB adopted a regulation setting a Maximum Contaminant Level (“MCL”) for TCP of five parts per trillion or 5 ppt based upon a running annual average. TCP is a manufactured chemical used as a cleaning and degreasing solvent and has been found at industrial and hazardous waste sites. It is also associated with pesticide products used in agricultural practices. In January 2018, the new regulation went into effect. Under the new regulation, drinking water agencies are required to perform quarterly monitoring of TCP. There have been no detections of this chemical in Metropolitan’s system. However, TCP has been detected above the new MCL in groundwater wells of three of Metropolitan’s groundwater storage program partners through monitoring performed by these agencies. Levels detected in groundwater wells of the Arvin-Edison Water Storage District are the highest and will impact the ability of Metropolitan to take return water under that program. As noted under “METROPOLITAN’S WATER SUPPLY–Water Transfer, Storage and Exchange Programs” in this Appendix A, Metropolitan has temporarily suspended operation of this program until the water quality concerns can be further evaluated and managed. The levels of TCP detected at Metropolitan’s other groundwater storage programs are much lower and impact fewer groundwater wells. Metropolitan is evaluating the effects of TCP on the return capability of those programs.

Possible remediation measures include, for example, return water with other surface water supplies, removal of wells from service, return water by exchange, or treatment. Additional capital and/or operation and maintenance costs could be incurred by Metropolitan in connection with remediation options, but the magnitude of such costs is not known at this time. To the extent return water under one or more groundwater storage programs could not be utilized due to groundwater quality, the available supply of stored water during extended drought or emergency periods would be reduced.

Metropolitan continually monitors new water quality laws and regulations and frequently comments on new legislative proposals and regulatory rules. For example, on June 26, 2019, the USEPA proposed setting the MCL for perchlorate at 56 micrograms per liter ( $\mu\text{g}/\text{L}$ ). Perchlorate is both a naturally occurring and man-made chemical used in the production of rocket fuel, missiles, fireworks, flares and explosives. It is also sometimes present in bleach and in some fertilizers. Groundwater in the Henderson, Nevada area has been contaminated with perchlorate as a result of two former chemical manufacturing facilities, and there are ongoing remediation programs to mitigate its release into the Las Vegas Wash and the downstream Colorado River. In addition to its proposed setting of a perchlorate MCL of 56  $\mu\text{g}/\text{L}$ , the USEPA sought comment on three alternative regulatory options: (1) setting an MCL for perchlorate at 18  $\mu\text{g}/\text{L}$ ; (2) setting an MCL for perchlorate at 90  $\mu\text{g}/\text{L}$ ; or (3) withdrawing EPA’s 2011 determination to regulate perchlorate in drinking water. On August 23, 2019, Metropolitan submitted a comment letter on the USEPA’s proposed regulation, recommending that the USEPA consider the health effects data used by several states for setting MCLs and

Advisory Levels for perchlorate, as well as the monitoring and compliance guidance provided by California and Massachusetts in developing their perchlorate MCLs. Also, Metropolitan expressed its concern that the USEPA does not have an up-to-date accounting of perchlorate contamination and that the USEPA excluded perchlorate data from California and Massachusetts. As it has in the past, Metropolitan continued to urge the USEPA to establish a drinking water regulation for perchlorate that is protective of human health and prevents any adverse impact to the Colorado River and the millions of users that rely upon it as a source of drinking water supply. Lastly, Metropolitan asked the USEPA not to withdraw its 2011 determination to regulate perchlorate in drinking water; otherwise, drinking water utilities in Nevada and Arizona which rely on Colorado River water could then have higher levels of perchlorate in their source water, and California drinking water utilities, including some of Metropolitan's member agencies, would be challenged to comply with California's MCL for perchlorate of 6 µg/L if remediation efforts in the Henderson area were slowed down in the absence of a federal regulation. On June 18, 2020, the USEPA withdrew its 2011 determination to regulate perchlorate under the SDWA and issued a new determination that perchlorate does not meet the statutory criteria for regulation. Whether the USEPA should issue a national drinking water standard for perchlorate is the subject of ongoing litigation by the Natural Resources Defense Council, Inc. California is also reviewing its MCL for perchlorate in light of a revised Public Health Goal ("PHG") of 1 µg/L adopted in February 2015. PHGs are established by the California Office of Environmental Health Hazard Assessment ("OEHHA") and used as the basis for the development of a State regulation setting an MCL. The SWRCB is required to set an MCL for a chemical as close to the PHG as is technologically and economically feasible, placing primary emphasis on the protection of public health. As part of this process, on March 6, 2020, the SWRCB proposed lowering the detection limit for purposes of reporting ("DLR") for perchlorate from 4 µg/L to 2 µg/L. Data collected from monitoring using the lower DLR will allow the SWRCB to evaluate the technological and economic feasibility of water treatment to reduce perchlorate levels to concentrations less than the current DLR. On April 30, 2020, Metropolitan submitted a comment letter to the SWRCB supporting the lower perchlorate DLR which is consistent with laboratory capabilities and will allow for a more accurate and complete assessment of perchlorate occurrence across the State. In July 2020, due to improved analytical methods, and in order to evaluate a lower MCL, DDW modified its proposal to lowering the DLR for perchlorate initially to 2 µg/L, and subsequently to the PHG of 1 µg/L in a second phase effective January 1, 2024. On October 6, 2020, the SWRCB approved the modified proposal. Metropolitan will continue to participate in federal and state rulemaking proceedings.

Metropolitan is monitoring and commenting on the development of legislation, laws, and regulations regarding per- and poly-fluoroalkyl substances ("PFAS"). PFAS are substances widely used in consumer and industrial products such as fabrics, carpets, firefighting foams, food packaging and nonstick cookware and are known for their nonstick, waterproof, and heat and stain resistant properties. Perfluorooctane sulfonate ("PFOS") and perfluorooctanoic acid ("PFOA") are the two most common synthetic organic chemicals in the group of compounds referred to as PFAS. In August 2019, DDW lowered the notification levels for PFOS from 13 ppt to 6.5 ppt and for PFOA from 14 ppt to 5.1 ppt. Notification levels are non-regulatory, precautionary health-based measures for concentrations of chemicals in drinking water that warrant notification and further monitoring and assessment. If a chemical concentration is greater than its notification level in drinking water that is provided to consumers, DDW recommends that the utility inform its customers and consumers about the presence of the chemical, and about health concerns associated with exposure to it. In February 2020, DDW lowered response levels for PFOA and PFOS from 70 ppt for individual or combined concentrations to 10 ppt for PFOA and 40 ppt for PFOS. A response level is set higher than a notification level and represents a chemical concentration level at which DDW recommends a water system consider taking a water source out of service or providing treatment if that option is available to them. Legislation which took effect on January 1, 2020 (California Assembly Bill 756), requires that water systems that receive a monitoring order from the SWRCB and detect levels of PFAS that exceed their respective response level must either take a drinking water source out of use or provide specified public notification if they continue to supply water above the response level. PFOA and PFOS have not been detected in Metropolitan's imported or treated water supplies. In 2019, Metropolitan detected in its supplies low levels of perfluorohexanoic acid (PFHxA), which is not acutely toxic or carcinogenic and is not currently regulated

in California or at the federal level. No other PFAS have been detected in Metropolitan imported or treated supplies. However, PFOA and PFOS have been detected in groundwater wells in the region, including those of certain member agencies. Metropolitan may experience increased demands for its imported water to help offset the potential loss of any affected local supplies. On January 19, 2021, the USEPA announced its final determination to regulate PFOA and PFOS in drinking water, as well as that it is considering whether to designate PFOA and PFOS as hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and/or hazardous waste under the Resource Conservation and Recovery Act. The same day, the USEPA announced its proposed revisions to the Unregulated Contaminant Monitoring Rule (UCMR 5) for public water systems which includes monitoring for 29 PFAS in drinking water. The proposal would require pre-sampling preparations in 2022, sample collection from 2023-2025, and reporting of final results through 2026. Comments on the USEPA's proposal will be due within 60 days after it is published in the Federal Register. The USEPA also released its final toxicity assessment for perfluorobutane sulfonic acid ("PFBS"), a replacement for PFOS. The toxicity assessment will be a part of the USEPA's risk assessment decision-making process. OEHHA recently recommended a notification level for PFBS at 0.5 ppb (or 500 ppt). In addition, the SWRCB has initiated a process to establish regulatory standards for PFOA and PFOS by requesting the OEHHA to establish PHGs for these two chemicals. Metropolitan will continue to monitor and participate in federal and state rulemaking proceedings.

Metropolitan is currently operating in compliance with all state and federal drinking water regulations and permit requirements.

#### **Seismic Considerations and Emergency Response Measures**

*General.* Although the magnitude of damages resulting from a significant seismic event are impossible to predict, Metropolitan's water conveyance and distribution facilities are designed either to withstand a maximum probable seismic event or to minimize the potential repair time in the event of damage. The five pumping plants on the CRA have been buttressed to better withstand seismic events. Other components of the CRA are monitored for any necessary rehabilitation and repair. Metropolitan personnel and independent consultants periodically reevaluate the internal water distribution system's vulnerability to earthquakes. As facilities are evaluated and identified for seismic retrofitting, they are prioritized, with those facilities necessary for delivering or treating water scheduled for upgrade before non-critical facilities. However, major portions of the California Aqueduct and the CRA are located near major earthquake faults, including the San Andreas Fault. A significant earthquake could damage structures and interrupt the supply of water, adversely affecting Metropolitan's revenues and its ability to pay its obligations. Therefore, emergency supplies are stored for use throughout Metropolitan's service area, and a six-month reserve supply of water normally held in local storage (including emergency storage in Diamond Valley Lake) provides reasonable assurance of continuing water supplies during and after such events (assuming there has been no impairment of Metropolitan's internal distribution network).

Metropolitan has an ongoing surveillance program that monitors the safety and structural performance of its 20 dams and reservoirs permitted by DWR's Division of Safety of Dams. Operating personnel perform regular inspections that include monitoring and analyzing seepage flows and pressures. Engineers responsible for dam safety review the inspection data and monitor the horizontal and vertical movements for each dam. Major on-site inspections are performed at least twice each year. Instruments that transmit seismic acceleration time histories for analysis any time a dam is subjected to strong motion during an earthquake are located at a number of selected sites.

Metropolitan has developed an emergency plan that calls for specific levels of response appropriate to an earthquake's magnitude and location. Included in this plan are various communication tools, as well as a structured plan of management that varies with the severity of the event. Pre-designated personnel follow detailed steps for field facility inspection and distribution system patrol. Approximately 40 employees are designated to respond immediately under certain identifiable seismic events. An emergency operations center is maintained at the OCC. The OCC, which is specifically designed to be earthquake resistant, contains

communication equipment, including a radio transmitter, microwave capability and a response line linking Metropolitan with its member agencies, DWR, other utilities and the State's Office of Emergency Services.

Metropolitan, in conjunction with DWR and LADWP, has formed the Seismic Resilience Water Supply Task Force for the purpose of collaborating on studies and mitigation measures aimed at improving the reliability of imported water supplies to Southern California. Specific task force goals included revisiting historical assumptions regarding potential aqueduct outages after a seismic event; establishing a common understanding about individual agency aqueduct vulnerability assessments, projected damage scenarios, and planning assumptions; and discussing ideas for improving the resiliency of Southern California's imported water supplies through multi-agency cooperation. The task force has established multi-year goals and will continue to meet on these issues and develop firm plans for mitigating seismic vulnerabilities.

Metropolitan's resiliency efforts include manufacturing, pipe fabrication and coating capabilities in La Verne, California. Over \$47 million has been invested to enhance and expand Metropolitan's capacity to provide fabrication, manufacturing, and coating services for rehabilitation work, maintenance activities, and capital projects. Upon request, Metropolitan is also able to provide manufacturing, coating and fabrication services through reimbursable agreements to member agencies, and DWR. These agreements have enhanced timely and cost-effective emergency response capabilities. Materials to fabricate pipe and other appurtenant fittings are kept on site. In the event of earthquake damage, Metropolitan has taken measures to provide the design and fabrication capacity to fabricate pipe and manufacture fittings. Metropolitan is also staffed to perform emergency repairs and has pre-qualified contractors for emergency repair needs at various locations throughout Metropolitan's service area.

***State Water Project Facilities-California Aqueduct.*** The California Aqueduct crosses all major faults either by canal at ground level or by pipeline at very shallow depths to ease repair in case of damage from movement along a fault. State Water Project facilities are designed to withstand major earthquakes along a local fault or the San Andreas Fault without major damage. Dams, for example, are designed to accommodate movement along their foundations and to resist earthquake forces on their embankments. Earthquake loads have been taken into consideration in the design of project structures such as pumping and power plants. The location of check structures on the canal allows for hydraulic isolation of the fault-crossing repair. While the dams, canals, pump stations and other constructed State Water Project facilities have been designed to withstand earthquake forces, the critical supply of water from Northern California must traverse the Bay-Delta through hundreds of miles of varying levels of engineered levees that are susceptible to major failures due to flood and seismic risk. In the event of a failure of the Bay-Delta levees, the quality of the Bay-Delta's water could be severely compromised as saltwater comes in from the San Francisco Bay. Metropolitan's supply of State Water Project water would be adversely impacted if pumps that move Bay-Delta water southward to the Central Valley and Southern California are shut down to contain the saltwater intrusion. Metropolitan estimates that stored water supplies, CRA supplies and local water resources that would be available in case of a levee breach or other interruption in State Water Project supplies would meet demands in Metropolitan's service area for approximately twelve months. See "METROPOLITAN'S WATER SUPPLY—Storage Capacity and Water in Storage" in this Appendix A.

Metropolitan, in cooperation with the other State Water Contractors, developed recommendations to DWR for emergency preparedness measures to maintain continuity in export water supplies and water quality during seismic and other emergency events. These measures include improvements to emergency construction materials stockpiles in the Bay-Delta, improved emergency contracting capabilities, strategic levee improvements and other structural measures of importance to Bay-Delta water export interests, including development of an emergency freshwater pathway to export facilities in a severe earthquake. DWR utilized \$12 million in fiscal year 2007-08 for initial stockpiling of rock for emergency levee repairs and development of Bay-Delta land and marine loading facilities and has identified future funding for expanded stockpiles.

**State Water Project-Perris Dam.** DWR's Perris Dam forms Lake Perris, the southernmost terminal reservoir for the State Water Project in Riverside County, with maximum capacity of approximately 130,000 acre-feet of water. Metropolitan uses water from Lake Perris for delivery to customers in Riverside and San Diego counties. Deliveries from the lake are used as a redundant source for the Mills Water Treatment Plant, drought supply from a flexible storage account, and for consumptive use by Metropolitan's customers. After seismic studies concluded in 2005 that DWR's Perris Dam facility could experience damage from moderate earthquakes along the San Jacinto or San Andreas faults due to potential weaknesses in the dam's foundation, DWR lowered the water level in the reservoir by about 25 feet and reduced the amount of water stored in the reservoir to about 75,000 acre-feet as DWR evaluated alternatives for repair of the dam. Following completion of environmental review and design work in 2011, DWR undertook a major retrofit to Perris Dam to improve its seismic stability and designed to restore the reservoir to its historical level. Repair work was completed in April 2018. Upgrades included strengthening the foundation and adding 1.4 million cubic yards of embankment at the 130-foot tall, earthen dam. DWR's current estimate for repair costs, inclusive of environmental and right-of-way work is \$139.5 million. Following completion of the work, DWR began to refill Lake Perris in March 2018 to allow the dam to be tested and certified to again store 130,000 acre-feet of water. Under the original allocation of joint costs for this facility, the State would have paid approximately six percent of the repair costs. However, because of the recreational benefit this facility provides to the public, the Legislature has approved a recommendation from DWR that the State assume 32.2 percent of these repair costs. The remaining 67.8 percent of repairs costs are being paid for by the three agencies that use the water stored in Lake Perris: Metropolitan (42.9 percent), DWA (3.0 percent) and CVWD (21.9 percent). DWR recovers the cost of repairs through its annual statement of charges sent to each agency. See "METROPOLITAN EXPENSES—State Water Contract Obligations" in this Appendix A.

The dam remediation is one of three major projects to improve seismic stability and enhance public safety in the Perris Dam Remediation Program. The other two projects include the Outlet Tower Improvements project and the Emergency Release Facility ("ERF") project. Construction on the Outlet Tower Improvements project began October 2, 2019. Work on the outlet tower bridge, with modifications to bridge support, bridge seat, end diaphragm, and installation of stiffener plates, is planned for completion in early 2022. The final EIR for the ERF project was certified and approved by DWR in May 2018. Since then, modifications to the ERF project have been identified and the Addendum No. 1 to the EIR was published in September 2020. The ERF project includes improvements downstream of the reservoir that would direct the flow of water in an emergency requiring the dewatering of the reservoir. Flows would be directed through a series of berms and lined and unlined channels that would ultimately terminate at the Riverside County Flood Control and Water Conservation District's Perris Valley Channel. The ERF project is planned to be completed in 2023. The Outlet Tower Improvements and ERF projects enhance the safety of the dam for other risks in addition to that posed by earthquakes. It is anticipated that costs will be shared in the same manner as for the Lake Perris dam remediation project. DWR's current estimate for repair costs (including the share of costs to be assumed by the State) is \$27.1 million for the Outlet Tower Improvements project and \$62.3 million for the ERF project (of which Metropolitan's anticipated share would be 42.9 percent).

### **Security Measures**

Metropolitan conducts ground and air patrols of the CRA and monitoring and testing at all treatment plants and along the CRA. Similarly, DWR has in place security measures reasonably designed to protect critical facilities of the State Water Project, including both ground and air patrols of the State Water Project.

Although Metropolitan has constructed redundant systems and other safeguards to ensure its ability to continually deliver water to its customers, and DWR has made similar efforts, a terrorist attack or other security breach against water facilities could materially impair Metropolitan's ability to deliver water to its customers, its operations, and revenues and its ability to pay its obligations.

## CAPITAL INVESTMENT PLAN

### General Description

Metropolitan's current Capital Investment Plan (the "Capital Investment Plan" or "CIP") involves infrastructure and system reliability projects, either as upgrades to existing capital assets or replacements and refurbishments of existing facilities, to ensure reliability as well as enhance operational efficiency and flexibility, and comply with water quality regulations. Metropolitan's CIP is regularly reviewed and updated. Metropolitan's biennial budget process includes a review of the projected long-term capital needs and the development of a capital expenditure forecast for the ten-year financial forecast, as well as the identification of the capital priorities of Metropolitan over the biennial budget term. While the award of major contracts and professional services agreements are subject to approval by Metropolitan's Board, in October 2018 the Board amended the Administrative Code to update the process for appropriating funds and authorizing work to proceed for capital projects. Under the revised process, following the adoption of the biennial budget, a Board action is presented to (1) appropriate the total amount of approved biennial CIP expenditures and (2) authorize the General Manager to initiate and proceed with all work on projects that have been included in the CIP for such biennial period. The new appropriation process has resulted in faster implementation of capital projects. The amount and timing of borrowings to fund capital expenditures will depend upon, among other factors, status of construction activity and water demands within Metropolitan's service area. From time to time, projects that have been undertaken are delayed, redesigned or deferred by Metropolitan for various reasons, and no assurance can be given that a project in the CIP will be completed in accordance with its original schedule or that any project will be completed as currently planned. In addition, from time to time, when circumstances warrant, Metropolitan's Board may approve capital expenditures other than or in addition to those contemplated by the CIP at the time of the then current biennial budget.

### Projection of Capital Investment Plan Expenditures

The table below sets forth the projected CIP expenditures by project type for the fiscal years ending June 30, 2021 through 2025, as currently projected for fiscal years 2020-21 and 2021-22, and as reflected in the biennial budget for fiscal years 2020-21 and 2021-22 for fiscal years 2022-2023 through 2024-25. The projection for the current biennium, which covers fiscal years 2020-21 and 2021-22, is updated every month to reflect the most current changes to planned expenditures. The biennial budget is updated every two years as a result of the periodic review and adoption of the capital budget by Metropolitan's Board. See "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A.

#### CAPITAL INVESTMENT PLAN PROJECTION OF EXPENDITURES<sup>(1)</sup> (Fiscal Years Ended June 30 - Dollars in Thousands)

	2021	2022	2023	2024	2025	Total
Infrastructure R&R	\$135,500	\$ 94,000	\$124,500	\$147,700	\$147,900	\$ 649,600
Infrastructure Upgrade	138,400	76,200	127,300	127,200	135,700	604,800
Regulatory Compliance	1,200	500	1,000	500	400	3,600
Stewardship	4,900	3,600	7,600	10,000	8,000	34,100
Supply Reliability	300	0	200	100	3,400	4,000
System Flexibility	16,300	18,900	34,700	0	0	69,900
Water Quality	8,000	2,200	4,700	14,500	4,600	34,000
<b>Total</b>	<b>\$304,600<sup>(2)</sup></b>	<b>\$195,400<sup>(2)</sup></b>	<b>\$300,000</b>	<b>\$300,000</b>	<b>\$300,000</b>	<b>\$1,400,000</b>

Source: Metropolitan.

<sup>(1)</sup> Fiscal years 2020-21 and 2021-22 are based on current projections. Fiscal years 2022-23 through 2024-25 are based on the ten-year financial forecast provided in the biennial budget for fiscal years 2020-21 and 2021-22.

<sup>(2)</sup> Planned capital expenditures of \$250 million per year were appropriated for fiscal years 2020-21 and 2021-22. Projected capital expenditures for fiscal years 2020-21 and 2021-22 in the table above reflect current projections as to the timing of expenditure of the \$500 million of appropriated funds.



In developing the CIP, projects are reviewed, scored and prioritized towards the objectives of ensuring the sustainable delivery of reliable, high-quality water, while meeting all regulatory requirements and maintaining affordability. Additional capital costs may arise in the future as a result of, among other things, federal and State water quality regulations, project changes and mitigation measures necessary to satisfy environmental and regulatory requirements, and additional facilities' needs. See "METROPOLITAN'S WATER DELIVERY SYSTEM—Water Quality and Treatment" in this Appendix A.

Construction projects included in the CIP are subject to ordinary construction risks and delays, including but not limited to: inclement weather or natural hazards affecting work and timeliness of completion; contractor claims or nonperformance; work stoppages or slowdowns; unanticipated project site conditions encountered during construction; errors or omissions in contract documents requiring change orders; and/or higher than anticipated construction bids or costs, any of which could affect the costs and availability of, or delivery schedule for, equipment, components, materials, labor or subcontractors, and result in increased CIP costs. The construction schedules for certain Metropolitan projects were initially delayed as a result of the COVID-19 outbreak and additional delays in the future are possible. See "INTRODUCTION—COVID-19 Pandemic."

### **Capital Investment Plan Financing**

The CIP requires funding from debt financing (see "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A) as well as from pay-as-you-go funding. In connection with the biennial budget process and the development of the ten-year financial forecast provided therein, an internal funding objective is established for the funding of capital program expenditures from current revenues. An internal funding objective to fund 55 to 60 percent of capital program expenditures from current revenues was established in connection with the adoption of the biennial budget for fiscal years 2020-21 and 2021-22. This objective is updated every two years as a result of the periodic review and adoption of the capital budget by Metropolitan's Board. The remainder of capital program expenditures are expected to be funded through the issuance from time to time of water revenue bonds, which are payable from Net Operating Revenues. However, as in prior years, pay-as-you-go or debt funding may be reduced or increased by the Board during the fiscal year.

Projections for fiscal years 2020-21 through 2024-25 assume the issuance of approximately \$585 million (including Metropolitan's 2021 Series A Bonds) in additional water revenue bonds over such period to finance the CIP. These revenue bonds may be issued either as Senior Revenue Bonds under the Senior Debt Resolutions or as Subordinate Revenue Bonds under the Subordinate Debt Resolutions (each as defined under "METROPOLITAN EXPENSES—Limitations on Additional Revenue Bonds" in this Appendix A). The cost of these projected bond issues is reflected in the financial projections under "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A.

### **Major Projects of Metropolitan's Capital Investment Plan**

*Colorado River Aqueduct Facilities.* As previously noted, deliveries through the CRA began in 1941. Through annual inspections and maintenance activities, the performance and reliability of the various components of the CRA are regularly evaluated. Projects under the CRA facilities program are designed to replace or refurbish facilities and components on the CRA system in order to reliably convey water from the Colorado River to Southern California. A variety of projects have been completed over the past 10 years, including, among other things, replacement of the uninterruptible power supply system at each of the five pumping plants, replacement of high voltage circuit breakers and transformers at the five pumping plant switchyards, refurbishment of operators and power centers on the head gates downstream of the pumping plants, replacement of several miles of deteriorated concrete canal liner, new wastewater systems at the Hinds and Eagle Mountain Pumping Plants, replacement of the sand trap facilities upstream of the Hinds, Eagle Mountain, and Iron Mountain pumping plants, and replacement of the outlet gates and appurtenant electrical, mechanical, and control systems at the Copper Basin Reservoir. Projects currently underway

include radial gates replacement along the CRA, rehabilitation of the Gene Wash Reservoir discharge structure, and projects to refurbish or replace electrical and mechanical system components at each of the five pumping plants, including power cables, overhead cranes, and sump systems. Additionally, many of the mechanical and electrical components, including the nine main pumps and motors at each of the five pumping plants will be evaluated and replaced or refurbished over the next several years. The current projected cost estimate for all prior and planned refurbishment or replacement projects under the CRA facilities program is \$762.8 million. Costs through October 2020 were \$349.4 million. Budgeted aggregate capital expenditures for improvements on the CRA for fiscal years 2020-21 and 2021-22 are \$107.4 million.

***Distribution System – Prestressed Concrete Cylinder Pipe.*** Metropolitan's distribution system is comprised of approximately 830 miles of pipelines ranging in diameter from 30 inches to over 200 inches. (See "METROPOLITAN'S WATER DELIVERY SYSTEM" in this Appendix A.) 163 miles of the distribution system is made up of prestressed concrete cylinder pipe ("PCCP"). In response to PCCP failures experienced by several water agencies, Metropolitan initiated the PCCP Assessment Program in December 1996 to evaluate the condition of Metropolitan's PCCP lines and investigate inspection and refurbishment methods. As a result, Metropolitan has identified and made improvements to several sections of PCCP. The costs for these improvements through February 2020 were \$99.2 million. Rather than continue to make spot repairs to pipe segments, Metropolitan has initiated a long-term capital program to rehabilitate approximately 100 miles of PCCP in five pipelines by relining with a welded steel liner. The first two major contracts to reline approximately 6.4 miles of PCCP on the Second Lower Feeder have been completed. The third major contract to reline an additional approximately 4.5 miles of PCCP on the Second Lower Feeder was awarded in May 2019 and is estimated to be completed by the end of 2020. As a change order to the same contract, an additional approximately 2,900 feet of re-lining of PCCP on the Second Lower Feeder was completed in late 2020. Subsequent contracts are planned to be awarded annually depending on shutdown scheduling. In order to meet the critical timing of the relining projects, the steel pipe lining sections for the next contract are being purchased in advance. Costs through October 2020 for all PCCP work (including the \$99.3 million of repairs costs noted above) were \$280.1 million. The estimated cost to reline all 100 miles of PCCP is approximately \$2.2 billion and is expected to be undertaken over a period of approximately 20 years. Budgeted aggregate capital expenditures for PCCP rehabilitation for fiscal years 2020-21 and 2021-22 are \$53.9 million.

***Distribution System – Refurbishments and Improvements.*** In addition to the long-term program to rehabilitate Metropolitan's PCCP lines, several other components of the distribution system including dams and reservoirs are being refurbished and/or improved. Major projects completed to date include the \$70 million replacement of the outlet facilities at Lake Mathews, the first two phases of the Orange County Feeder and Etiwanda Pipeline relining projects for a total of \$34 million, and various other facility refurbishment and replacement projects ranging in cost from approximately \$500,000 to over \$10 million. Ongoing projects to ensure the reliability of the distribution system, primarily due to age, include multiple replacements or refurbishments of isolation and control valves and gates, lining replacement of remaining portions of the Etiwanda Pipeline and Orange County Feeder, refurbishment to pressure control and hydroelectric power facilities, system improvements to provide drought relief, replacement of finished water reservoir covers and liners, upgrading dam monitoring systems, and various other upgrades totaling approximately \$450.1 million through October 2020. The current projected cost estimate for the prior and planned refurbishment or replacement projects, other than the PCCP relining, is \$1.4 billion. For fiscal years 2020-21 and 2021-22, budgeted aggregate capital expenditures for refurbishing and improvements on the distribution system, other than PCCP rehabilitation, are \$123.7 million.

***System Reliability.*** System Reliability projects are implemented at facilities throughout Metropolitan's system to utilize new processes or technologies, to improve safety, or to increase overall reliability. Significant projects in this category include seismic strengthening of Metropolitan's headquarters building, construction or improvement of operations support facilities such as the La Verne machine and fabrication shops, security system enhancements, and information technology infrastructure projects. The total estimated cost for all prior and projected system reliability improvements under this program is

approximately \$544.8 million, with \$237.8 million spent through October 2020. Budgeted aggregate capital expenditures for improvements on system reliability projects for fiscal years 2020-21 and 2021-22 are \$97.4 million.

**F.E. Weymouth Treatment Plant Improvements.** The Weymouth Treatment Plant, built in 1938, is Metropolitan's oldest water treatment facility. It has been subsequently expanded several times since its original construction. Metropolitan has completed several upgrades and refurbishment/replacement projects to maintain the plant's reliability and improve its efficiency. These include power systems upgrades, residual solids dewatering facility, refurbishment/replacement of the mechanical equipment in two of the eight flocculation and settling basins, a new plant maintenance facility, new chemical feed systems and storage tanks, replacement of the plant domestic/fire water system, seismic upgrades to the plant inlet structure and filter buildings, upgrades to the plants filters, and a new chlorine handling and containment facility. Significant projects over the next several years include refurbishment of four of the plant's settling basins and strengthening inlet channels to the basins, seismic retrofits to the administration building, and replacement of the valves used to control filter operation. The cost estimate for all prior and projected improvements at the Weymouth plant, not including the ozone facilities, is approximately \$453.8 million, with \$300.8 million spent through October 2020. Budgeted aggregate capital expenditures for improvements at the Weymouth plant for fiscal years 2020-21 and 2021-22 are \$18.7 million.

**Robert B. Diemer Treatment Plant Improvements.** The Diemer Treatment Plant, built in 1963 and subsequently expanded in 1968, is Metropolitan's second oldest water treatment facility. Several upgrades and refurbishment/replacement projects have been completed at the Diemer plant, including power system upgrades, a new residual solids dewatering facility, new vehicle and plant maintenance facilities, new chemical feed systems and storage tanks, a new chlorine handling and containment facility, construction of a roller-compacted concrete slope stabilization system, a new secondary access road, and upgrades to half of the plant's settling basins and filter valves. Significant projects over the next several years include the completion of refurbishment of the plant's settling basins and replacement of the valves used to control filter operation, and seismic retrofits to the filter buildings. The current cost estimate for all prior and projected improvements at the Diemer plant, not including the ozone facilities, is approximately \$432.1 million, with \$315.2 million spent through October 2020. Budgeted aggregate capital expenditures for improvements at the Diemer plant for fiscal years 2020-21 and 2021-22 are \$22.9 million.

## METROPOLITAN REVENUES

### General

Until water deliveries began in 1941, Metropolitan's activities were, by necessity, supported entirely through the collection of *ad valorem* property taxes. Since the mid-1980s, water revenues, which includes revenues from water sales, wheeling and exchanges, have provided approximately 80 percent of total revenues annually. In that time period, *ad valorem* property taxes have accounted for about 10 percent of total revenues, and in fiscal year 2019-20, *ad valorem* property taxes accounted for approximately 10 percent of total revenues. See "--Revenue Allocation Policy and Tax Revenues." The remaining revenues have been derived principally from the sale of hydroelectric power, interest on investments and additional revenue sources (water standby charges and availability of service charges) beginning in 1992. *Ad valorem* taxes do not constitute a part of Operating Revenues and are not available to make payments with respect to the water revenue bonds issued by Metropolitan.

The basic rate for untreated water service for domestic and municipal uses is \$777 per acre-foot at the Tier 1 level, which became effective January 1, 2021. See "--Rate Structure" and "--Water Rates." The *ad valorem* tax rate for Metropolitan purposes has gradually been reduced from a peak equivalent rate of 0.1250 percent of full assessed valuation in fiscal year 1945-46 to 0.0035 percent of full assessed valuation for fiscal year 2020-21. The rates charged by Metropolitan represent the cost of Metropolitan's wholesale

water service to its member agencies, and not the cost of water to the ultimate consumer. Metropolitan does not exercise control over the rates charged by its member agencies or their subagencies to their customers.

### Summary of Revenues by Source

The following table sets forth Metropolitan's sources of revenues for the five fiscal years ended June 30, 2020, on a modified accrual basis. All information is unaudited. Audited financial statements for the fiscal years ended June 30, 2020 and June 30, 2019 are included in APPENDIX B—"THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA INDEPENDENT AUDITORS' REPORT AND BASIC FINANCIAL STATEMENTS FOR FISCAL YEARS ENDED JUNE 30, 2020 AND JUNE 30, 2019 AND BASIC FINANCIAL STATEMENTS FOR THE THREE MONTHS ENDED SEPTEMBER 30, 2020 AND 2019 (UNAUDITED)."

#### SUMMARY OF REVENUES BY SOURCE<sup>(1)</sup> Fiscal Years Ended June 30 (Dollars in Millions)

	2016	2017	2018	2019	2020
Water Revenues <sup>(2)</sup>	\$1,166	\$1,151	\$1,285	\$1,149	\$1,188
Taxes, Net <sup>(3)</sup>	108	116	131	145	147
Additional Revenue Sources <sup>(4)</sup>	200	184	172	170	165
Interest on Investments	18	4	8	34	20
Hydroelectric Power Sales	7	21	24	18	16
Other Revenues <sup>(5)</sup>	245	51	28	22	14
Total Revenues	<u>\$1,744</u>	<u>\$1,527</u>	<u>\$1,648</u>	<u>\$1,538</u>	<u>\$1,550</u>

Source: Metropolitan.

(1) Does not include any proceeds from the sale of bonded indebtedness.

(2) Water revenues include revenues from water sales, exchanges, and wheeling.

(3) *Ad valorem* taxes levied by Metropolitan are applied solely to the payment of outstanding general obligation bonds of Metropolitan and to State Water Contract obligations.

(4) Includes revenues derived from water standby charges, readiness-to-serve, and capacity charges.

(5) Includes miscellaneous revenues and Build America Bonds (BABs) subsidy payment of \$12.3 million, \$9.8 million, \$15.0 million, \$12.5 million, and \$2.9 in fiscal years 2015-16 through 2019-20, respectively. Fiscal years 2015-16, 2016-17, and 2017-18, include \$222 million, \$33 million, and \$1 million, respectively, of water conservation and supply program expenses, funded from a like amount of funds transferred from the Water Management Fund.

### Revenue Allocation Policy and Tax Revenues

The Board determines the water revenue requirement for each fiscal year after first projecting the *ad valorem* tax levy for that year. The tax levy for any year is subject to limits imposed by the State Constitution, the Act and Board policy and to the requirement under the State Water Contract that in the event that Metropolitan fails or is unable to raise sufficient funds by other means, Metropolitan must levy upon all property within its boundaries not exempt from taxation a tax or assessment sufficient to provide for all payments under the State Water Contract. See "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A. Beginning with fiscal year 1990-91, the Act limits Metropolitan's tax levy to the amount needed to pay debt service on Metropolitan's general obligation bonds and to satisfy a portion of Metropolitan's State Water Contract obligation. However, Metropolitan has authority to impose a greater tax levy if, following a public hearing, the Board finds that such revenue is essential to Metropolitan's fiscal integrity. For each fiscal year since 2013-14, the Board has exercised that authority and voted to suspend the tax limit clause in the Act, maintaining the fiscal year 2012-13 *ad valorem* tax rate to pay for a greater portion of Metropolitan's State Water Contract obligations. Any deficiency between tax levy receipts and Metropolitan's State Water Contract obligations is expected to be paid from Operating Revenues, as defined

in the Senior Debt Resolutions (defined in this Appendix A under “METROPOLITAN EXPENSES—Limitations on Additional Revenue Bonds”).

The COVID-19 pandemic has negatively affected economic activity throughout the U.S., including within the Southern California region. These negative impacts may reduce or otherwise negatively affect future property tax values within Metropolitan’s service area and/or Metropolitan’s tax levy receipts. The assumptions underlying Metropolitan’s financial projections for fiscal years 2020-21 through 2024-25 include modest annual increases in assessed valuation over the five-year projection period that are significantly below the average annual assessed valuation increases actually observed, and property tax delinquency rates that are significantly in excess of the property tax delinquency rate actually experienced, over the five fiscal years 2014-15 through 2018-19, which is expected to help abate the financial effects of such COVID-19 impacts if they occur. See “INTRODUCTION—COVID-19 Pandemic.”

### **Water Revenues**

**General; Authority.** Water rates are established by the Board and are not subject to regulation or approval by the California Public Utilities Commission or by any other local, State or federal agency. In accordance with the Act, water rates must be uniform for like classes of service. Metropolitan, a wholesaler, provides two types of services: full-service water service (treated or untreated) and wheeling service. See “—Classes of Water Service.”

No member agency of Metropolitan is obligated to purchase water from Metropolitan. However, 21 of Metropolitan’s 26-member agencies have entered into 10-year voluntary water supply purchase orders (“Purchase Orders”) effective through December 31, 2024. See “—Member Agency Purchase Orders.” Consumer demand and locally supplied water vary from year to year, resulting in variability in water revenues. See “REGIONAL WATER RESOURCES” in this Appendix A. Metropolitan uses its financial reserves and budgetary tools to manage the financial impact of the variability in revenues due to fluctuations in annual water transactions. See “MANAGEMENT’S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES” in this Appendix A.

**Payment Procedure.** Water is delivered to the member agencies on demand and is metered at the point of delivery. Member agencies are billed monthly and a late charge of one percent of the delinquent payment is assessed for a payment that is delinquent for no more than five business days. A late charge of two percent of the amount of the delinquent payment is charged for a payment that is delinquent for more than five business days for each month or portion of a month that the payment remains delinquent. Metropolitan has the authority to suspend service to any member agency delinquent for more than 30 days. Delinquencies have been rare; in such instances late charges have been collected. No service has been suspended because of delinquencies.

**Water Revenues.** The following table sets forth water transactions (which includes water sales, exchanges, and wheeling) in acre-feet and water revenues (which includes revenues from water sales, exchanges, and wheeling) for the five fiscal years ended June 30, 2020, on a modified accrual basis. As reflected in the table below, water revenues for the fiscal year ended June 30, 2020 aggregated \$1,188.0 million, of which \$1,047.9 million was generated from water sales and \$140.1 million was generated from exchanges and wheeling. Water revenues of Metropolitan for the fiscal years ended June 30, 2020 and June 30, 2019, on an accrual basis, are shown in Metropolitan’s audited financial statements included in Appendix B.

**SUMMARY OF WATER TRANSACTIONS AND REVENUES**  
**Fiscal Years Ended June 30**

Year	Water Transactions in Acre-Feet <sup>(1)</sup>	Water Revenues <sup>(2)</sup> (in millions)	Dollars Per Acre-Foot	Average Dollars Per 1,000 Gallons
2016	1,623,052	\$1,166.0	\$718	\$2.20
2017	1,540,915	1,150.5	747	2.29
2018	1,610,969	1,285.2	798	2.45
2019	1,418,324	1,148.7	810	2.49
2020	1,419,156	1,188.0	837	2.57

Source: Metropolitan.

<sup>(1)</sup> Water Transactions include water sales, exchanges, and wheeling with member agencies and third parties.

<sup>(2)</sup> Water Revenues include revenues from water sales, exchanges, and wheeling. Water Revenues from wheeling and exchange transactions were \$84.3 million, \$87.4 million, \$96.1 million, \$102.2 million and \$140.1 million in the fiscal years ended June 30, 2016 through 2020, respectively.

**Principal Customers**

Total water transactions accrued for the fiscal year ended June 30, 2020, were 1.42 million acre-feet, generating \$1.19 billion in water revenues for such period. Metropolitan's ten largest water customers for the year ended June 30, 2020 are shown in the following table, on an accrual basis. The SDCWA has filed litigation challenging Metropolitan's rates. See "--Litigation Challenging Rate Structure."

**TEN LARGEST WATER CUSTOMERS**  
**Year Ended June 30, 2020**  
**Accrual Basis**

Agency	Water Revenues <sup>(1)</sup> (in Millions)	Percent of Total	Water Transactions in Acre-Feet <sup>(2)</sup>	Percent of Total
San Diego CWA	\$ 187.3	15.8%	324,660	22.9%
MWD of Orange County	152.6	12.8	157,346	11.1
City of Los Angeles	129.0	10.9	148,022	10.4
West Basin MWD	119.7	10.1	112,636	7.9
Calleguas MWD	99.6	8.4	93,802	6.6
Eastern MWD	93.9	7.9	105,215	7.4
Three Valleys MWD	65.4	5.5	73,239	5.2
Western MWD of Riverside County	59.8	5.0	64,811	4.6
Inland Empire Utilities Agency	47.0	4.0	64,538	4.5
City of Long Beach	30.2	2.5	28,332	2.0
<b>Total</b>	<b>\$ 984.5</b>	<b>82.9%</b>	<b>1,172,602</b>	<b>82.6%</b>
<b>Total Water Revenues<sup>(1)</sup></b>	<b>\$1,188.0</b>	<b>Total Acre-Fcet<sup>(2)</sup></b>	<b>1,419,156</b>	

Source: Metropolitan.

<sup>(1)</sup> Water Revenues include revenues from water sales, exchanges, and wheeling.

<sup>(2)</sup> Water Transactions include water sales, exchanges, and wheeling with member agencies and third parties.

**Rate Structure**

The following rates and charges are elements of Metropolitan's unbundled rate structure:

**Tier 1 and Tier 2 Water Supply Rates.** The rate structure recovers supply costs through a two-tiered price structure. The Tier 1 Supply Rate supports a regional approach through the uniform, postage stamp



rate. The Tier 1 Supply Rate is calculated as the amount of the total supply revenue requirement that is not covered by the Tier 2 Supply Rate divided by the estimated amount of Tier 1 water sales. The Tier 2 Supply Rate is a volumetric rate that reflects Metropolitan's cost of purchasing water transfers north of the Delta. The Tier 2 Supply Rate encourages the member agencies and their customers to maintain existing local supplies and develop cost-effective local supply resources and conservation. Member agencies are charged the Tier 1 or Tier 2 Water Supply Rate for water purchases, as described under "Member Agency Purchase Orders" below.

**System Access Rate.** The System Access Rate recovers the cost of the conveyance and distribution system that is used on an average annual basis through a uniform, volumetric rate. The System Access Rate is charged for each acre-foot of water transported by Metropolitan, regardless of the ownership of the water being transported. All users (including member agencies and third-party wheelers) using Metropolitan's water system to transport water pay the same System Access Rate for the use of the system conveyance and distribution capacity to meet average annual demands.

**Water Stewardship Rate.** The Water Stewardship Rate was designed to provide a dedicated source of funding for conservation and local resources development through a uniform, volumetric rate. The Water Stewardship Rate was charged on each acre-foot of water delivered by Metropolitan through December 31, 2020, except SDCWA Exchange Agreement deliveries as explained below, and is allocated to Metropolitan's transportation rates. All users (including member agencies and third-party wheelers) benefit from avoided system infrastructure costs through conservation and local resources development, and from the system capacity made available by investments in demand management programs like Metropolitan's Conservation Credits Program and Local Resources Program. Therefore, all users paid the Water Stewardship Rate, except on water delivered to SDCWA pursuant to the Exchange Agreement (see "METROPOLITAN REVENUES—Water Rates" and "Litigation Challenging Rate Structure" in this Appendix A) in calendar years 2018, 2019, and 2020. The Water Stewardship Rate was not incorporated into Metropolitan's rates and charges for calendar years 2021 and 2022 and therefore has not been collected on water transactions after December 31, 2020. See also "CONSERVATION AND WATER SHORTAGE MEASURES—General."

In *San Diego County Water Authority v. Metropolitan Water District of Southern California, et al.* (see "Litigation Challenging Rate Structure" below), the Court of Appeal held that the administrative record before it for the rates in calendar years 2011 through 2014 did not support Metropolitan's Water Stewardship Rate allocation to transportation rates, but the court did not address the allocation in subsequent years based on a different record. On April 10, 2018, the Board suspended the billing and collection of the Water Stewardship Rate on Exchange Agreement deliveries to SDCWA in calendar years 2018, 2019, and 2020, pending Metropolitan's completion of a cost allocation study of its demand management costs recovered through the Water Stewardship Rate. For calendar year 2018, the suspension was retroactive to January 1, 2018. The total effect of the suspension, taking into consideration the lower revenues over the three calendar years, is estimated to be up to approximately \$46 million.

Having completed a demand management cost allocation process, on December 10, 2019, Metropolitan's Board directed staff to incorporate the use of the 2019-20 fiscal year-end balance of the Water Stewardship Fund to fund demand management costs in the proposed biennial budget for fiscal years 2020-21 and 2021-22 and to not incorporate the Water Stewardship Rate (or any other rates or charges to recover demand management costs), with the proposed rates and charges for calendar years 2021 and 2022, to allow the Board to consider demand management funding in relation to the 2020 Integrated Resources Plan update and to undergo a rate structure refinement process. The balance of the Water Stewardship Fund as of June 30, 2020 was \$133 million, which based on the biennial budget for fiscal years 2020-21 and 2021-22, is expected to be sufficient to fund the demand management costs during the biennial budget period.

**System Power Rate.** The System Power Rate recovers the cost of energy required to pump water to Southern California through the State Water Project and CRA. The cost of power is recovered through a

uniform, volumetric rate. The System Power Rate is applied to all deliveries of Metropolitan water to member agencies. Wheeling parties pay for actual cost (not system average) of power needed to move the water. Member agencies engaging in wheeling transactions of up to one year pay the wheeling rate (consisting of the actual cost of power, the System Access Rate, the Water Stewardship Rate, and an administrative fee). Other wheeling transactions are pursuant to individual contracts. For example, a party wheeling water through the California Aqueduct would pay the variable power cost associated with using the State Water Project transportation facilities.

**Treatment Surcharge.** The Treatment Surcharge recovers all of the costs of providing treatment capacity and operations through a uniform, volumetric rate per acre-foot of treated water transactions. The Treatment Surcharge is charged to all treated water transactions.

The amount of each of these rates since January 1, 2016, is shown in the table entitled "SUMMARY OF WATER RATES" under "-Water Rates" below.

### **Member Agency Purchase Orders**

The current rate structure allows member agencies to choose to purchase water from Metropolitan by means of a Purchase Order. Purchase Orders are voluntary agreements that determine the amount of water that a member agency can purchase at the Tier 1 Supply Rate. Under the Purchase Orders, member agencies have the option to purchase a greater amount of water (based on past purchase levels) over the term of the Purchase Order. Such agreements allow member agencies to manage costs and provide Metropolitan with a measure of secure revenue.

In November 2014, the Metropolitan Board approved new Purchase Orders effective January 1, 2015 through December 31, 2024 (the "Purchase Order Term"). Twenty-one of Metropolitan's 26-member agencies have Purchase Orders, which commit the member agencies to purchase a minimum amount of supply from Metropolitan (the "Purchase Order Commitment").

The key terms of the Purchase Orders include:

- A ten-year term, effective January 1, 2015 through December 31, 2024;
- A higher Tier 1 limit based on the Base Period Demand, determined by the member agency's choice between (1) the Revised Base Firm Demand, which is the highest fiscal year purchases during the 13-year period of fiscal year 1989-90 through fiscal year 2001-02, or (2) the highest year purchases in the most recent 12-year period of fiscal year 2002-03 through 2013-14. The demand base is unique for each member agency, reflecting the use of Metropolitan's system water over time;
- An overall purchase commitment by the member agency based on the Demand Base period chosen, times ten to reflect the ten-year Purchase Order term. Those agencies choosing the more recent 12-year period may have a higher Tier 1 Maximum and commitment. The commitment is also unique for each member agency;
- The opportunity to reset the Base Period Demand using a five-year rolling average;
- Any obligation to pay the Tier 2 Supply Rate will be calculated over the ten-year period, consistent with the calculation of any Purchase Order commitment obligation; and
- An appeals process for agencies with unmet purchase commitments that will allow each acre-foot of unmet commitment to be reduced by the amount of production from a local resource project that commences operation on or after January 1, 2014.

Member agencies that do not have Purchase Orders in effect are subject to Tier 2 Supply Rates for amounts exceeding 60 percent of their base amount (equal to the member agency's highest fiscal year demand between 1989-90 and 2001-02) annually.

### **Other Charges**

The following paragraphs describe the additional charges for the use of Metropolitan's distribution system:

***Readiness-to-Serve Charge.*** The Readiness-to-Serve Charge ("RTS") recovers the cost of the portion of the system that is available to provide emergency service and available capacity during outages and hydrologic variability. The RTS is a fixed charge that is allocated among the member agencies based on a ten-fiscal year rolling average of firm demands. Water transfers and exchanges, except SDCWA Exchange Agreement transactions, are included for purposes of calculating the ten-fiscal year rolling average. The Standby Charge, described below, will continue to be collected at the request of a member agency and applied as a direct offset to the member agency's RTS obligation. The RTS (including RTS charge amounts collected through the Standby Charge described below) generated \$137.5 million in fiscal year 2017-18, \$136.5 million in fiscal year 2018-19, and \$134.5 million in fiscal year 2019-20. Based on the adopted rates and charges, the RTS (including RTS charge amounts expected to be collected through the Standby Charge described below) is projected to generate \$133.0 million in fiscal year 2020-21 and \$135.0 million in fiscal year 2021-22.

***Water Standby Charges.*** The Standby Charge is authorized by the State Legislature and has been levied by Metropolitan since fiscal year 1992-93. Metropolitan will continue to levy the Standby Charge only within the service areas of the member agencies that request that the Standby Charge be utilized to help fund a member agency's RTS obligation. See "-- Readiness-to-Serve Charge" above. The Standby Charge for each acre or parcel of less than an acre will vary from member agency to member agency, reflecting current rates, which have not exceeded the rates set in fiscal year 1993-94, and range from \$5 to \$15 for each acre or parcel less than an acre within Metropolitan's service area, subject to specified exempt categories. Standby charges are assessments under the terms of Proposition 218, a State constitutional ballot initiative approved by the voters on November 5, 1996, but Metropolitan's current standby charges are exempt from Proposition 218's procedural requirements. See "--California Ballot Initiatives."

Twenty-two of Metropolitan's member agencies collect their RTS charges through Standby Charges. RTS charges collected by means of such Standby Charges were \$41.6 million in fiscal year 2017-18, \$41.7 million in fiscal year 2018-19, and \$41.7 million in fiscal year 2019-20.

***Capacity Charge.*** The Capacity Charge recovers costs incurred to provide peak capacity within Metropolitan's distribution system. The Capacity Charge provides a price signal to encourage agencies to reduce peak demands on the distribution system and to shift demands that occur during the May 1 through September 30 period into the October 1 through April 30 period. This results in more efficient utilization of Metropolitan's existing infrastructure and deferring capacity expansion costs. Each member agency will pay the Capacity Charge per cfs based on a three-year trailing peak (maximum) day demand, measured in cfs. Each member agency's peak day is likely to occur on different days; therefore, this measure approximates peak week demands on Metropolitan. The Capacity Charge was \$8,800 per cfs effective as of January 1, 2020 and was \$10,700 per cfs effective as of January 1, 2021. The Capacity Charge will be \$12,200 per cfs effective as of January 1, 2022. The Capacity Charge generated \$34.6 million in fiscal year 2017-18, \$33.0 million in fiscal year 2018-19, and \$30.5 million in fiscal year 2019-20. Based on the adopted rates and charges, the Capacity Charge is projected to generate \$32.3 million in fiscal year 2020-21 and \$40.5 million in fiscal year 2021-22.

**Classes of Water Service**

Metropolitan, a wholesaler, provides two types of services: full-service water service (treated or untreated) and wheeling service. Metropolitan has one class of customers: its member agencies. The level of rate unbundling in Metropolitan’s rate structure provides transparency to show that rates and charges recover only those functions involved in the applicable service, and that no cross-subsidy of costs exists. Metropolitan’s cost of service process and resulting unbundled rate structure ensures that its wholesale customers pay for only those services they elect to receive.

The applicable rate components and fixed charges for each class of water service are shown in the chart below.

**Current Services and Rate Components**

Service	Rates & Charges That Apply						
	System Access	Water Stewardship <sup>(1)</sup>	System Power	Tier 1/ Tier 2	Readiness to Serve	Capacity Charge	Treatment Surcharge
Full Service Untreated	Yes	No	Yes	Yes	Yes	Yes	No
Full Service Treated	Yes	No	Yes	Yes	Yes	Yes	Yes
Wheeling Service <sup>(2)</sup>	Yes	No	No <sup>(3)</sup>	No	Yes	Yes	Yes <sup>(4)</sup>

<sup>(1)</sup> As described under “–Rate Structure –Water Stewardship Rate,” the Water Stewardship Rate has not been incorporated into Metropolitan’s rates and charges for calendar years 2021 and 2022 and therefore has not been collected on water transactions after December 31, 2020.

<sup>(2)</sup> Metropolitan’s rate for wheeling service applies to wheeling to member agencies in transactions of up to one year.

<sup>(3)</sup> Under Metropolitan’s rate for wheeling service, wheeling parties must pay for their own cost for power (if such power can be scheduled by Metropolitan) or pay Metropolitan for the actual cost (not system average) of power service utilized for delivery of the wheeled water. In addition, wheeling parties shall be assessed an administration fee of not less than \$5,000 per transaction.

<sup>(4)</sup> If applicable.

Metropolitan offers three programs that encourage the member agencies to increase groundwater and emergency storage and for which certain Metropolitan charges are inapplicable.

*(1) Conjunctive Use Program.* The Conjunctive Use Program is operated through individual agreements with member and retail agencies for groundwater storage within Metropolitan’s service area. Wet-year imported supplies are stored to enhance reliability during dry, drought, and emergency conditions. Metropolitan has the option to call water stored in the groundwater basins for the participating member agency pursuant to its contractual conjunctive use agreement. At the time of the call, the member agency pays the prevailing rate for that water, but the deliveries are excluded from the calculation of the Capacity Charge because Conjunctive Use Program deliveries are made at Metropolitan’s discretion. Conjunctive use programs may also contain cost-sharing terms related to operational costs. See “REGIONAL WATER RESOURCES–Local Water Supplies” in this Appendix A.

*(2) Cyclic Storage Program.* The Cyclic Storage Program refers collectively to the existing Cyclic Storage Program agreements and the Pre-Deliveries Program approved in 2019. The Program is operated through individual agreements with member agencies for groundwater or surface water storage or pre-deliveries within Metropolitan’s service area. Wet-year imported supplies are stored to enhance reliability during dry, drought, and emergency conditions. Deliveries to the cyclic storage accounts are at Metropolitan’s discretion while member agencies have discretion on whether they want to accept the water. At the time the water is delivered from the cyclic storage account, the prevailing full-service rate applies, but deliveries are excluded from the calculation of the Capacity Charge because Cyclic Storage Program deliveries are made at Metropolitan’s discretion. Cyclic agreements may also contain a credit payable to the member agencies under terms approved by the Board in April 2019. See “REGIONAL WATER RESOURCES–Local Water Supplies” in this Appendix A.

(3) *Emergency Storage Program.* The Emergency Storage Program is used for delivering water for emergency storage in surface water reservoirs and storage tanks. Emergency Storage Program purposes include initially filling a newly constructed reservoir or storage tank and replacing water used during an emergency. Because Metropolitan could interrupt delivery of this water, Emergency Storage Program Deliveries are excluded from the calculation of the RTS Charge, the Capacity Charge, and the Tier 1 maximum.

The applicable rate components and fixed charges applicable for each such program are shown in the following chart.

**Current Programs and Rate Components**

Program	Supply	Rates & Charges That Apply					
		System Access	Water Stewardship <sup>(1)</sup>	System Power	Readiness to Serve	Capacity Charge	Tier 1 Maximum
Full Service	Yes	Yes	No	Yes	Yes	Yes	Yes
Conjunctive Use	Yes	Yes	No	Yes	Yes	No	Yes
Cyclic	Yes	Yes	No	Yes	Yes	No	Yes
Emergency Storage	Yes	Yes	No	Yes	No	No	No <sup>(2)</sup>

<sup>(1)</sup> As described under “Rate Structure –Water Stewardship Rate,” the Water Stewardship Rate has not been incorporated into Metropolitan’s rates and charges for calendar years 2021 and 2022 and therefore has not been collected on water transactions after December 31, 2020.

<sup>(2)</sup> Emergency Storage Program pays the Tier 1 Supply Rate; purchases under Emergency Storage program do not count towards a member agency’s Tier 1 Maximum.

**Water Rates**

The following table sets forth Metropolitan’s water rates by category beginning January 1, 2016. See also “MANAGEMENT’S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES–Water Revenues” in this Appendix A. In addition to the base rates for untreated water sold in the different classes of service, the columns labeled “Treated” include the surcharge that Metropolitan charges for water treated at its water treatment plants. See “Rate Structure” and “Classes of Water Service” for descriptions of current rates. See also “Litigation Challenging Rate Structure” for a description of litigation challenging Metropolitan’s water rates.

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**SUMMARY OF WATER RATES  
(Dollars Per Acre-Foot)**

	SUPPLY RATE		SYSTEM ACCESS RATE	WATER STEWARDSHIP RATE <sup>(1)</sup>	SYSTEM POWER RATE	TREATMENT SURCHARGE
	Tier 1	Tier 2				
January 1, 2016	\$156	\$290	\$259	\$41	\$138	\$348
January 1, 2017	\$201	\$295	\$289	\$52	\$124	\$313
January 1, 2018	\$209	\$295	\$299	\$55	\$132	\$320
January 1, 2019	\$209	\$295	\$326	\$69	\$127	\$319
January 1, 2020	\$208	\$295	\$346	\$65	\$136	\$323
January 1, 2021*	\$243	\$285	\$373	\$--	\$161	\$327
January 1, 2022*	\$243	\$285	\$389	\$--	\$167	\$344

	FULL SERVICE TREATED <sup>(2)</sup>		FULL SERVICE UNTREATED <sup>(3)</sup>	
	Tier 1	Tier 2	Tier 1	Tier 2
January 1, 2016	\$942	\$1,076	\$594	\$728
January 1, 2017	\$979	\$1,073	\$666	\$760
January 1, 2018	\$1,015	\$1,101	\$695	\$781
January 1, 2019	\$1,050	\$1,136	\$731	\$817
January 1, 2020	\$1,078	\$1,165	\$755	\$842
January 1, 2021*	\$1,104	\$1,146	\$777	\$819
January 1, 2022*	\$1,143	\$1,185	\$799	\$841

Source: Metropolitan.

\* Rates effective January 1, 2021 and January 1, 2022 were adopted by Metropolitan's Board on April 14, 2020.

(1) As described under "Rate Structure -Water Stewardship Rate," the Water Stewardship Rate has not been incorporated into Metropolitan's rates and charges for calendar years 2021 and 2022 and therefore has not been collected on water transactions after December 31, 2020.

(2) Full service treated water rates are the sum of the applicable Supply Rate, System Access Rate, Water Stewardship Rate, System Power Rate and Treatment Surcharge.

(3) Full service untreated water rates are the sum of the applicable Supply Rate, System Access Rate, Water Stewardship Rate and System Power Rate.

**Financial Reserve Policy**

Metropolitan's reserve policy provides for a minimum reserve requirement and target amount of unrestricted reserves at June 30 of each year. The minimum reserve requirement at June 30 of each year is equal to the portion of fixed costs estimated to be recovered by water revenues for the 18 months beginning with the immediately succeeding July. Funds representing the minimum reserve requirement are held in the Revenue Remainder Fund. Any funds in excess of the minimum reserve requirement are held in the Water Rate Stabilization Fund. The target amount of unrestricted reserves is equal to the portion of the fixed costs estimated to be recovered by water revenues during the two years immediately following the 18-month period used to calculate the minimum reserve requirement. Funds in excess of the target amount are to be utilized for capital expenditures in lieu of the issuance of additional debt, or for the redemption, defeasance or purchase of outstanding bonds or commercial paper as determined by the Board. Provided that the fixed charge coverage ratio is at or above 1.2, amounts in the Water Rate Stabilization Fund may be expended for



any lawful purpose of Metropolitan, as determined by the Board. See “CAPITAL INVESTMENT PLAN–Capital Investment Plan Financing” in this Appendix A.

At June 30, 2020, unrestricted reserves, which consist of the Water Rate Stabilization Fund and the Revenue Remainder Fund, totaled \$448 million on a modified accrual basis. As of June 30, 2020, the minimum reserve requirement was \$269.5 million, and the target reserve level was \$654.4 million.

Due to SDCWA’s litigation challenging Metropolitan’s rates and pursuant to the Exchange Agreement between Metropolitan and SDCWA, Metropolitan is required to set aside funds based on the quantities of exchange water that Metropolitan provides to SDCWA and the amount of charges disputed by SDCWA. In April 2016, Metropolitan transferred these funds from unrestricted financial reserves to a new designated fund, the Exchange Agreement Set-Aside Fund. As of November 30, 2020, Metropolitan held \$57.90 million in the Exchange Agreement Set-Aside Fund. This amount contains the disputed Water Stewardship Rate payments and interest earned thereon based on the rate earned by Metropolitan’s investment portfolio. The amounts held do not include the statutory prejudgment interest, post-judgment interest, attorneys’ fees, or costs awards, none of which the Exchange Agreement requires to be held. Amounts held pursuant to the Exchange Agreement will continue to accumulate based on the quantities of exchange water that Metropolitan provides to SDCWA and the payments disputed by SDCWA, until the litigation, including all appeals, is concluded. See “METROPOLITAN’S WATER SUPPLY–Colorado River Aqueduct –Metropolitan and San Diego County Water Authority Exchange Agreement” in this Appendix A. See also “–Litigation Challenging Rate Structure” below.

Metropolitan projects that its unrestricted reserves as of June 30, 2021 will be approximately \$429 million. This amount does not include funds held in the Exchange Agreement Set-Aside Fund. This projection is based on the assumptions set forth in the table entitled “HISTORICAL AND PROJECTED REVENUES AND EXPENSES” under “HISTORICAL AND PROJECTED REVENUES AND EXPENSES” in this Appendix A. In addition, this projection is based on the assumption that Metropolitan’s Board will not authorize the use of any additional amounts in the unrestricted reserves.

### **California Ballot Initiatives**

Proposition 218, a State ballot initiative known as the “Right to Vote on Taxes Act,” was approved by the voters on November 5, 1996 adding Articles XIIC and XIID to the California Constitution. Article XIID provides substantive and procedural requirements on the imposition, extension or increase of any “fee” or “charge” levied by a local government upon a parcel of real property or upon a person as an incident of property ownership. As a wholesaler, Metropolitan serves water to its member agencies, not to persons or properties as an incident of property ownership. Thus, water rates charged by Metropolitan to its member agencies are not property related fees and charges and therefore are exempt from the requirements of Article XIID. Fees for retail water service by Metropolitan’s member agencies or their agencies are subject to the requirements of Article XIID.

Article XIID also imposes certain procedures with respect to assessments. Under Article XIID, “standby charges” are considered “assessments” and must follow the procedures required for “assessments,” unless they were in existence on the effective date of Article XIID. Metropolitan has imposed its water standby charges since 1992 and therefore its current standby charges are exempt from the Article XIID procedures. Changes to Metropolitan’s current standby charges could require notice to property owners and approval by a majority of such owners returning mail-in ballots approving or rejecting any imposition or increase of such standby charge. Twenty-two of Metropolitan’s member agencies have elected to collect all or a portion of their readiness-to-serve charges through standby charges. See “–Other Charges – Readiness-to-Serve Charge” and “– Water Standby Charges” above. Even if Article XIID is construed to limit the ability of Metropolitan and its member agencies to impose or collect standby charges, the member agencies will continue to be obligated to pay the readiness-to-serve charges.

Article XIIC makes all taxes either general or special taxes and imposes voting requirements for each kind of tax. It also extends the people's initiative power to reduce or repeal previously authorized local taxes, assessments, fees and charges. This extension of the initiative power is not limited by the terms of Article XIIC to fees imposed after November 6, 1996 or to property-related fees and charges and absent other authority could result in retroactive reduction in existing taxes, assessments or fees and charges.

Proposition 26, a State ballot initiative aimed at restricting regulatory fees and charges, was approved by the California voters on November 2, 2010. Proposition 26 broadens the definition of "tax" in Article XIIC of the California Constitution to include: levies, charges and exactions imposed by local governments, except for charges imposed for benefits or privileges or for services or products granted to the payor (and not provided to those not charged) that do not exceed their reasonable cost; regulatory fees that do not exceed the cost of regulation and are allocated in a fair or reasonable manner; fees for the use of local governmental property; fines and penalties imposed for violations of law; real property development fees; and assessments and property-related fees imposed under Article XIID of the California Constitution. Special taxes imposed by local governments including special districts are subject to approval by two-thirds of the electorate. Proposition 26 applies to charges imposed or increased by local governments after the date of its approval. Metropolitan believes its water rates and charges are not taxes under Proposition 26. SDCWA's lawsuit challenging the rates adopted by Metropolitan in April 2012 (part of which became effective January 1, 2013 and part of which became effective January 1, 2014) alleged that such rates violate Proposition 26. On June 21, 2017, the California Court of Appeal ruled that whether or not Proposition 26 applies to Metropolitan's rates, the System Access Rate and System Power Rate challenged by SDCWA in such lawsuit comply with Proposition 26. See "--Litigation Challenging Rate Structure."

Propositions 218 and 26 were adopted as measures that qualified for the ballot pursuant to the State's initiative process. Other initiative measures have been proposed from time to time, including presently, or could be proposed in the future, which if qualified for the ballot, could be adopted, or legislative measures could be approved by the Legislature, which may place limitations on the ability of Metropolitan or its member agencies to increase revenues or to increase appropriations. Such measures may further affect Metropolitan's ability to collect taxes, assessments or fees and charges, which could have an effect on Metropolitan's revenues.

### **Preferential Rights**

Section 135 of the Act gives each of Metropolitan's member agencies a preferential right to purchase for domestic and municipal uses within the agency a portion of the water served by Metropolitan, based upon a ratio of all payments on tax assessments and otherwise, except purchases of water, made to Metropolitan by the member agency compared to total payments made by all member agencies on tax assessments and otherwise since Metropolitan was formed, except purchases of water. Historically, these rights have not been used in allocating Metropolitan's water. In 2004, the California Court of Appeal upheld Metropolitan's methodology for calculation of the respective member agencies' preferential rights under Section 135 of the Act. SDCWA's litigation challenging Metropolitan's rate structure also challenged Metropolitan's exclusion of payments for Exchange Agreement deliveries from the calculation of SDCWA's preferential right. On June 21, 2017, the California Court of Appeal held that SDCWA's payments under the Exchange Agreement must be included in the preferential rights calculation. See "--Litigation Challenging Rate Structure."

### **Litigation Challenging Rate Structure**

SDCWA filed *San Diego County Water Authority v. Metropolitan Water District of Southern California, et al.* on June 11, 2010. The complaint alleges that the rates adopted by the Board on April 13, 2010, which became effective January 1, 2011 and January 1, 2012, misallocate certain State Water Contract costs to the System Access Rate and the System Power Rate, and thus affect charges for transportation of water, resulting in an overcharge to SDCWA by at least \$24.5 million per year. The complaint alleges that all State Water Project costs should be allocated instead to Metropolitan's Supply Rate, even though under the

State Water Contract Metropolitan is billed separately for transportation, power and supply costs. It states additionally that Metropolitan will overcharge SDCWA by another \$5.4 million per year by including the Water Stewardship Rate in transportation charges.

The complaint requested a court order invalidating the rates adopted April 13, 2010, and that Metropolitan be mandated to allocate costs associated with the State Water Contract and the Water Stewardship Rate to water supply rates and not to transportation rates. Rates in effect in prior years are not challenged in this lawsuit.

SDCWA filed its First Amended Petition for Writ of Mandate and Complaint on October 27, 2011, adding five new claims to this litigation, two of which were eliminated from the case on January 4, 2012. The three remaining new claims were for breach of the water Exchange Agreement between Metropolitan and SDCWA (described herein under "METROPOLITAN'S WATER SUPPLY—Colorado River Aqueduct—Metropolitan and San Diego County Water Authority Exchange Agreement") due to a price based on allegedly illegal rates; improper exclusion of SDCWA's payments under such Exchange Agreement from calculation of SDCWA's preferential rights to purchase Metropolitan supplies (see "—Preferential Rights" above); and illegality of the rate structure integrity provision in conservation and local resources incentive agreements between Metropolitan and SDCWA. The rate structure integrity provision permitted the Board to terminate incentives payable under conservation and local resources incentive agreements between Metropolitan and a member agency due to certain actions by the member agency to challenge the rates that are the source of incentive payments. In June 2011, Metropolitan's Board authorized termination of two incentive agreements with SDCWA under the rate structure integrity provision in such agreements after SDCWA filed its initial complaint challenging Metropolitan's rates. SDCWA filed a Second Amended Petition for Writ of Mandate and Complaint on April 17, 2012, which contained additional allegations but no new causes of action.

On June 8, 2012, SDCWA filed a new lawsuit challenging the rates adopted by Metropolitan on April 10, 2012 and effective on January 1, 2013 and January 1, 2014. The complaint contained allegations similar to those in the Second Amended Petition for Writ of Mandate and Complaint and new allegations asserting that Metropolitan's rates, adopted in April 2012, violate Proposition 26. See "—California Ballot Initiatives" for a description of Proposition 26.

SDCWA filed a Third Amended Petition for Writ of Mandate and Complaint on January 23, 2013, to add new allegations that Metropolitan's rates adopted in April 2010 did not meet the requirements of Proposition 26. The court granted Metropolitan's motion to strike allegations relating to Proposition 26 on March 29, 2013, expressly ruling that SDCWA may not allege a violation of Proposition 26 in its challenge to the rates adopted in April 2010. This ruling did not affect SDCWA's separate challenge to Metropolitan's rates adopted in April 2012, which also includes Proposition 26 allegations.

Following trial of both lawsuits in two phases, concluding on January 23, 2014 and April 30, 2015, respectively, the Superior Court of the State of California, County of San Francisco (the "Superior Court"), issued its Final Judgment and a Peremptory Writ of Mandate in the 2010 and 2012 SDCWA v. Metropolitan cases. Metropolitan appealed the trial court's decision in each case, and SDCWA filed a cross-appeal of the court's ruling on the rate structure integrity claim and an attorneys' fees order.

On June 21, 2017, the California Court of Appeal released its decision in the appeals and cross-appeal filed by Metropolitan and SDCWA, respectively. The Court of Appeal ruled that Metropolitan may lawfully include its State Water Project transportation costs in the System Access Rate and System Power Rate that are part of the Exchange Agreement's price term, and that Metropolitan may also lawfully include the System Access Rate in its wheeling rate, reversing the trial court decision on this issue. The Court held Metropolitan's allocation of the State Water Project transportation costs as its own transportation costs is proper and does not violate the wheeling statutes (Water Code, § 1810, *et seq.*), Proposition 26 (Cal. Const.,

Article XIII C, §1, subd.(e)), whether or not that Proposition applies to Metropolitan's rates, California Government Code section 54999.7, the common law, or the terms of the parties' Exchange Agreement.

The Court of Appeal also ruled that the administrative record before it for the rates in calendar years 2011 through 2014 did not support Metropolitan's inclusion of its Water Stewardship Rate as a transportation cost in the Exchange Agreement price or the wheeling rate, under the common law and wheeling statutes. Having made that determination, the Court of Appeal stated it need not evaluate the issue under any other law. The court did not address the allocation of the Water Stewardship Rate in subsequent years based on a different record. The court noted, and in a subsequent modification confirmed, that its holding does not preclude Metropolitan from including the Water Stewardship Rate in Metropolitan's full-service rate.

The Court of Appeal held that because the Water Stewardship Rate was included in the Exchange Agreement price, there was a breach by Metropolitan of the Exchange Agreement in 2011 through 2014. The court remanded the case to the trial court for a redetermination of damages in light of its ruling concerning the Water Stewardship Rate. The Court of Appeal agreed with the trial court that statutory prejudgment interest applies with respect to any damages award, not a lesser contractual interest. The Court of Appeal reversed the trial court by finding that the Exchange Agreement may entitle SDCWA to attorneys' fees for the second phase of the case concerning breach of contract; but directed the trial court on remand to make a new determination of the prevailing party, if any. The cases were therefore remanded to the trial court for a review of both damages and attorneys' fees.

With respect to other issues considered on appeal, the Court of Appeal upheld the trial court's ruling that Metropolitan improperly excludes SDCWA's payments under the Exchange Agreement in Metropolitan's calculation of SDCWA's preferential rights. The court also ruled that SDCWA had the constitutional right to challenge the rate structure integrity provision in Metropolitan's conservation and local resources incentive agreements and found that the rate structure integrity provision was invalid and unenforceable as an unconstitutional condition on the provision of a public benefit.

On September 27, 2017, the California Supreme Court denied SDCWA's petition for review, declining to consider the Court of Appeal's decision. The Court of Appeal's decision is therefore final.

On July 25, 2018, the Superior Court issued an order regarding the scope of the matters to be reconsidered by the Superior Court on remand pursuant to the Court of Appeal decision. With respect to the Superior Court's re-determination of damages in light of the Court of Appeal's ruling that the administrative record for calendar years 2011 through 2014 did not support Metropolitan's inclusion of its demand management costs in the Exchange Agreement price, the Superior Court ruled that it will award SDCWA \$28,678,190.90 in contract damages for breach of the Exchange Agreement, plus prejudgment interest at 10 percent per annum. The Superior Court determined that Metropolitan is not entitled in the remand proceedings to show what it could have lawfully charged SDCWA for demand management costs and to deduct that from SDCWA's damages.

The Superior Court further ruled that SDCWA is not entitled in the remand proceedings to litigate the issue of "offsetting benefits" under the wheeling statutes for the parties' Exchange Agreement. The Superior Court found that such claim is both outside the scope of remand and waived.

The Superior Court also ruled that SDCWA is entitled to judgment on its declaratory relief cause of action declaring the rate structure integrity provision in Metropolitan's conservation and local resources incentive agreements invalid and unenforceable, SDCWA is entitled to further proceedings to litigate the issue of an entitlement to monetary restitution for 2011 through 2014, and the parties shall also litigate in further proceedings the issue of what prospective relief SDCWA may be entitled to in connection with this cause of action.

Finally, the Superior Court confirmed, as the parties agreed, that it will conduct further proceedings for a redetermination of the prevailing party and attorneys' fees in this matter.

On September 14, 2018, Metropolitan filed a Petition for Writ of Mandate with the California Court of Appeal, requesting the court to require the Superior Court to recalculate contract damages for breach of the Exchange Agreement from years 2011 through 2014, to include a set-off for the additional sums SDCWA would have paid had Metropolitan collected the Water Stewardship Rate through its full service sales as SDCWA argued was correct. On November 1, 2018, the Court of Appeal determined that it would not review the issue at this stage of the cases. Metropolitan may raise this issue again on any later appeal from the cases' final judgment.

Due to SDCWA's litigation challenging Metropolitan's rates, and pursuant to the Exchange Agreement between Metropolitan and SDCWA, as of November 30, 2020, Metropolitan held \$57.90 million in a designated fund, the Exchange Agreement Set-Aside Fund. See "Financial Reserve Policy." This amount includes the disputed Water Stewardship Rate payments for calendar years 2011 through 2017, and interest earned by Metropolitan thereon. The amount held does not include statutory prejudgment interest or any post-judgment interest, attorneys' fees, or costs the Court may award.

On February 14, 2019, Metropolitan tendered to SDCWA payment of \$44.4 million for the San Francisco Superior Court's contract damages award for Water Stewardship Rate payments from 2011 through 2014, plus statutory interest through February 15, 2019, with a reservation of appeal rights, in the 2010 and 2012 SDCWA v. Metropolitan actions. This tender was made under compulsion to cease accrual of statutory interest in excess of market rates, but did not affect Metropolitan's rights to appeal, including its right to challenge the amount of the damages award. The tendered payment included \$31.6 million of amounts withdrawn from the Exchange Agreement Set-Aside Fund, and \$12.8 million withdrawn from reserves (representing statutory interest). On March 7, 2019, SDCWA rejected the tendered payment and returned the uncashed check for the tendered payment. The returned funds were credited back to the Exchange Agreement Set-Aside Fund and Metropolitan reserves in the amounts drawn. The balance in the Exchange Agreement Set-Aside Fund set forth above includes the returned funds. In the 2010-2012 Judgment (discussed below), the Superior Court confirmed that Metropolitan's tender was effective and stopped the accrual of interest in February 2019. On August 29, 2019, as a result of changes in reorganization of assignments at the San Francisco Superior Court, the 2010, 2012, 2016, and 2017 SDCWA v. Metropolitan cases were reassigned to a different department of the Court. SDCWA filed a motion for peremptory disqualification of the new judge and on September 6, 2019, the motion was sustained. On September 27, 2019, the 2010, 2012, 2016, and 2017 cases were assigned to Department 304, a different complex department in which the 2014 case is already pending.

The Superior Court had scheduled an evidentiary hearing for June 16 to June 18, 2020 on SDCWA's requested relief based on its rate structure integrity provision claim. Following action of the SDCWA Board of Directors on February 27, 2020 (discussed below), SDCWA informed Metropolitan and the court that it was no longer seeking this relief. Accordingly, the evidentiary hearing was canceled.

On August 13, 2020, the Superior Court entered a final judgment in the 2010 and 2012 SDCWA v. Metropolitan cases (the "2010-2012 Judgment"). On August 14, 2020, SDCWA served notice of entry of judgment and notice of the court's peremptory writ of mandate in the cases.

In the 2010-2012 Judgment, the Court entered judgment: (1) on the first three causes of action – for writ of mandate, declaratory relief, and invalidation (the rate challenges) – in SDCWA's favor, because the Court of Appeal found Metropolitan's inclusion of the Water Stewardship Rate as a component of the transportation rates charged under the Exchange Agreement and wheeling rate was unlawful, and ordered issuance of a writ of mandate as described below; (2) on the fourth cause of action – breach of contract – in favor of SDCWA but only with respect to its challenge to Metropolitan's inclusion of the Water Stewardship Rate in the Exchange Agreement price for deliveries in 2011-2014, the Court awarded SDCWA a total of

\$44,373,872.29, comprised of: (A) \$28,678,190.90 in damages; (B) prejudgment interest at the rate of 10 percent per annum through November 18, 2015 in the amount of \$7,484,315.54; and (C) post-judgment interest at the rate of 7 percent per annum from November 19, 2015 until February 15, 2019 (the date of Metropolitan's tender of \$44,373,872.29 to SDCWA), in the amount of \$8,211,365.85; (3) on the fifth cause of action – declaratory relief regarding the rate structure integrity (RSI) provision – in favor of SDCWA as the RSI provision is invalid and unenforceable; (4) on the sixth cause of action – declaratory relief regarding preferential rights calculation – in favor of SDCWA that Metropolitan's previous methodology for calculating preferential rights violates § 135 of the Metropolitan Water District Act; (5) on the previously-dismissed cause of action for breach of fiduciary duty – in favor of Metropolitan; and (6) on the previously dismissed cause of action for breach of the covenant of good faith and fair dealing – in favor of Metropolitan.

The peremptory writ of mandate commands Metropolitan to “enact only legal wheeling and transportation rates in the future and, specifically, not to do the things that [the Court of Appeal] held were unlawful,” and incorporates by reference the Court of Appeal decision; and to “exclude the costs of conservation programs and other demand management programs, enacted in [the 2010 and 2012] cases as the Water Stewardship Rate, from Metropolitan's wheeling rate published in Section 4405 of Metropolitan's Administrative Code and from the transportation rates charged under the [Exchange Agreement].” Metropolitan filed a notice of appeal of the 2010-2012 Judgment and the writ on September 11, 2020.

The court requested the parties' briefing as to whether it has jurisdiction to determine the prevailing party, if any, in the 2010 and 2012 cases, after the appeal was filed. The parties filed a joint submission that the court has jurisdiction and the court agreed. On December 16, 2020, the court heard the parties' cross-motions on the determination of a prevailing party, if any, under the Exchange Agreement's attorneys' fees and costs provision. On January 13, 2021, the court issued an order finding SDCWA is the prevailing party on the contract, entitled to its attorneys' fees and costs under the contract. The court will schedule further proceedings to determine fees. On January 12, 2021, the court heard the parties' motions to strike or tax each's memorandum of statutory costs, which involves a determination of prevailing party as to all claims. The court has not yet ruled on the costs motions. For both sets of motions, Metropolitan contended that it is the prevailing party entitled to attorneys' fees and costs, or else there is not a prevailing party in these mixed-result cases. The determinations as to prevailing party, attorneys' fees, and costs are subject to appeal after entry of the final order.

In May 2014, SDCWA filed a new lawsuit asserting essentially the same rate claims and breach of contract claim in connection with the Board's April 2014 rate adoption. Metropolitan filed its answer on June 30, 2014. On February 9, 2015, pursuant to stipulation by the parties, the San Francisco Superior Court ordered that the case be stayed.

On April 13, 2016, SDCWA filed a new lawsuit that alleged all rates and charges for 2017 and 2018 adopted by Metropolitan's Board on April 12, 2016 violate the California Constitution, statutes, and common law. The Petition for Writ of Mandate and Complaint asserted misallocation of costs as alleged in the previous cases listed above and additional claims of over-collection and misallocation of costs and procedural violations. Following a stipulated order issued by the court on November 10, 2016, SDCWA filed a First Amended Petition for Writ of Mandate and Complaint and the court ordered the case stayed pending final resolution of the 2010 and 2012 SDCWA v. Metropolitan cases' appeals. The amended petition/complaint added allegations of the same Exchange Agreement breach as in the previous cases listed above and breach of a provision that requires Metropolitan to set aside disputed amounts, relating to the manner in which Metropolitan has set aside the amounts; requested a judicial declaration that, if a judgment is owed to SDCWA under the Exchange Agreement, SDCWA will not be required to pay any portion of that judgment; and requests a refund to SDCWA of any amount Metropolitan has collected in excess of the reasonable costs of the services provided or, alternatively, a reduction in SDCWA's future fees.

On August 27, 2020, the court granted SDCWA's motion to lift the stays in the 2014 and 2016 SDCWA v. Metropolitan cases and to file a further amended petition/complaint. On August 28, 2020,



SDCWA filed the amended petitions/complaints, which included claims for offsetting benefits. On September 28, 2020, Metropolitan filed demurrers to, or in the alternative motions to strike, portions of the amended petitions/complaints, which are set for hearing on February 10, 2021. The pleadings seek to remove offsetting benefits claims in both cases as to alleged breach of contract and Metropolitan's wheeling rate, and the declaratory relief claim in the 2016 case as to how Metropolitan may satisfy a judgment.

On June 9, 2017, SDCWA filed a new Petition for Writ of Mandate and Complaint challenging the Readiness-to-Serve Charge and Capacity Charge for 2018 adopted by Metropolitan's Board on April 11, 2017. These two charges are set annually, and SDCWA's 2016 lawsuit included a challenge to these two charges for 2017. The new lawsuit similarly alleged the 2018 Readiness-to-Serve Charge and Capacity Charge violated the California Constitution, statutes, and common law. The petition/complaint asserts misallocation of costs. Metropolitan was served with the petition/complaint on June 20, 2017. On July 18, 2017, SDCWA filed a first amended petition/complaint to add Metropolitan's Board action of July 11, 2017 to make minor corrections to the Readiness-to-Serve Charge. On July 31, 2018, pursuant to stipulation by the parties, the San Francisco Superior Court ordered that the case be stayed. On July 23, 2020, the court entered SDCWA's requested dismissal of the 2017 case. The dismissal is without prejudice, which means SDCWA would not be precluded from re-initiating the case in the future.

On June 8, 2018, SDCWA filed a new lawsuit that alleges all rates and charges for 2019 and 2020 adopted by Metropolitan's Board on April 10, 2018 violate the California Constitution, statutes, and common law. The Petition for Writ of Mandate and Complaint asserts the Water Stewardship Rate is unlawful per se and its collection in transportation charges is also unlawful; failure to provide wheelers a reasonable credit for "offsetting benefits" pursuant to Water Code Section 1810, *et seq.*, which SDCWA contends (and Metropolitan disputes) applies to the parties' Exchange Agreement; over-collection and misallocation of costs, including misallocation of Metropolitan's California WaterFix costs as its transportation costs; and specified procedural violations. SDCWA states in the Petition and Complaint that it intends to amend its complaint to allege additional claims against Metropolitan, including but not limited to a claim for breach of contract. Following a stipulated order issued by the San Francisco Superior Court on January 10, 2019, SDCWA filed a First Amended Petition for Writ of Mandate and Complaint and the court ordered the case stayed pending final resolution of the 2010 and 2012 SDCWA v. Metropolitan cases. The amended petition/complaint adds a cause of action for breach of the Exchange Agreement alleging Metropolitan charged an unlawful price that includes the Water Stewardship Rate (despite suspension of this charge), failing to provide credit for offsetting benefits, charging transportation rates that are not based on costs of service, including California WaterFix costs, and not following procedural requirements; and requests a refund to SDCWA of any amount Metropolitan has collected in excess of the reasonable costs of the services provided or, alternatively, a reduction in SDCWA's future fees. On July 28, 2020, the parties filed a stipulation and application to designate the case complex and related to the 2010-2017 cases. Metropolitan is unable to assess at this time the likelihood of success of this case, any possible appeal or any future claims.

On November 15, 2019, Metropolitan provided a statutory Offer to Compromise to SDCWA to resolve all pending litigation filed by SDCWA. The offer, which was not confidential, was made under California Code of Civil Procedure Section 998 and was deemed withdrawn if not accepted by December 30, 2019. By letter dated December 19, 2019, SDCWA notified Metropolitan that it had determined not to act upon Metropolitan's Section 998 Offer to Compromise. Metropolitan's statutory Offer to Compromise was deemed withdrawn. SDCWA made its own settlement offer, which is public but non-statutory. SDCWA's settlement offer was made subject to acceptance by Metropolitan no later than the close of business on January 31, 2020. The Metropolitan Board reviewed SDCWA's proposal at its January 14, 2020 Board meeting and took no action.

On February 27, 2020, the SDCWA Board of Directors authorized its attorneys to dismiss, without prejudice, claims related to payments of the Water Stewardship Rate on supply purchases only and the unquantified claims in the stayed cases relating to cost-of-service grounds and the rate model. The above-

mentioned amended petitions/complaints in the 2014 and 2016 cases added, removed, and retained certain claims. Retained claims include SDCWA's challenge to Metropolitan's Water Stewardship Rate for calendar years 2015 through 2018 based on its allocation to transportation, with a request for the court to invalidate the transportation rates and the wheeling rate and award damages for breach of the parties' Exchange Agreement as a result. Added claims include a challenge to the wheeling rate and alleged breach of the Exchange Agreement for failure to provide offsetting benefits (only the stayed 2018 case had previously included an offsetting benefits claim). SDCWA has not yet dismissed claims in the 2018 case. Metropolitan has not yet assessed the impact of the authorized dismissals. Metropolitan is unable to assess at this time the likelihood of success of these cases, any possible appeals or any future claims.

#### **Other Revenue Sources**

**Hydroelectric Power Recovery Revenues.** Metropolitan has constructed 16 small hydroelectric plants on its distribution system. The combined generating capacity of these plants is approximately 130 megawatts. The plants are located in Los Angeles, Orange, Riverside, and San Diego Counties at existing pressure control structures and other locations. The total capital cost of the 16 facilities is approximately \$176.1 million. Since 2000, annual energy generation sales revenues have ranged between \$7.3 million and nearly \$29.6 million. Including the sale of excess energy generation from Hoover and Parker dams, the total energy sales revenues were \$18.3 million in fiscal year 2018-19 and \$15.9 million in fiscal year 2019-20.

**Investment Income.** In fiscal years 2017-18, 2018-19 and 2019-20, Metropolitan's earnings on investments, including adjustments for gains and losses and premiums and discounts, including construction account and trust fund earnings, excluding gains and losses on swap terminations, on a cash basis (unaudited) were \$15.5 million, \$31.3 million, and \$18.1 million, respectively.

#### **Investment of Moneys in Funds and Accounts**

The Board has delegated to the Treasurer the authority to invest funds. All moneys in any of the funds and accounts established pursuant to Metropolitan's water revenue or general obligation bond resolutions are managed by the Treasurer in accordance with Metropolitan's Statement of Investment Policy. All Metropolitan funds available for investment are currently invested in United States Treasury and agency securities, supranationals, commercial paper, negotiable certificates of deposit, banker's acceptances, corporate notes, municipal bonds, government-sponsored enterprise, money market funds, California Asset Management Program ("CAMP") and the California Local Agency Investment Fund ("LAIF"). CAMP is a program created through a joint powers agency as a pooled short-term portfolio and cash management vehicle for California public agencies. CAMP is a permitted investment for all local agencies under California Government Code Section 53601(p). LAIF is a voluntary program created by statute as an investment alternative for California's local governments and special districts. LAIF permits such local agencies to participate in an investment portfolio, which invests billions of dollars, managed by the State Treasurer's Office.

The Statement of Investment Policy provides that in managing Metropolitan's investments, the primary objective shall be to safeguard the principal of the invested funds. The secondary objective shall be to meet all liquidity requirements and the third objective shall be to achieve a return on the invested funds. Although the Statement of Investment Policy permits investments in some government-sponsored enterprise, the portfolio does not include any of the special investment vehicles related to sub-prime mortgages. The Statement of Investment Policy allows Metropolitan to exceed the portfolio and single issuer limits for purchases of California local agency securities when purchasing Metropolitan tendered bonds in conjunction with its self-liquidity program. Metropolitan's current investments comply with the Statement of Investment Policy.

As of November 30, 2020, the total market value (cash-basis) of all Metropolitan invested funds was \$1.0 billion, including bond reserves of \$1.7 million. The market value of Metropolitan's investment

portfolio is subject to market fluctuation and volatility and general economic conditions. Over the three years ended November 30, 2020 the market value of the month-end balance of Metropolitan's investment portfolio (excluding bond reserve funds) averaged approximately \$1.0 billion. The minimum month-end balance of Metropolitan's investment portfolio (excluding bond reserve funds) during such period was approximately \$831.9 million on July 31, 2019. See Note 3 to Metropolitan's audited financial statements in Appendix B for additional information on the investment portfolio.

Metropolitan's administrative code requires that (1) the Treasurer provide an annual Statement of Investment Policy for approval by Metropolitan's Board, (2) the Treasurer provide a monthly investment report to the Board and the General Manager showing by fund the description, maturity date, yield, par, cost and current market value of each security, and (3) the General Counsel review as to eligibility the securities invested in by the Treasurer for that month and report his or her determinations to the Board. The Board approved the Statement of Investment Policy for fiscal year 2020-21 on June 9, 2020.

Subject to the provisions of Metropolitan's water revenue or general obligation bond resolutions, obligations purchased by the investment of bond proceeds in the various funds and accounts established pursuant to a bond resolution are deemed at all times to be a part of such funds and accounts and any income realized from investment of amounts on deposit in any fund or account therein will be credited to such fund or account. The Treasurer is required to sell or present for redemption any investments whenever it may be necessary to do so in order to provide moneys to meet required payments or transfers from such funds and accounts. For the purpose of determining at any given time the balance in any such funds, any such investments constituting a part of such funds and accounts will be valued at the then estimated or appraised market value of such investments.

All investments, including those authorized by law from time to time for investments by public agencies, contain certain risks. Such risks include, but are not limited to, a lower rate of return than expected and loss or delayed receipt of principal. The occurrence of these events with respect to amounts held under Metropolitan's water revenue or general obligation revenue bond resolutions, or other amounts held by Metropolitan, could have a material adverse effect on Metropolitan's finances. These risks may be mitigated, but are not eliminated, by limitations imposed on the portfolio management process by Metropolitan's Statement of Investment Policy.

The Statement of Investment Policy requires that investments have a minimum credit rating of "A-1/P-1/F1" for short-term securities and "A" for longer-term securities, without regard to modifiers, at the time of purchase. If a security is downgraded below the minimum rating criteria specified in the Statement of Investment Policy, the Treasurer shall determine a course of action to be taken on a case-by-case basis considering such factors as the reason for the downgrade, prognosis for recovery or further rating downgrades, and the market price of the security. The Treasurer is required to note in the Treasurer's monthly report any securities which have been downgraded below Policy requirements and the recommended course of action.

The Statement of Investment Policy also limits the amount of securities that can be purchased by category, as well as by issuer, and prohibits investments that can result in zero interest income. Metropolitan's securities are settled on a delivery versus payment basis and are held by an independent third-party custodian. See Metropolitan's financial statements included in APPENDIX B—"THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA INDEPENDENT AUDITORS' REPORT AND BASIC FINANCIAL STATEMENTS FOR FISCAL YEARS ENDED JUNE 30, 2020 AND JUNE 30, 2019 AND BASIC FINANCIAL STATEMENTS FOR THE THREE MONTHS ENDED SEPTEMBER 30, 2020 AND 2019 (UNAUDITED)" for a description of Metropolitan's investments at June 30, 2020 and September 30, 2020.

Since July 2019, Metropolitan has retained one outside investment firm to manage the portion of Metropolitan's portfolio not needed to provide liquidity for expenditures over the next six months. As of November 30, 2020, this manager was managing approximately \$196.4 million in investments on behalf of Metropolitan. Since December 2018, Metropolitan has retained an outside investment firm to manage a portion of the liquidity portfolio and certain trust funds. As of November 30, 2020, this firm managed approximately \$529.5 million. The outside managers are required to adhere to Metropolitan's Statement of Investment Policy.

Metropolitan's Statement of Investment Policy may be changed at any time by the Board (subject to State law provisions relating to authorized investments). There can be no assurance that the State law and/or the Statement of Investment Policy will not be amended in the future to allow for investments that are currently not permitted under State law or the Statement of Investment Policy, or that the objectives of Metropolitan with respect to investments or its investment holdings at any point in time will not change.

## METROPOLITAN EXPENSES

### General

The following table sets forth a summary of Metropolitan's expenses, by major function, for the five years ended June 30, 2020, on a modified accrual basis. All information is unaudited. Expenses of Metropolitan for the fiscal years ended June 30, 2020 and June 30, 2019, on an accrual basis, are shown in Metropolitan's audited financial statements included in Appendix B.

### SUMMARY OF EXPENSES Fiscal Years Ended June 30 (Dollars in Millions)

	2016	2017	2018	2019	2020
Operation and Maintenance Costs <sup>(1)</sup>	\$ 799	\$ 559	\$ 568	\$ 569	\$ 641
Total State Water Project <sup>(2)</sup>	512	506	527	482	519
Total Debt Service	332	330	360	347	285
Construction Expenses from Revenues <sup>(3)</sup>	273	132	98	128	39
Other <sup>(4)</sup>	6	4	5	6	6
Total Expenses (net of reimbursements)	<u>\$1,922</u>	<u>\$1,531</u>	<u>\$1,558</u>	<u>\$1,532</u>	<u>\$1,490</u>

Source: Metropolitan.

<sup>(1)</sup> Includes operation and maintenance, debt administration, conservation and local resource programs, CRA power, and water supply expenses. Fiscal years 2015-16, 2016-17, and 2017-18 include \$222 million, \$33 million, and \$1 million, respectively, of conservation and supply program expenses funded from transfers from the Water Management Fund.

<sup>(2)</sup> Includes both operating and capital expense portions.

<sup>(3)</sup> At the discretion of the Board, in any given year, Metropolitan may increase or decrease funding available for construction disbursements to be paid from revenues. Includes \$160 million for acquiring properties in Riverside and Imperial Counties, funded by \$160 million from the Replacement and Refurbishment Fund Reserves in fiscal year 2015-16. Does not include expenditures of bond proceeds.

<sup>(4)</sup> Includes operating equipment.

### Revenue Bond Indebtedness and Other Obligations

As of December 1, 2020, Metropolitan had total outstanding indebtedness secured by a lien on Net Operating Revenues of \$3.81 billion. This indebtedness was comprised of \$2.40 billion of Senior Revenue Bonds issued under the Senior Debt Resolutions (each as defined below), which includes \$2.07 billion of fixed rate Senior Revenue Bonds, and \$331.9 million of variable rate Senior Revenue Bonds; \$1.36 billion of Subordinate Revenue Bonds issued under the Subordinate Debt Resolutions (each as defined below), which includes \$915.87 million of fixed rate Subordinate Revenue Bonds, and \$446.3 million of variable rate Subordinate Revenue Bonds; and \$46.8 million of subordinate lien short-term certificates, which bear a

variable rate, and are on parity with the Subordinate Revenue Bonds. In addition, Metropolitan has \$438.7 million of fixed-payor interest rate swaps which provides a fixed interest rate hedge to an equivalent amount of variable rate debt. Metropolitan's revenue bonds and other revenue obligations are more fully described below.

**REVENUE BOND INDEBTEDNESS AND OTHER OBLIGATIONS**

	Variable Rate	Fixed Rate	Total
Senior Lien Revenue Bonds	\$ 331,875,000	\$2,068,605,000	\$2,400,480,000
Subordinate Lien Revenue Bonds	446,255,000	915,865,000	1,362,120,000
Subordinate Lien Short-Term Certificates	46,800,000	--	46,800,000
<b>Total</b>	<b>\$ 824,930,000</b>	<b>\$2,984,470,000</b>	<b>\$3,809,400,000</b>
Fixed-Payor Interest Rate Swaps	(438,665,000)	438,665,000	--
<b>Net Amount (after giving effect to Swaps)</b>	<b>\$ 386,265,600</b>	<b>\$3,423,135,000</b>	<b>\$3,809,400,000</b>

*Source: Metropolitan.*

**Limitations on Additional Revenue Bonds**

Resolution 8329, adopted by Metropolitan's Board on July 9, 1991, as amended and supplemented (the "Master Senior Resolution," and collectively with all such supplemental resolutions, the "Senior Debt Resolutions"), provides for the issuance of Metropolitan's senior lien water revenue bonds. The Senior Debt Resolutions establish limitations on the issuance of additional obligations payable from Net Operating Revenues. Under the Senior Debt Resolutions, no additional bonds, notes or other evidences of indebtedness payable out of Operating Revenues may be issued having any priority in payment of principal, redemption premium, if any, or interest over any water revenue bonds authorized by the Senior Debt Resolutions ("Senior Revenue Bonds") or other obligations of Metropolitan having a lien and charge upon, or being payable from, the Net Operating Revenues on parity with such Senior Revenue Bonds ("Senior Parity Obligations"). No additional Senior Revenue Bonds or Senior Parity Obligations may be issued or incurred unless the conditions of the Senior Debt Resolutions have been satisfied.

Resolution 9199, adopted by Metropolitan's Board on March 8, 2016, as amended and supplemented (the "Master Subordinate Resolution," and collectively with all such supplemental resolutions, the "Subordinate Debt Resolutions," and together with the Senior Debt Resolutions, the "Revenue Bond Resolutions"), provides for the issuance of Metropolitan's subordinate lien water revenue bonds and other obligations secured by a pledge of Net Operating Revenues that is subordinate to the pledge securing Senior Revenue Bonds and Senior Parity Obligations. The Subordinate Debt Resolutions establish limitations on the issuance of additional obligations payable from Net Operating Revenues. Under the Subordinate Debt Resolutions, with the exception of Senior Revenue Bonds and Senior Parity Obligations, no additional bonds, notes or other evidences of indebtedness payable out of Operating Revenues may be issued having any priority in payment of principal, redemption premium, if any, or interest over any subordinate water revenue bonds authorized by the Subordinate Debt Resolutions ("Subordinate Revenue Bonds" and, together with Senior Revenue Bonds, "Revenue Bonds") or other obligations of Metropolitan having a lien and charge upon, or being payable from, the Net Operating Revenues on parity with the Subordinate Revenue Bonds ("Subordinate Parity Obligations"). No additional Subordinate Revenue Bonds or Subordinate Parity Obligations may be issued or incurred unless the conditions of the Subordinate Debt Resolutions have been satisfied.

The laws governing Metropolitan's ability to issue water revenue bonds currently provide two additional limitations on indebtedness that may be incurred by Metropolitan. The Act provides for a limit on general obligation bonds, water revenue bonds and other evidences of indebtedness of 15 percent of the assessed value of all taxable property within Metropolitan's service area. As of December 1, 2020, outstanding general obligation bonds, water revenue bonds and other evidences of indebtedness in the

amount of \$3.84 billion represented approximately 0.12 percent of the fiscal year 2020-21 taxable assessed valuation of \$3,263.4 billion. The second limitation under the Act specifies that no revenue bonds may be issued, except for the purpose of refunding, unless the amount of net assets of Metropolitan as shown on its balance sheet as of the end of the last fiscal year prior to the issuance of such bonds, equals at least 100 percent of the aggregate amount of revenue bonds outstanding following the issuance of such bonds. The net assets of Metropolitan at June 30, 2020 were \$6.94 billion. The aggregate amount of revenue bonds outstanding as of December 1, 2020 was \$3.76 billion. The limitation does not apply to other forms of financing available to Metropolitan. Audited financial statements including the net assets of Metropolitan as of June 30, 2020 and June 30, 2019 are shown in Metropolitan's audited financial statements included in APPENDIX B—"THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA INDEPENDENT AUDITORS' REPORT AND BASIC FINANCIAL STATEMENTS FOR FISCAL YEARS ENDED JUNE 30, 2020 AND JUNE 30, 2019 AND BASIC FINANCIAL STATEMENTS FOR THE THREE MONTHS ENDED SEPTEMBER 30, 2020 AND 2019 (UNAUDITED)."

Metropolitan provides no assurance that the Act's limitations on indebtedness will not be revised or removed by future legislation. Limitations under the Revenue Bond Resolutions respecting the issuance of additional obligations payable from Net Operating Revenues on parity with the Senior Revenue Bonds and Subordinate Revenue Bonds of Metropolitan will remain in effect so long as any Senior Revenue Bonds and Subordinate Revenue Bonds authorized pursuant to the applicable Revenue Bond Resolutions are outstanding, provided however, that the Revenue Bond Resolutions are subject to amendment and supplement in accordance with their terms.

#### **Variable Rate Exposure Policy**

As of December 1, 2020, Metropolitan had outstanding \$331.9 million of variable rate obligations issued as Senior Revenue Bonds under the Senior Debt Resolutions (described under "–Outstanding Senior Revenue Bonds and Senior Parity Obligations –Variable Rate and Swap Obligations" below). In addition, as of December 1, 2020, \$493.1 million of Metropolitan's \$1.41 billion of outstanding Subordinate Revenue Bonds issued under the Subordinate Debt Resolutions and other Subordinate Parity Obligations were variable rate obligations (described under "–Outstanding Subordinate Revenue Bonds and Subordinate Parity Obligations" below).

As of December 1, 2020, of Metropolitan's \$824.9 million of variable rate obligations, \$438.7 million of such variable rate demand obligations are treated by Metropolitan as fixed rate debt, by virtue of interest rate swap agreements (described under "–Outstanding Senior Revenue Bonds and Senior Parity Obligations –Variable Rate and Swap Obligations – Interest Rate Swap Transactions" below), for the purpose of calculating debt service requirements. The remaining \$386.3 million of variable rate obligations represent approximately 10.1 percent of total outstanding water revenue secured indebtedness (including Senior Revenue Bonds and Senior Parity Obligations and Subordinate Revenue Bonds and Subordinate Parity Obligations), as of December 1, 2020.

Metropolitan's variable rate exposure policy requires that variable rate debt be managed to limit net interest cost increases within a fiscal year as a result of interest rate changes to no more than \$5 million. In addition, the maximum amount of variable interest rate exposure (excluding variable rate bonds associated with interest rate swap agreements) is limited to 40 percent of total outstanding water revenue bond debt. Variable rate debt capacity will be reevaluated as interest rates change and managed within these parameters.

The periodic payments due to Metropolitan from counterparties under its outstanding interest rate swap agreements and the interest payments to be payable by Metropolitan under certain of its outstanding variable rate obligations (including some of Metropolitan's Subordinate Revenue Bonds and certain notes issued pursuant to its short-term revolving credit agreement and subordinate note purchase agreements as hereinafter described) are calculated by reference to the London interbank offering rate ("LIBOR"). On July 27, 2017, the Financial Conduct Authority (the "FCA"), the U.K. regulatory body currently responsible



for the regulation and supervision of LIBOR, announced that it will no longer persuade or compel banks to submit rates for the calculation of the LIBOR rates after 2021 (the “FCA Announcement”). On November 30, 2020, Intercontinental Exchange Benchmark Administration (“IBA”), the administrator of LIBOR authorized and regulated by the FCA, announced, with the support of the Federal Reserve Board and the FCA, that it is commencing a consultation on its intention to cease publication of (1) only the one-week and two-month USD LIBOR on December 31, 2021, and (2) all other tenors of USD LIBOR, including the one-month LIBOR and three-month LIBOR, the most widely used tenors of USD LIBOR and which are used to determine the periodic payments due to Metropolitan from swap counterparties and the interest payments to be payable by Metropolitan under certain of its outstanding variable rate obligations, on June 30, 2023. The IBA proposal isn’t final and is subject to feedback on the consultation. IBA has indicated that it expects to complete the consultation process by the end of January 2021. Metropolitan staff is monitoring alternate benchmark rates. Metropolitan is unable to predict the outcome of the IBA’s ongoing consultation as to the specific timing for the cessation of publication of USD LIBOR, or how the prospective phasing out of LIBOR as a reference rate and transition to an alternate benchmark rate will ultimately be implemented, but increased volatility in the reported LIBOR rates may occur and the level of Metropolitan’s LIBOR-based swap and interest payments may be affected by the transition to an alternate benchmark rate when it occurs.

## Outstanding Senior Revenue Bonds and Senior Parity Obligations

### Senior Revenue Bonds

The water revenue bonds issued under the Senior Debt Resolutions outstanding as of December 1, 2020, are set forth below:

Name of Issue	Principal Outstanding
Water Revenue Refunding Bonds, 1993 Series A	\$ 2,040,000
Water Revenue Bonds, 2000 Authorization, Series B-3 <sup>(1)</sup>	78,900,000
Water Revenue Refunding Bonds, 2011 Series C	118,700,000
Water Revenue Refunding Bonds, 2012 Series A	181,180,000
Water Revenue Refunding Bonds, 2012 Series C	5,635,000
Water Revenue Refunding Bonds, 2012 Series F	37,735,000
Water Revenue Refunding Bonds, 2012 Series G	89,820,000
Water Revenue Refunding Bonds, 2014 Series A	4,870,000
Water Revenue Refunding Bonds, 2014 Series C-3	2,810,000
Water Revenue Refunding Bonds, 2014 Series E	86,060,000
Water Revenue Bonds, 2015 Authorization, Series A	201,535,000
Water Revenue Refunding Bonds, 2016 Series A	239,455,000
Special Variable Rate Water Revenue Refunding Bonds, 2016 Series B-1 and B-2 <sup>(1)</sup>	82,905,000
Water Revenue Bonds, 2017, Authorization, Series A <sup>(1)</sup>	80,000,000
Special Variable Water Revenue Refunding Bonds, 2018 Series A-1 and A-2 <sup>(1)</sup>	90,070,000
Water Revenue Refunding Bonds, 2018 Series B	133,510,000
Water Revenue Refunding Bonds, 2019 Series A	218,090,000
Water Revenue Bonds, 2020 Series A	207,355,000
Special Variable Rate Water Revenue Refunding Bonds, 2020 Series B <sup>(2)</sup>	271,815,000
Water Revenue Refunding Bonds, 2020 Series C	267,995,000
<b>Total</b>	<b>\$2,400,480,000</b>

Source: Metropolitan.

<sup>(1)</sup> Outstanding variable rate obligation.

<sup>(2)</sup> Initially delivered in a long mode at a fixed interest rate to April 2, 2021.

### Variable Rate and Swap Obligations

As of December 1, 2020, Metropolitan had outstanding \$331.9 million of senior lien variable rate obligations. The outstanding variable rate obligations consist of Senior Revenue Bonds issued under the Senior Debt Resolutions (described under this caption “–Variable Rate and Swap Obligations”) as variable rate demand obligations in a daily mode supported by standby bond purchase agreements between

Metropolitan and various liquidity providers (the “Liquidity Supported Bonds”). Metropolitan also has an outstanding Short-Term Revolving Credit Facility under which it may incur variable rate Senior Parity Obligations (described under “—Senior Parity Obligations – Short-Term Revolving Credit Facility” below).

**Liquidity Supported Bonds.** The interest rates for Metropolitan’s variable rate demand obligations issued under the Senior Debt Resolutions, totaling \$331.9 million as of December 1, 2020, are currently reset on a daily basis. While bearing interest at a daily rate, such variable rate demand obligations are subject to optional tender on any business day with same day notice by the owners thereof and mandatory tender upon specified events. Such variable rate demand obligations are supported by standby bond purchase agreements between Metropolitan and liquidity providers that provide for purchase of variable rate bonds by the applicable liquidity provider upon tender of such variable rate bonds and a failed remarketing. Metropolitan has secured its obligation to repay principal and interest advanced under the standby bond purchase agreements as Senior Parity Obligations. A decline in the creditworthiness of a liquidity provider will likely result in an increase in the interest rate of the applicable variable rate bonds, as well as an increase in the risk of a failed remarketing of such tendered variable rate bonds. Variable rate bonds purchased by a liquidity provider (“bank bonds”) would initially bear interest at a per annum interest rate equal to, depending on the liquidity facility, either: (a) the highest of (i) the Prime Rate, (ii) the Federal Funds Rate plus one-half of a percent, or (iii) seven and one-half percent (with the spread or rate increasing in the case of each of (i), (ii) and (iii) of this clause (a) by one percent after 60 days); or (b) the highest of (i) the Prime Rate plus one percent, (ii) Federal Funds Rate plus two percent, and (iii) seven percent (with the spread or rate increasing in the case of each of (i), (ii) and (iii) of this clause (b) by one percent after 90 days). To the extent such bank bonds have not been remarketed or otherwise retired as of the earlier of the 60<sup>th</sup> day following the date such bonds were purchased by the liquidity provider or the stated expiration date of the related liquidity facility, Metropolitan’s obligation to reimburse the liquidity provider may convert the term of the variable rate bonds purchased by the liquidity provider into a term loan payable under the terms of the current liquidity facilities in semi-annual installments over a period ending on either the third anniversary or fifth anniversary, depending on the applicable liquidity facility, of the date on which the variable rate bonds were purchased by the liquidity provider. In addition, upon an event of default under any such liquidity facility, including a failure by Metropolitan to perform or observe its covenants under the applicable standby bond purchase agreement, a default in other specified indebtedness of Metropolitan, or other specified events of default (including a reduction in the credit rating assigned to Senior Revenue Bonds issued under the Senior Debt Resolutions by any of Fitch, S&P or Moody’s below “A-” or “A3”), the liquidity provider could require all bank bonds to be subject to immediate mandatory redemption by Metropolitan.

The following table lists the liquidity providers, the expiration date of each facility and the principal amount of outstanding variable rate demand obligations covered under each facility as of December 1, 2020.

**Liquidity Facilities and Expiration Dates**

<b>Liquidity Provider</b>	<b>Bond Issue</b>	<b>Principal Outstanding</b>	<b>Facility Expiration</b>
The Toronto-Dominion Bank, New York Branch	2018 Series A-1 and Series A-2	\$ 90,070,000	June 2021 <sup>(1)</sup>
Bank of America, N.A.	2016 Series B-1 and Series B-2	\$ 82,905,000	July 2021 <sup>(1)</sup>
PNC Bank, N.A.	2017 Authorization Series A	\$ 80,000,000	March 2023
PNC Bank, N.A.	2000 Authorization Series B-3	<u>\$ 78,900,000</u>	March 2023
<b>Total</b>		<b>\$331,875,000</b>	

Source: Metropolitan.

<sup>(1)</sup> Metropolitan expects to renew or replace such liquidity facilities prior to their expiration date.

**Interest Rate Swap Transactions.** By resolution adopted on September 11, 2001, Metropolitan's Board authorized the execution of interest rate swap transactions and related agreements in accordance with a master swap policy, which was subsequently amended by resolutions adopted on July 14, 2009 and May 11, 2010. Metropolitan may execute interest rate swaps if the transaction can be expected to reduce exposure to changes in interest rates on a particular financial transaction or in the management of interest rate risk derived from Metropolitan's overall asset/liability balance, result in a lower net cost of borrowing or achieve a higher net rate of return on investments made in connection with or incidental to the issuance, incurring or carrying of Metropolitan's obligations or investments, or manage variable interest rate exposure consistent with prudent debt practices and Board-approved guidelines. The Chief Financial Officer reports to the Finance and Insurance Committee of Metropolitan's Board each quarter on outstanding swap transactions, including notional amounts outstanding, counterparty exposures and termination values based on then-existing market conditions.

Metropolitan currently has one type of interest rate swap, referred to in the table below as "Fixed Payor Swaps." Under this type of swap, Metropolitan receives payments that are calculated by reference to a floating interest rate and makes payments that are calculated by reference to a fixed interest rate.

Metropolitan's obligations to make regularly scheduled net payments under the terms of the interest rate swap agreements are payable on a parity with the Senior Parity Obligations. Termination payments under the 2002A and 2002B interest rate swap agreements would be payable on a parity with the Senior Parity Obligations. Termination payments under all other interest rate swap agreements would be on parity with the Subordinate Parity Obligations.

The following swap transactions were outstanding as of December 1, 2020:

**FIXED PAYOR SWAPS:**

<u>Designation</u>	<u>Notional Amount Outstanding</u>	<u>Swap Counterparty</u>	<u>Fixed Payor Rate</u>	<u>Metropolitan Receives</u>	<u>Maturity Date</u>
2002 A	\$ 48,282,000	Morgan Stanley Capital Services, Inc.	3.300%	57.74% of one-month LIBOR	7/1/2025
2002 B	18,063,000	JPMorgan Chase Bank	3.300	57.74% of one-month LIBOR	7/1/2025
2003	150,047,500	Wells Fargo Bank	3.257	61.20% of one-month LIBOR	7/1/2030
2003	150,047,500	JPMorgan Chase Bank	3.257	61.20% of one-month LIBOR	7/1/2030
2004 C	7,760,500	Morgan Stanley Capital Services, Inc.	2.980	61.55% of one-month LIBOR	10/1/2029
2004 C	6,349,500	Citigroup Financial Products, Inc.	2.980	61.55% of one-month LIBOR	10/1/2029
2005	29,057,500	JPMorgan Chase Bank	3.360	70% of 3-month LIBOR	7/1/2030
2005	<u>29,057,500</u>	Citigroup Financial Products, Inc.	3.360	70% of 3-month LIBOR	7/1/2030
<b>Total</b>	<b>\$438,665,000</b>				

*Source: Metropolitan.*

These interest rate swap agreements entail risk to Metropolitan. The counterparty may fail or be unable to perform, interest rates may vary from assumptions, Metropolitan may be required to post collateral in favor of its counterparties and Metropolitan may be required to make significant payments in the event of

an early termination of an interest rate swap. Metropolitan believes that if such an event were to occur, it would not have a material adverse impact on its financial position. Metropolitan seeks to manage counterparty risk by diversifying its swap counterparties, limiting exposure to any one counterparty, requiring collateralization or other credit enhancement to secure swap payment obligations, and by requiring minimum credit rating levels. Initially, swap counterparties must be rated at least “Aa3” or “AA-”, or equivalent by any two of the nationally recognized credit rating agencies; or use a “AAA” subsidiary as rated by at least one nationally recognized credit rating agency. Should the credit rating of an existing swap counterparty drop below the required levels, Metropolitan may enter into additional swaps if those swaps are “offsetting” and risk-reducing swaps. Each counterparty is initially required to have minimum capitalization of at least \$150 million. See Note 5(e) in Metropolitan’s audited financial statements in Appendix B.

Early termination of an interest rate swap agreement could occur due to a default by either party or the occurrence of a termination event (including defaults under other specified swaps and indebtedness, certain acts of insolvency, if a party may not legally perform its swap obligations, or, with respect to Metropolitan, if its credit rating is reduced below “BBB-” by Moody’s or “Baa3” by S&P (under most of the interest rate swap agreements) or below “BBB” by Moody’s or “Baa2” by S&P (under one of the interest rate swap agreements)). As of September 31, 2020, Metropolitan would have been required to pay to some of its counterparties termination payments if its swaps were terminated on that date. Metropolitan’s net exposure to its counterparties for all such termination payments on that date was approximately \$68.1 million. Metropolitan does not presently anticipate early termination of any of its interest rate swap agreements due to default by either party or the occurrence of a termination event. However, Metropolitan has previously exercised, and may in the future exercise, from time to time, optional early termination provisions to terminate all or a portion of certain interest rate swap agreements.

Metropolitan is required to post collateral in favor of a counterparty to the extent that Metropolitan’s total exposure for termination payments to that counterparty exceeds the threshold specified in the applicable swap agreement. Conversely, the counterparties are required to release collateral to Metropolitan or post collateral for the benefit of Metropolitan as market conditions become favorable to Metropolitan. As of September 30, 2020, Metropolitan had no collateral posted with any counterparty. The highest, month-end, amount of collateral posted was \$36.8 million, on June 30, 2012, which was based on an outstanding swap notional amount of \$1.4 billion at that time. The amount of required collateral varies from time to time due primarily to interest rate movements and can change significantly over a short period of time. See “METROPOLITAN REVENUES—Financial Reserve Policy” in this Appendix A. In the future, Metropolitan may be required to post additional collateral, or may be entitled to a reduction or return of the required collateral amount. Collateral deposited by Metropolitan is held by the counterparties; a bankruptcy of any counterparty holding collateral posted by Metropolitan could adversely affect the return of the collateral to Metropolitan. Moreover, posting collateral limits Metropolitan’s liquidity. If collateral requirements increase significantly, Metropolitan’s liquidity may be materially adversely affected. See “METROPOLITAN REVENUES—Financial Reserve Policy” in this Appendix A.

#### **Direct Purchase Long Mode Bonds**

In April 2020, Metropolitan entered into a Bond Purchase Agreement, dated as of April 1, 2020 (the “2020 Direct Purchase Agreement”) with Wells Fargo Municipal Capital Strategies, LLC (“WFMCS”), for the purchase by WFMCS and sale by Metropolitan of Metropolitan’s \$271.8 million Special Variable Rate Water Revenue Refunding Bonds 2020 Series B (the “2020B Senior Revenue Bonds”). The 2020B Senior Revenue Bonds were issued for the purpose of refunding all of Metropolitan’s then outstanding variable rate Senior Revenue Bonds that were designated as self-liquidity bonds as part of Metropolitan’s self-liquidity program (“Self-Liquidity Bonds”).

The 2020B Senior Revenue Bonds were issued under the Senior Debt Resolutions and are further described in a related paying agent agreement, dated as of April 1, 2020 (the “2020B Paying Agent Agreement”), by and between Metropolitan and Wells Fargo Bank, N.A., as paying agent. Pursuant to the

2020B Paying Agent Agreement, the 2020B Senior Revenue Bonds may bear interest from time to time in any one of several interest rate modes at the election of Metropolitan. The 2020B Senior Revenue Bonds were initially issued in a Long Mode under the 2020B Paying Agent Agreement and initially bear interest at a Long Rate equal to 1.04 percent per annum for the initial Long Period ending on April 2, 2021. The 2020B Senior Revenue Bonds are subject to mandatory tender for purchase on April 2, 2021 (the "Mandatory Tender Date"), the last day of the Long Period. The 2020B Senior Revenue Bonds were initially designated as Self-Liquidity Bonds pursuant to the 2020B Paying Agent Agreement and no standby bond purchase agreement or other liquidity facility is in effect for the purchase of such bonds.

On or before the date 120 days prior to the end of the Long Period, Metropolitan may request WFMCS to purchase the 2020B Senior Revenue Bonds for another Long Period, or Metropolitan may seek to remarket the 2020B Senior Revenue Bonds to another bank or in the public debt markets in a new interest rate mode or at a fixed interest rate. In the event the 2020B Bonds are not purchased by WFMCS for a subsequent Long Period, Metropolitan is obligated under the 2020 Direct Purchase Agreement to cause 2020B Senior Revenue Bonds that have not been converted to another interest rate mode or remarketed to a purchaser or purchasers other than WFMCS ("Unremarketed 2020B Bonds") to be redeemed on the Mandatory Tender Date; provided, that if no default or event of default under the 2020 Direct Purchase Agreement shall have occurred and be continuing and the representations and warranties of Metropolitan shall be true and correct on the Mandatory Tender Date, then the principal amount of the Unremarketed 2020B Senior Revenue Bonds shall be due and payable on the date that is 30 days following the Mandatory Tender Date and shall accrue interest at the Purchaser Rate, a fluctuating interest per annum equal to, the greatest of the (i) the Prime Rate, (ii) Federal Funds Rate plus one-half of one percent, and (iii) five percent, as specified in the 2020 Direct Purchase Agreement. If no default or event of default under the 2020 Direct Purchase Agreement shall have occurred and be continuing and the representations and warranties of Metropolitan shall be true and correct at the end of such 30-day period, the Unremarketed 2020B Senior Revenue Bonds will continue to bear interest at the Purchaser Rate plus, after 180 days from the Mandatory Tender Date, a spread of one percent, and the principal amount of such Unremarketed 2020B Senior Revenue Bonds may, at Metropolitan's request, instead be subject to mandatory redemption in substantially equal installments payable every six months over an amortization period commencing six months after the Mandatory Tender Date and ending on the third anniversary of the Mandatory Tender Date.

Under the 2020 Direct Purchase Agreement, upon a failure by Metropolitan to pay principal or interest of any 2020B Senior Revenue Bonds, a failure by Metropolitan to perform or observe its covenants, a default in other specified indebtedness of Metropolitan, certain acts of bankruptcy or insolvency, or other specified events of default (including if S&P shall have assigned a credit rating below "BBB-", or if any of Fitch, S&P or Moody's shall have assigned a credit rating below "A-" or "A3," to Senior Revenue Bonds issued under the Senior Debt Resolutions), WFMCS has the right to cause a mandatory tender of the 2020B Senior Revenue Bonds and accelerate (depending on the event, seven days after the occurrence, or for certain events, only after 180 days' notice) Metropolitan's obligation to repay the 2020B Senior Revenue Bonds.

In connection with the execution of the 2020 Direct Purchase Agreement, Metropolitan designated the principal payable on the 2020B Senior Revenue Bonds on the Mandatory Tender Date as Excluded Principal Payments under the Senior Debt Resolutions and thus, for purposes of calculating Maximum Annual Debt Service, included the amount of principal and interest due and payable in connection therewith on a schedule of Assumed Debt Service. This schedule of Assumed Debt Service assumes that Metropolitan will pay the principal of the 2020B Senior Revenue Bonds over a period of 30 years at a fixed interest rate of approximately 5.00 percent.

Metropolitan has previously, and may in the future, enter into one or more self-liquidity revolving credit agreements which may be drawn upon for the purpose of paying the purchase price of any Self-Liquidity Bonds issued by Metropolitan, the repayment obligations of Metropolitan under which may be secured as either Senior Parity Obligations or Subordinate Parity Obligations.

### **Term Mode Bonds**

As of December 1, 2020, Metropolitan had outstanding \$2.8 million of Senior Revenue Bonds bearing interest in a term mode, comprised of its 2014 Series C-3 Bonds (the "Term Mode Bonds"). The Term Mode Bonds initially bear interest at a fixed rate for a specified period from their date of issuance, after which there shall be determined a new interest mode for such Term Mode Bonds (which may be another term mode, a daily mode, a weekly mode, a short-term mode or an index mode) or the Term Mode Bonds may be converted to bear fixed interest rates through the maturity date thereof. The owners of the Term Mode Bonds must tender for purchase, and Metropolitan must purchase, all of the Term Mode Bonds on the specified scheduled mandatory tender date of each term period for such Term Mode Bonds. The Term Mode Bonds outstanding as of December 1, 2020, are summarized in the following table:

<b>Term Mode Bonds</b>		
<b>Series</b>	<b>Original Principal Amount Issued</b>	<b>Next Scheduled Mandatory Tender Date</b>
2014 C-3	\$ 2,810,000	October 1, 2021 <sup>(1)</sup>

*Source: Metropolitan.*

<sup>(1)</sup> Metropolitan expects to refund or remarket the Term Mode Bonds prior to their next scheduled mandatory tender date.

Metropolitan will pay the principal of, and interest on, the Term Mode Bonds on parity with its other Senior Revenue Bonds. Metropolitan anticipates that it will pay the purchase price of tendered Term Mode Bonds from the proceeds of remarketing such Term Mode Bonds or from other available funds. Metropolitan's obligation to pay the purchase price of any tendered Term Mode Bonds is an unsecured, special limited obligation of Metropolitan payable from Net Operating Revenues. Purchase price payments of Term Mode Bonds are subordinate to both the Senior Revenue Bonds and Senior Parity Obligations and to the Subordinate Revenue Bonds and Subordinate Parity Obligations. Metropolitan has not secured any liquidity facility or letter of credit to support the payment of the purchase price of Term Mode Bonds in connection with any scheduled mandatory tender. If the purchase price of the Term Mode Bonds is not paid from the proceeds of remarketing or other funds following a scheduled mandatory tender, such Term Mode Bonds will then bear interest at a default rate of up to 12 percent per annum until purchased by Metropolitan or redeemed. Failure to pay the purchase price of Term Mode Bonds on a scheduled mandatory tender date is a default under the related paying agent agreement, upon the occurrence and continuance of which a majority in aggregate principal amount of the owners of such Term Mode Bonds may elect a bondholders' committee to exercise rights and powers of such owners under such paying agent agreement. Failure to pay the purchase price of Term Mode Bonds on a scheduled mandatory tender date is not a default under the Senior Debt Resolutions. If the purchase price of the Term Mode Bonds is not paid on a scheduled mandatory tender date, such Term Mode Bonds will also be subject to special mandatory redemption, in part, 18, 36 and 54 months following the purchase default. Any such special mandatory redemption payment will constitute an obligation payable on parity with the Senior Revenue Bonds and Senior Parity Obligations.

### **Senior Parity Obligations**

**Short-Term Revolving Credit Facility.** In April 2016, Metropolitan entered into a noteholder's agreement (such agreement as subsequently amended, the "RBC Short-Term Revolving Credit Facility") with RBC Municipal Products, LLC ("RBC") and a related note purchase agreement with RBC Capital Products, LLC, as the underwriter, for the issuance and sale by Metropolitan and the purchase by RBC of Metropolitan's short-term Index Notes. Pursuant to the RBC Short-Term Revolving Credit Facility, Metropolitan may borrow, pay down and re-borrow amounts, through the issuance and sale from time to time of up to \$200 million of notes (including, subject to certain terms and conditions, notes to refund maturing notes) to be purchased by RBC during the term of RBC's commitment thereunder (which commitment currently extends to April 5, 2022). As of December 1, 2020, Metropolitan had outstanding \$0 of short-term notes under the RBC Short-Term Revolving Credit Facility. Any unpaid principal remaining outstanding at



the April 5, 2022 commitment end date of the RBC Short-Term Revolving Credit Facility is required to be paid by Metropolitan in quarterly installments over a period of approximately one year.

Notes under the RBC Short-Term Revolving Credit Facility bear interest at a variable rate of interest: for taxable borrowings, at a spread of 0.54 percent (so long as the current credit rating on Metropolitan's Senior Revenue Bonds issued under the Senior Debt Resolutions is maintained) to the one-month LIBOR; and for tax-exempt borrowings, at a spread of 0.38 percent (so long as the current credit rating on Metropolitan's Senior Revenue Bonds issued under the Senior Debt Resolutions is maintained) to the SIFMA Municipal Swap Index. Under the RBC Short-Term Revolving Credit Facility, upon a failure by Metropolitan to pay principal or interest of any note thereunder, a failure by Metropolitan to perform or observe its covenants, a default in other specified indebtedness of Metropolitan, certain acts of insolvency, or other specified events of default (including a reduction in the credit rating assigned to Senior Revenue Bonds issued under the Senior Debt Resolutions by Fitch, S&P or Moody's below "A-" or "A3"), the bank has the right to terminate its commitments and may accelerate (depending on the event, seven days after the occurrence, or for certain events, only after 180 days' notice) Metropolitan's obligation to repay its borrowings. Metropolitan has secured its obligation to pay principal and interest on notes evidencing borrowings under the RBC Short-Term Credit Facility as Senior Parity Obligations.

In connection with the execution of the RBC Short-Term Revolving Credit Facility, Metropolitan designated the principal and interest payable on the notes thereunder as Excluded Principal Payments under the Senior Debt Resolutions and thus, for purposes of calculating Maximum Annual Debt Service, included the amount of principal and interest due and payable under the RBC Short-Term Revolving Credit Facility on a schedule of Assumed Debt Service. This schedule of Assumed Debt Service assumes that Metropolitan will pay the principal under the RBC Short-Term Revolving Credit Facility over a period of 30 years at a fixed interest rate of approximately 3.3 percent.

Metropolitan has previously, and may in the future, enter into one or more other or alternative short-term revolving credit facilities, the repayment obligations of Metropolitan under which may be secured as either Senior Parity Obligations or Subordinate Parity Obligations.

### **Outstanding Subordinate Revenue Bonds and Subordinate Parity Obligations**

#### **Subordinate Revenue Bonds**

The water revenue bonds issued under the Subordinate Debt Resolutions outstanding as of December 1, 2020, are set forth below:

<u>Name of Issue</u>	<u>Principal Outstanding</u>
Subordinate Water Revenue Bonds, 2016 Authorization Series A <sup>(1)</sup>	\$ 175,000,000
Subordinate Water Revenue Refunding Bonds, 2017 Series A	232,715,000
Subordinate Water Revenue Refunding Bonds, 2017 Series B <sup>(2)</sup>	142,575,000
Subordinate Water Revenue Bonds, 2017 Series C <sup>(1)</sup>	80,000,000
Subordinate Water Revenue Refunding Bonds, 2017 Series D <sup>(1)</sup>	95,630,000
Subordinate Water Revenue Refunding Bonds, 2017 Series E <sup>(1)</sup>	95,625,000
Subordinate Water Revenue Refunding Bonds, 2018 Series A	90,115,000
Subordinate Water Revenue Bonds, 2018 Series B	64,345,000
Subordinate Water Revenue Refunding Bonds, 2019 Series A	233,660,000
Subordinate Water Revenue Refunding Bonds, 2020 Series A	152,455,000
<b>Total</b>	<b>\$1,362,120,000</b>

Source: Metropolitan.

<sup>(1)</sup> Outstanding variable rate obligation.

<sup>(2)</sup> Metropolitan expects to refund the \$35,645,000 principal amount of these bonds maturing on August 1, 2021 on or after their July 1, 2021 optional call date and prior to their maturity date.

### **Variable Rate Bonds**

As of December 1, 2020, of the \$1.36 billion outstanding Subordinate Revenue Bonds, \$446.3 million were variable rate obligations. The outstanding variable rate Subordinate Revenue Bonds (described under this caption “–Variable Rate Bonds”) are all bonds bearing interest in a LIBOR Index Mode or a SIFMA Index Mode (referred to herein as “Index Tender Bonds”). Metropolitan also has outstanding \$46.8 million short-term notes issued as variable rate Subordinate Parity Obligations (described under “–Subordinate Parity Obligations – Subordinate Short-Term Certificates” below).

***Direct Purchase LIBOR Index Mode Bonds.*** In December 2016, Metropolitan entered into a Continuing Covenant Agreement with Bank of America, N.A. (“BANA,” and the “2016 BANA Agreement”), for the purchase by BANA and sale by Metropolitan of \$175 million Subordinate Water Revenue Bonds, 2016 Authorization Series A (the “Subordinate 2016 Series A Bonds”), which was the first series of bonds issued under the Subordinate Debt Resolutions. Proceeds were used to reimburse Metropolitan for the purchase of the Delta Islands in the San Francisco Bay\Sacramento-San Joaquin River Delta that was funded from Metropolitan’s reserves in July 2016.

The Subordinate 2016 Series A Bonds bear interest at a variable rate of interest, at a spread of 0.32 percent (so long as the current credit rating on Metropolitan’s Senior Revenue Bonds issued under the Senior Debt Resolutions is maintained) to one-month LIBOR. Under the 2016 BANA Agreement, upon a failure by Metropolitan to pay principal or interest of any Subordinate 2016 Series A Bonds, a failure by Metropolitan to perform or observe its covenants, a default in other specified indebtedness of Metropolitan, certain acts of insolvency, or other specified events of default (including if S&P shall have assigned a credit rating below “BBB–,” or if any of Fitch, S&P or Moody’s shall have assigned a credit rating below “BBB” or “Baa2,” to Senior Revenue Bonds issued under the Senior Debt Resolutions), BANA has the right to accelerate (depending on the event, seven days after the occurrence, or for certain events, only after 180 days’ notice) Metropolitan’s obligation to repay the Subordinate 2016 Series A Bonds. Metropolitan has secured its obligation to pay principal and interest under the 2016 BANA Agreement as a Subordinate Parity Obligation. The Subordinate 2016 Series A Bonds are Index Tender Bonds and are subject to mandatory tender for purchase on the scheduled mandatory tender date of June 21, 2021, or, if directed by BANA upon the occurrence and continuance of an event of default under the 2016 BANA Agreement, five business days after receipt of such direction. On or before the scheduled mandatory tender date, Metropolitan may request an extension of the 2016 BANA Agreement for another tender period or may request BANA to purchase the Subordinate 2016 Series A Bonds in another interest rate mode, or Metropolitan may seek to remarket the Subordinate 2016 Series A Bonds to another bank or in the public debt markets. In the event the 2016 BANA Agreement is not extended, Metropolitan is obligated under the 2016 BANA Agreement to cause unremarketed Subordinate 2016 Series A Bonds to be redeemed five business days after the scheduled mandatory tender date in the event the purchase price of the Subordinate 2016 Series A Bonds is not paid from the proceeds of a remarketing or other funds on the scheduled mandatory tender date. A failure to pay the purchase price of the Subordinate 2016 Series A Bonds upon a mandatory tender would constitute a default under the Subordinate Debt Resolutions if not remedied within five business days.

***SIFMA Index Mode Bonds.*** Metropolitan’s Subordinate Water Revenue Bonds, 2017 Series C, Subordinate Water Revenue Refunding Bonds, 2017 Series D and Subordinate Water Revenue Refunding Bonds, 2017 Series E (collectively, the “Subordinate 2017 Series C, D and E Bonds”) bear interest at a rate that fluctuates weekly based on the SIFMA Municipal Swap Index plus a spread. The Subordinate 2017 Series C, D and E Bonds are Index Tender Bonds and are subject to mandatory tender under certain circumstances, including on certain scheduled mandatory tender dates (unless earlier remarketed or otherwise retired). Metropolitan anticipates that it will pay the purchase price of tendered Subordinate 2017 Series C, D and E Bonds from the proceeds of remarketing such Index Tender Bonds or from other available funds. Metropolitan’s obligation to pay the purchase price of any such tendered Subordinate 2017 Series C, D and E Bonds is a special limited obligation of Metropolitan payable solely from Net Operating Revenues subordinate to the Senior Revenue Bonds and Senior Parity Obligations and on parity with the other

outstanding Subordinate Revenue Bonds and Subordinate Parity Obligations. Metropolitan has not secured any liquidity facility or letter of credit to support the payment of the purchase price of Subordinate 2017 Series C, D and E Bonds in connection with a scheduled mandatory tender. Failure to pay the purchase price of any Subordinate 2017 Series C, D and E Bonds on a scheduled mandatory tender date for such Index Tender Bonds for a period of five business days following written notice by any Owner of such Subordinate 2017 Series C, D and E Bonds will constitute an event of default under the Subordinate Debt Resolutions, upon the occurrence and continuance of which the owners of 25 percent in aggregate principal amount of the Subordinate Revenue Bonds then outstanding may elect a bondholders' committee to exercise rights and powers of such owners under the Subordinate Debt Resolutions, including the right to declare the entire unpaid principal of the Subordinate Revenue Bonds then outstanding to be immediately due and payable.

The mandatory tender dates and related tender periods for the Index Tender Bonds outstanding as of December 1, 2020, are summarized in the following table:

<b>Index Tender Bonds</b>				
<b>Series</b>	<b>Date of Issuance</b>	<b>Original Principal Amount Issued</b>	<b>Next Scheduled Mandatory Tender Date</b>	<b>Maturity Date</b>
Subordinate 2016 Authorization Series A	December 21, 2016	\$175,000,000	June 21, 2021 <sup>(1)</sup>	July 1, 2045
Subordinate 2017 Series C	July 3, 2017	80,000,000	June 21, 2021 <sup>(1)</sup>	July 1, 2047
Subordinate 2017 Refunding Series D	July 3, 2017	95,630,000	June 21, 2021 <sup>(1)</sup>	July 1, 2037
Subordinate 2017 Refunding Series E	July 3, 2017	<u>95,625,000</u>	June 21, 2021 <sup>(1)</sup>	July 1, 2037
<b>Total</b>		<b>\$446,255,000</b>		

Source: Metropolitan.

<sup>(1)</sup> Metropolitan expects to refund or remarket the Index Tender Bonds prior to their next scheduled mandatory tender date.

### **Subordinate Parity Obligations**

**Subordinate Short-Term Certificates.** In August 2019, Metropolitan entered into an amended and restated note purchase and continuing covenant agreement with BANA (the "Subordinate Refunding Note Purchase Agreement") for the purchase by BANA and sale by Metropolitan of Metropolitan's \$46.8 million principal amount of Short-Term Revenue Refunding Certificates, Series 2019 A (the "2019A Subordinate Short-Term Refunding Notes"). The \$46.8 principal amount of 2019A Subordinate Short-Term Refunding Notes issued by Metropolitan and purchased by BANA on August 1, 2019 refunded all of the outstanding notes previously issued by Metropolitan under a prior note purchase and continuing covenant agreement entered into in 2018 between Metropolitan and BANA. Such refunded notes were issued for the purpose of providing advance funding to support the California WaterFix as authorized by the Board on July 10, 2018. On May 2, 2019, DWR withdrew its approval of California WaterFix and announced plans to pursue a new planning and environmental review process for a single tunnel Bay-Delta conveyance project. See "METROPOLITAN'S WATER SUPPLY—State Water Project —Bay-Delta Proceedings Affecting State Water Project — Bay-Delta Planning Activities; Delta Conveyance" in this Appendix A.

The 2019A Subordinate Short-Term Refunding Notes bear interest at a fluctuating per annum interest rate, equal to one-month LIBOR plus a spread of 0.32 percent (which spread is subject to increase on a scale based upon the then applicable credit ratings on Metropolitan's Senior Revenue Bonds), not to exceed 18 percent per annum. The scheduled maturity date of the 2019A Subordinate Short-Term Refunding Notes is August 1, 2021. On or before the date 120 days prior to the scheduled maturity date of the 2019A Subordinate Short-Term Refunding Notes, Metropolitan may request BANA to extend its commitment and to refund and exchange the 2019A Subordinate Short-Term Refunding Notes with new refunding notes, or Metropolitan may seek to refund the 2019A Subordinate Short-Term Refunding Notes with another bank or

to refinance the 2019A Subordinate Short-Term Refunding Notes on a short or long-term basis in the public debt markets.

Concurrently with the execution of the Subordinate Refunding Note Purchase Agreement, in August 2019, Metropolitan entered into an additional note purchase and continuing covenant agreement (the "2019 Subordinate Note Purchase Agreement") with BANA for the purchase by BANA and sale by Metropolitan, from time to time, of Metropolitan's Short-Term Revenue Certificates, Series 2019. Pursuant to the terms of the 2019 Subordinate Note Purchase Agreement, Metropolitan may borrow, through the issuance and sale from time to time of short-term notes (with maturity dates not exceeding one year from their delivery date), an aggregate principal amount not to exceed \$39.2 million (including, subject to certain terms and conditions, notes to refund maturing notes) to be purchased by BANA during the term of BANA's commitment thereunder (the stated expiration date of which is July 30, 2021). As of December 1, 2020, Metropolitan had outstanding \$0 of Short-Term Revenue Certificates under the 2019 Subordinate Note Purchase Agreement.

Notes under the 2019 Subordinate Note Purchase Agreement bear interest at a fluctuating per annum interest rate: (i) for taxable borrowings, equal to one-month LIBOR plus a spread of 0.32 percent; and (ii) for tax-exempt borrowings, equal to 80 percent of one-month LIBOR plus a spread of 0.20 percent; in each case, which spread is subject to increase on a scale based upon the then applicable credit ratings on Metropolitan's Senior Revenue Bonds. The per annum interest rate on notes under 2019 Subordinate Note Purchase Agreement shall not exceed 12 percent on notes issued for new money purposes and shall not exceed 18 percent on notes issued to refund maturing notes.

Metropolitan has secured its obligations to pay principal and interest under the Subordinate Refunding Note Purchase Agreement and the 2019 Subordinate Note Purchase Agreement as Subordinate Parity Obligations, payable from Net Operating Revenues on a basis junior and subordinate to Metropolitan's Senior Revenue Bonds and Senior Parity Obligations and on parity with Metropolitan's Subordinate Revenue Bonds.

Under each of Subordinate Refunding Note Purchase Agreement and the 2019 Subordinate Note Purchase Agreement, upon a failure by Metropolitan to pay principal or interest of any note thereunder, upon a failure by Metropolitan to perform or observe its covenants, a default in other specified indebtedness of Metropolitan, certain acts of bankruptcy or insolvency, or other specified events of default (including if S&P shall have assigned a credit rating below "BBB-," or if any of Fitch, S&P or Moody's shall have assigned a credit rating below "BBB" or "Baa2," to Metropolitan's Senior Revenue Bonds), BANA has the right to terminate its commitments thereunder and may accelerate (depending on the event, seven days after the occurrence, or for certain events, only after 180 days' notice) Metropolitan's obligation to repay its borrowings. Upon the occurrence and during the continuation of an event of default under the Subordinate Refunding Note Purchase Agreement or the 2019 Subordinate Note Purchase Agreement, outstanding notes thereunder would bear interest at a default rate of 12 percent per annum.

#### **Other Junior Obligations**

Metropolitan currently is authorized to issue up to \$400,000,000 of Commercial Paper Notes payable from Net Operating Revenues on a basis subordinate to both the Senior Revenue Bonds and Senior Parity Obligations and to the Subordinate Revenue Bonds and Subordinate Parity Obligations. Although no Commercial Paper Notes are currently outstanding, the authorization remains in full force and effect and Metropolitan may issue Commercial Paper Notes from time to time.

#### **General Obligation Bonds**

As of December 1, 2020, \$32,230,000 aggregate principal amount of general obligation bonds payable from *ad valorem* property taxes were outstanding. See "METROPOLITAN REVENUES-General" and "Revenue Allocation Policy and Tax Revenues" in this Appendix A. Metropolitan's revenue bonds are not payable from the levy of *ad valorem* property taxes.

<b>General Obligation Bonds</b>	<b>Amount Issued<sup>(1)</sup></b>	<b>Principal Outstanding</b>
Waterworks General Obligation Refunding Bonds, 2014 Series A	\$49,645,000	\$ 4,540,000
Waterworks General Obligation Refunding Bonds, 2019 Series A	16,755,000	14,025,000
Water Works General Obligation Refunding Bonds, 2020 Series A	<u>13,665,000</u>	<u>13,665,000</u>
<b>Total</b>	<b><u>\$80,065,000</u></b>	<b><u>\$32,230,000</u></b>

Source: Metropolitan.

<sup>(1)</sup> Voters authorized Metropolitan to issue \$850,000,000 of Waterworks General Obligation Bonds, Election 1966, in multiple series, in a special election held on June 7, 1966. This authorization has been fully utilized. This table lists bonds that refunded such Waterworks General Obligation Bonds, Election 1966.

### State Water Contract Obligations

**General.** As described herein, in 1960, Metropolitan entered into its State Water Contract with DWR to receive water from the State Water Project. All expenditures for capital and operations, maintenance, power and replacement costs associated with the State Water Project facilities used for water delivery are paid for by the 29 Contractors that have executed State water supply contracts with DWR, including Metropolitan. Contractors are obligated to pay allocable portions of the cost of construction of the system and ongoing operating and maintenance costs through at least 2035, regardless of quantities of water available from the project. Other payments are based on deliveries requested and actual deliveries received, costs of power required for actual deliveries of water, and offsets for credits received. In exchange, Contractors have the right to participate in the system, with an entitlement to water service from the State Water Project and the right to use the portion of the State Water Project conveyance system necessary to deliver water to them at no additional cost as long as capacity exists. Metropolitan's State Water Contract accounts for nearly one-half of the total entitlement for State Water Project water contracted for by all Contractors.

DWR and other State Water Contractors, including Metropolitan, have reached an Agreement in Principle to extend their State water supply contracts to 2085 and to make certain changes related to the financial management of the State Water Project in the future. See "METROPOLITAN'S WATER SUPPLY—State Water Project" in this Appendix A.

Metropolitan's payment obligation for the State Water Project for the fiscal year ended June 30, 2020 was \$518.9 million, which amount reflects prior year's credits of \$33.2 million. For the fiscal year ended June 30, 2020, Metropolitan's payment obligations under the State Water Contract were approximately 35 percent of Metropolitan's total annual expenses. A portion of Metropolitan's annual property tax levy is for payment of State Water Contract obligations, as described above under "METROPOLITAN REVENUES—Revenue Allocation Policy and Tax Revenues" in this Appendix A. Any deficiency between tax levy receipts and Metropolitan's State Water Contract obligations is expected to be paid from Operating Revenues, as defined in the Senior Debt Resolutions. See Note 9(a) to Metropolitan's audited financial statements in Appendix B for an estimate of Metropolitan's payment obligations under the State Water Contract. See also "—Power Sources and Costs; Related Long-Term Commitments" for a description of current and future costs for electric power required to operate State Water Project pumping systems and a description of litigation involving the federal relicensing of the Hyatt-Thermalito hydroelectric generating facilities at Lake Oroville.

Metropolitan capitalizes its share of the State Water Project capital costs as participation rights in State Water Project facilities as such costs are billed by DWR. Unamortized participation rights essentially represent a prepayment for future water deliveries through the State Water Project system. Metropolitan's share of system operating and maintenance costs are annually expensed.

DWR and various subsets of the State Water Contractors have entered into amendments to the State water supply contracts related to the financing of certain State Water Project facilities. The amendments establish procedures to provide for the payment of construction costs financed by DWR bonds by establishing separate subcategories of charges to produce the revenues required to pay all of the annual financing costs (including coverage on the allocable bonds) relating to the financed project. If any affected Contractor defaults on payment under certain of such amendments, the shortfall may be collected from the non-defaulting affected Contractors, subject to certain limitations.

These amendments represent additional long-term obligations of Metropolitan, as described below.

***Devil Canyon-Castaic Contract.*** On June 23, 1972, Metropolitan and five other Southern California public agencies entered into a contract (the "Devil Canyon-Castaic Contract") with DWR for the financing and construction of the Devil Canyon and Castaic power recovery facilities, located on the aqueduct system of the State Water Project. Under this contract, DWR agreed to build the Devil Canyon and Castaic facilities, using the proceeds of revenue bonds issued by DWR under the State Central Valley Project Act. DWR also agreed to use and apply the power made available by the construction and operation of such facilities to deliver water to Metropolitan and the other contracting agencies. Metropolitan, in turn, agreed to pay to DWR 88 percent of the debt service on the revenue bonds issued by DWR. For calendar year 2020, this represented a payment of \$7.8 million. In addition, Metropolitan agreed to pay 78.5 percent of the operation and maintenance expenses of the Devil Canyon facilities and 96 percent of the operation and maintenance expenses of the Castaic facilities. Metropolitan's obligations under the Devil Canyon-Castaic Contract continue until the bonds are fully retired in 2022 even if DWR is unable to operate the facilities or deliver power from these facilities.

***Off-Aqueduct Power Facilities.*** In addition to system "on-aqueduct" power facilities costs, DWR has, either on its own or by joint venture, financed certain off-aqueduct power facilities. The power generated is utilized by the system for water transportation and other State Water Project purposes. Power generated in excess of system needs is marketed to various utilities and the California Independent System Operator ("CAISO"). Metropolitan is entitled to a proportionate share of the revenues resulting from sales of excess power. By virtue of a 1982 amendment to the State Water Contract and the other water supply contracts, Metropolitan and the other water Contractors are responsible for paying the capital and operating costs of the off-aqueduct power facilities regardless of the amount of power generated.

***East Branch Enlargement Amendment.*** In 1986, Metropolitan's State Water Contract and the water supply contracts of certain other State Water Contractors were amended for the purpose, among others, of financing the enlargement of the East Branch of the California Aqueduct. Under the amendment, enlargement of the East Branch can be initiated either at Metropolitan's request or by DWR finding that enlargement is needed to meet demands. Metropolitan, the other State Water Contractors on the East Branch, and DWR are currently in discussions on the timetable and plan for future East Branch enlargement actions.

The amendment establishes a separate subcategory of the Transportation Charge under the State Water Contract for the East Branch Enlargement and provides for the payment of costs associated with financing and operating the East Branch Enlargement. Under the amendment, the annual financing costs for such facilities financed by bonds issued by DWR are allocated among the participating Contractors based upon the delivery capacity increase allocable to each participating Contractor. Such costs include, but are not limited to, debt service, including coverage requirements, deposits to reserves, and certain operation and maintenance expenses, less any credits, interest earnings or other moneys received by DWR in connection with this facility.

If any participating Contractor defaults on payment of its allocable charges under the amendment, among other things, the non-defaulting participating Contractors may assume responsibility for such charges and receive delivery capability that would otherwise be available to the defaulting participating Contractor in



proportion to the non-defaulting Contractor's participation in the East Branch Enlargement. If participating Contractors fail to cure the default, Metropolitan will, in exchange for the delivery capability that would otherwise be available to the defaulting participating Contractor, assume responsibility for the capital charges of the defaulting participating Contractor.

***Water System Revenue Bond Amendment.*** In 1987, the State Water Contract and other water supply contracts were amended for the purpose of financing State Water Project facilities through revenue bonds. This amendment establishes a separate subcategory of the Delta Water Charge and the Transportation Charge under the State water supply contracts for projects financed with DWR water system revenue bonds. This subcategory of charge provides the revenues required to pay the annual financing costs of the bonds and consists of two elements. The first element is an annual charge for repayment of capital costs of certain revenue bond financed water system facilities under the existing water supply contract procedures. The second element is a water system revenue bond surcharge to pay the difference between the total annual charges under the first element and the annual financing costs, including coverage and reserves, of DWR's water system revenue bonds.

If any Contractor defaults on payment of its allocable charges under this amendment, DWR is required to allocate a portion of the default to each of the nondefaulting Contractors, subject to certain limitations, including a provision that no nondefaulting Contractor may be charged more than 125 percent of the amount of its annual payment in the absence of any such default. Under certain circumstances, the nondefaulting Contractors would be entitled to receive an allocation of the water supply of the defaulting Contractor.

The following table sets forth Metropolitan's projected costs of State Water Project water based upon DWR's Appendix B to Bulletin 132-19 (an annual report produced by DWR setting forth data and computations used by the State in determining State Water Contractors' Statements of Charges), Metropolitan's share of the forecasted costs associated with the planning of a single tunnel Bay-Delta conveyance project (see "METROPOLITAN'S WATER SUPPLY-State Water Project -Bay-Delta Proceedings Affecting State Water Project - Bay-Delta Planning Activities; Delta Conveyance"), and power costs forecasted by Metropolitan.

The projections for fiscal year 2020-21 are revised from the projections adopted in the fiscal year 2020-21 and 2021-22 biennial budget and based on results through November 2020. The projections for fiscal years 2021-22 through 2024-25 reflect Metropolitan's biennial budget for fiscal years 2020-21 and 2021-22, which includes a ten-year financial forecast. See also "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A. The projections reflect certain assumptions concerning future events and circumstances which may not occur or materialize. Actual costs may vary from these projections if such events and circumstances do not occur as expected or materialize, and such variances may be material.

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**PROJECTED COSTS OF METROPOLITAN  
FOR STATE WATER CONTRACT AND DELTA CONVEYANCE  
(Dollars in Millions)**

Year Ending June 30	Capital Costs <sup>(1)</sup>	Minimum OMP&R <sup>(1)</sup>	Power Costs <sup>(2)</sup>	Refunds & Credits <sup>(1)</sup>	Delta Conveyance <sup>(3)</sup>	Total <sup>(4)</sup>
2021	\$180.4	\$262.8	\$126.6	\$(39.9)	\$25.0	\$554.9
2022	211.9	275.2	212.4	(70.1)	25.0	654.4
2023	189.4	283.9	212.2	(63.5)	50.0	672.0
2024	209.9	294.9	212.5	(64.0)	--	653.3
2025	228.2	309.8	218.9	(66.8)	--	690.1

Source: Metropolitan.

- (1) Capital Costs, Minimum Operations, Maintenance, Power and Replacement ("OMP&R") and Refunds and Credits projections are based on DWR's Appendix B to Bulletin 132-19. Capital costs reflect DWR's October 2019 capital expenditures projections based upon its condition assessment review of State Water Project repair and replacement needs.
- (2) Power costs are forecasted by Metropolitan based on a 50 percent State Water Project allocation. Availability of State Water Project supplies vary and deliveries may include transfers and storage. All deliveries are based upon availability, as determined by hydrology, water quality and wildlife conditions. See "METROPOLITAN'S WATER SUPPLY-State Water Project" and "Endangered Species Act and Other Environmental Considerations" in this Appendix A.
- (3) Based on Metropolitan's share of the forecasted planning costs for a single tunnel project. Does not include any capital costs associated with any future proposed Bay-Delta conveyance project.
- (4) Totals may not add due to rounding.

**Power Sources and Costs; Related Long-Term Commitments**

Current and future costs for electric power required for operating the pumping systems of the CRA and the State Water Project are a substantial part of Metropolitan's overall expenses. Metropolitan's power costs include various ongoing fixed annual obligations under its contracts with the U.S. Department of Energy Western Area Power Administration and the Bureau of Reclamation for power from the Hoover and Parker Power Plants respectively. Expenses for electric power for the CRA for the fiscal years 2018-19 and 2019-20 were approximately and \$39.3 million and \$39.6 million, respectively. Expenses for electric power and transmission service for the State Water Project for fiscal years 2018-19 and 2019-20 were approximately \$127.5 million and \$134.0 million, respectively. Electricity markets are subject to volatility and Metropolitan is unable to give any assurance with respect to the magnitude of future power costs.

**Colorado River Aqueduct.** Approximately 50 percent of the annual power requirements for pumping at full capacity (1.25 million acre-feet of Colorado River water) in Metropolitan's CRA are secured through long-term contracts for energy generated from federal facilities located on the Colorado River (Hoover Power Plant and Parker Power Plant). Payments made under the Hoover Power Plant and Parker Power Plant contracts are operation and maintenance expenses. These contracts provide Metropolitan with reliable and economical power resources to pump Colorado River water to Metropolitan's service area.

As provided for under the Hoover Power Allocation Act of 2011 (H.R. 470), Metropolitan has executed a 50-year agreement with the Western Area Power Administration for the continued purchase of electric energy generated at the Hoover Power Plant through September 2067, succeeding Metropolitan's prior Hoover contract that expired on September 30, 2017.

Depending on pumping conditions, Metropolitan can require additional energy in excess of the base resources available to Metropolitan from the Hoover and Parker Power Plants. The remaining up to approximately 50 percent of annual pumping power requirements for full capacity pumping on the CRA is obtained through energy purchases from municipal and investor-owned utilities, third party suppliers, or the

CAISO markets. Metropolitan is a member of the Western Systems Power Pool (“WSPP”) and utilizes its industry standard form contract to make wholesale power purchases at market cost.

Gross diversions of water from Lake Havasu for fiscal years 2018-19 and 2019-20 were approximately 798,000 acre-feet and 552,000 acre-feet, respectively, including Metropolitan’s basic apportionment of Colorado River water and supplies from water transfer and storage programs. In fiscal years 2018-19 and 2019-20, Metropolitan purchased approximately 395,000 and sold 54,000 megawatt-hours, respectively, of additional energy.

Metropolitan has agreements with the Arizona Electric Power Cooperative (“AEPSCO”) to provide transmission and energy purchasing services to support CRA power operations. The term of these agreements extends to December 31, 2035.

**State Water Project.** The State Water Project’s power requirements are met from a diverse mix of resources, including State-owned hydroelectric generating facilities. DWR has short-term contracts with Metropolitan (hydropower), Kern River Conservation District (hydropower), Northern California Power Agency (natural gas generation), Wells Fargo Company (Solar), Dominion Solar Holdings (Solar), and S-Power Corporation (Solar). The remainder of the State Water Project power needs is met by purchases from the CAISO.

DWR is seeking renewal of the license issued by FERC for the State Water Project’s Hyatt-Thermalito hydroelectric generating facilities at Lake Oroville. A Settlement Agreement containing recommended conditions for the new license was submitted to FERC in March 2006. That agreement was signed by over 50 stakeholders, including Metropolitan and other State Water Contractors. With only a few minor modifications, FERC staff recommended that the Settlement Agreement be adopted as the condition for the new license. DWR issued a final EIR for the relicensing project on July 22, 2008.

Butte County and Plumas County filed separate lawsuits against DWR challenging the adequacy of the final EIR. This lawsuit also named all of the signatories to the Settlement Agreement, including Metropolitan, as “real parties in interest,” since they could be adversely affected by this litigation. On September 5, 2019, the Court of Appeal ruled that review pursuant to CEQA is preempted in certain respects by the Federal Power Act. The case is now before the California Supreme Court. If the decision is affirmed, the case will be dismissed. If the California Supreme Court finds in favor of the plaintiffs, the case will be remanded to the California Court of Appeal for a determination of sufficiency regarding the merits of the CEQA petition.

Regulatory permits and authorizations are also required before the new license can take effect. In December 2016, NMFS issued a biological opinion setting forth the terms and conditions under which the relicensing project must operate in order to avoid adverse impacts to threatened and endangered species. This was the last major regulatory requirement prior to FERC issuing a new license. Following the 2017 Oroville Dam spillway incident, Butte County, the City of Oroville, and others requested that FERC not issue a new license until an Independent Forensic Team (“IFT”) delivered their final report to FERC and FERC has had adequate time to review the report. The Final IFT report was delivered on January 5, 2018. DWR submitted a plan to address the findings of the report to FERC on March 12, 2018. See “METROPOLITAN’S WATER SUPPLY—State Water Project—2017 Oroville Dam Spillway Incident.” Metropolitan anticipates that FERC will issue the new license; however, the timeframe for FERC approval is not currently known. However, FERC has issued one-year renewals of the existing license since its initial expiration date on January 31, 2007 and is expected to issue successive one-year renewals until a new license is obtained.

DWR receives transmission service from the CAISO. The transmission service providers participating in the CAISO may seek increased transmission rates, subject to the approval of FERC. DWR

has the right to contest any such proposed increase. DWR may also be subject to increases in the cost of transmission service as new electric grid facilities are constructed.

On September 10, 2018, Governor Brown signed SB 100 into law, which took effect on January 1, 2019. SB 100 establishes a goal of providing 100 percent carbon-free electricity by 2045 and increases the 2030 Renewables Portfolio Standard ("RPS") requirement for retail electric utilities from 50 percent to 60 percent. Simultaneously, the Governor announced Executive Order B-55-18 directing state agencies to develop a framework to achieve and maintain carbon neutrality by 2045. Metropolitan and DWR are not subject to the RPS requirements. However, as a state agency, DWR is subject to the Executive Order. DWR has an existing climate action plan in order to achieve carbon neutrality by 2045.

October 9, 2019, Governor Newsom signed SB 49 into law. SB 49 requires Natural Resources, in collaboration with the Energy Commission and the Department of Water Resources to assess by January 1, 2022 the opportunities and constraints for potential operational and structural upgrades to the State Water Project to aid California in achieving its climate and energy goals, and to provide associated recommendations consistent with California's energy goals.

### **Defined Benefit Pension Plan and Other Post-Employment Benefits**

Metropolitan is a member of the California Public Employees' Retirement System ("PERS"), a multiple-employer pension system that provides a contributory defined-benefit pension for substantially all Metropolitan employees. PERS provides retirement and disability benefits, annual cost-of-living adjustments and death benefits to plan members and beneficiaries. PERS acts as a common investment and administrative agent for participating public entities within the State. PERS is a contributory plan deriving funds from employee contributions as well as from employer contributions and earnings from investments. A menu of benefit provisions is established by State statutes within the Public Employees' Retirement Law. Metropolitan selects optional benefit provisions from the benefit menu by contract with PERS.

Metropolitan makes contributions to PERS based on actuarially determined employer contribution rates. The actuarial methods and assumptions used are those adopted by the PERS Board of Administration ("PERS Board"). Employees hired prior to January 1, 2013 are required to contribute 7.00 percent of their earnings (excluding overtime pay) to PERS. Pursuant to the current memoranda of understanding, Metropolitan contributes the requisite 7.00 percent contribution for all employees represented by the Management and Professional Employees Association, the Association of Confidential Employees, Supervisors and Professional Personnel Association and AFSCME Local 1902 and who were hired prior to January 1, 2012. Employees in all four bargaining units who were hired on or after January 1, 2012 but before January 1, 2013, pay the full 7.00 percent contribution to PERS for the first five years of employment. After the employee completes five years of employment, Metropolitan contributes the requisite 7.00 percent contribution. Metropolitan also contributes the entire 7.00 percent on behalf of unrepresented employees. Employees hired on or after January 1, 2013 and who are "new" PERS members as defined by Public Employees' Pension Reform Act of 2013 pay a member contribution of 6.00 percent in fiscal years 2018-19 through 2019-20 and 7.25 percent in fiscal years 2020-21 through 2021-22. In addition, Metropolitan is required to contribute the actuarially determined remaining amounts necessary to fund the benefits for its members.

The contribution requirements of the plan members are established by State statute and the employer contribution rate is established and may be amended by PERS. The fiscal year contributions were/are based on the following actuarial reports and discount rates:

<b>Fiscal Year</b>	<b>Actuarial Valuation</b>	<b>Discount Rate</b>
2018-19	June 30, 2016	7.375%
2019-20	June 30, 2017	7.25%
2020-21	June 30, 2018	7.00%
2021-22	June 30, 2019	7.00%

Metropolitan was required to contribute 25.97 percent and 29.97 percent of annual projected payroll for fiscal years 2018-19 and 2019-20, respectively. Metropolitan's actual contribution for fiscal years 2018-19 and 2019-20 were \$68.3 million or 32.14 percent of annual covered payroll and \$77.6 million or 34.38 percent of annual covered payroll, respectively. The fiscal years 2018-19 and 2019-20 actual contribution included \$11.8 million or 5.56 percent and \$11.5 million or 5.10 percent of annual covered payroll, respectively, for Metropolitan's pick-up of the employees' 7.00 percent share. For fiscal years 2020-21 and 2021-22, Metropolitan is required to contribute 32.43 percent and 34.39 percent, respectively, of annual projected payroll, in addition to member contributions paid by Metropolitan.

Metropolitan's required contributions to PERS fluctuate each year and include a normal cost component and a component equal to an amortized amount of the unfunded liability. Many assumptions are used to estimate the ultimate liability of pensions and the contributions that will be required to meet those obligations. The PERS Board has adjusted and may in the future further adjust certain assumptions used in the PERS actuarial valuations, which may increase Metropolitan's required contributions to PERS in future years. Accordingly, Metropolitan cannot provide any assurances that its required contributions to PERS in future years will not significantly increase (or otherwise vary) from any past or current projected levels of contributions.

On December 21, 2016, the PERS Board approved lowering the discount rate to 7.00 percent over a three-year period. PERS has estimated that with a reduction in the rate of return to 7.00 percent, most employers could expect a rate increase of 1.00 percent to 3.00 percent of normal cost as a percent of payroll for miscellaneous plans and an increase in payments toward unfunded accrued liabilities of between 30 to 40 percent. As a result, required contributions of employers, including Metropolitan, are expected to increase.

Beginning with fiscal year 2017-18 PERS began collecting employer contributions towards the plan's unfunded liability as dollar amounts instead of the prior method of contribution rate. This change addresses potential funding issues that could arise from a declining payroll or reduction in the number of active members in the plan.

On December 19, 2017, the PERS Board adopted new actuarial assumptions based on the recommendations in the December 2017 CalPERS Experience Study and Review of Actuarial Assumptions. This study reviewed the retirement rates, termination rates, mortality rates, rates of salary increases and inflation assumption for public agencies. These new assumptions were incorporated in the June 30, 2017 actuarial valuation and reflected in the required contribution for fiscal year 2019-20. In addition, the Board adopted a new asset portfolio as part of its Asset Liability Management. The new asset mix supports a 7.00 percent discount rate. The reduction of the inflation assumption will be implemented in two steps in conjunction with the decreases in the discount rate. For the June 30, 2017 valuation an inflation rate of 2.625 percent was used and for the June 30, 2018 and subsequent valuations, an inflation rate of 2.50 percent was/will be used.

The PERS Board has adopted a new amortization policy effective with the June 30, 2019 actuarial valuation. The new policy shortens the period over which actuarial gains and losses are amortized from 30 years to 20 years with the payments computed using a level dollar amount. In addition, the new policy removes the five-year ramp-up and ramp-down on unfunded accrued liability bases attributable to

assumption changes and non-investment gains/losses. The new policy removes the five-year ramp-down on investment gains/losses. These changes will apply only to new unfunded accrued liability bases established on or after June 30, 2019.

The following table shows the funding progress of Metropolitan's pension plan.

<b>Valuation Date</b>	<b>Accrued Liability (\$ in billions)</b>	<b>Market Value of Assets (\$ in billions)</b>	<b>Unfunded Accrued Liability (\$ in billions)</b>	<b>Funded Ratio</b>
6/30/19 <sup>(1)</sup>	\$2.534	\$1.810	\$(0.724)	71.4%
6/30/18	\$2.433	\$1.744	\$(0.689)	71.7%
6/30/17	\$2.269	\$1.651	\$(0.618)	72.7%
6/30/16	\$2.166	\$1.524	\$(0.642)	70.3%
6/30/15	\$2.060	\$1.556	\$(0.504)	75.5%
6/30/14	\$1.983	\$1.560	\$(0.423)	78.7%
6/30/13	\$1.805	\$1.356	\$(0.449)	75.1%

<sup>(1)</sup> Most recent actuarial valuation available.

Source: California Public Employees' Retirement System.

The market value of assets reflected above is based upon the most recent actuarial valuation as of June 30, 2019. The actuarial valuation as of June 30, 2020 is not expected to be available before summer 2021. The June 30, 2020 valuation report will be used to establish the contribution requirements for fiscal year 2022-23. Increased volatility has been experienced in the financial markets in recent months and the market value at the time of the June 30, 2020 valuation is not yet known. Significant losses in market value or failure to achieve projected investment returns could substantially increase unfunded pension liabilities and future pension costs. See also "INTRODUCTION-COVID-19 Pandemic." However, as noted above, under the amortization policy adopted by PERS, changes in the unfunded accrued liability due to actuarial gains or losses are amortized over a fixed 20-year period with a five-year ramp up at the beginning and a five-year ramp down at the end of the amortization period, as a result of which the immediate fiscal impact of any one year's negative return on Metropolitan's contribution rates is reduced.

The following tables show the changes in Net Pension Liability and related ratios of Metropolitan's pension plan for fiscal years 2019-20 and 2018-19, and for fiscal years 2018-19 and 2017-18.

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(Dollars in thousands)	06/30/20	6/30/19	Increase/ (Decrease)
<b>Total Pension Liability</b>	\$2,479,307	\$2,376,778	\$102,529
<b>Plan Fiduciary Net Position</b>	1,810,312	1,742,741	67,571
<b>Plan Net Pension Liability</b>	\$ 668,995	\$ 634,037	\$ 34,958
Plan fiduciary net positions as a % of the total pension liability	73.02%	73.32%	
Covered payroll	\$ 212,558	\$ 204,635	
Plan net pension liability as a % of covered payroll	314.74%	309.84%	

(Dollars in thousands)	06/30/19	6/30/18	Increase/ (Decrease)
<b>Total Pension Liability</b>	\$2,376,778	\$2,315,248	\$61,530
<b>Plan Fiduciary Net Position</b>	1,742,741	1,654,331	88,410
<b>Plan Net Pension Liability</b>	\$ 634,037	\$ 660,917	\$(26,880)
Plan fiduciary net positions as a % of the total pension liability	73.32%	71.45%	
Covered payroll	\$ 204,635	\$ 199,186	
Plan net pension liability as a % of covered payroll	309.84%	331.81%	

The Net Pension Liability for Metropolitan's Miscellaneous Plan for the fiscal years ended June 30, 2020 and 2019 was measured as of June 30, 2019 and June 30, 2018, respectively, and the Total Pension Liability used to calculate the Net Pension Liability as of such dates was determined by an annual actuarial valuation as of June 30, 2018 and June 30, 2017, respectively.

For more information on the plan, see APPENDIX B—"THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA INDEPENDENT AUDITORS' REPORT AND BASIC FINANCIAL STATEMENTS FOR FISCAL YEARS ENDED JUNE 30, 2020 AND JUNE 30, 2019 AND BASIC FINANCIAL STATEMENTS FOR THE THREE MONTHS ENDED SEPTEMBER 30, 2020 AND 2019 (UNAUDITED)."

Metropolitan currently provides post-employment medical insurance to retirees and pays the post-employment medical insurance premiums to PERS. On January 1, 2012, Metropolitan implemented a longer vesting schedule for retiree medical benefits, which applies to all new employees hired on or after January 1, 2012. Payments for this benefit were \$27.3 million in fiscal year 2018-19 and \$45.3 million in fiscal year 2019-20. Under Governmental Accounting Standards Board Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*, Metropolitan is required to account for and report the outstanding obligations and commitments related to such benefits, commonly referred to as other post-employment benefits ("OPEB"), on an accrual basis.

The actuarial valuations dated June 30, 2017 and June 30, 2019, were released in March of 2018 and June of 2020, respectively. The 2017 valuation indicated that the Actuarially Determined Contribution ("ADC") in fiscal year 2019-20 was \$28.1 million and 2019 valuation indicate that the ADC will be

\$23.2 million and \$23.6 million in fiscal years 2020-21 and 2021-22, respectively. The ADC was based on the entry-age normal actuarial cost method with contributions determined as a level percent of pay. The actuarial assumptions included the following:

	June 30, 2019 Valuation	June 30, 2017 Valuation
Investment Rate of Return	6.75%	6.75%
Inflation	2.75%	2.75%
Salary Increases	3.00%	3.00%
Health Care Cost Trends	Medicare – starting at 6.3%, grading down to 4.0% over fifty-five years. Non-Medicare – starting at 7.25%, grading down to 4.0% over fifty-five years	Medicare – starting at 6.5%, grading down to 4.0% over fifty-seven years. Non-Medicare – starting at 7.5%, grading down to 4.0% over fifty-seven years.
Mortality, Termination, Disability	CalPERS 1997-2015 Experience Study Mortality projected fully generational with Scale MP-2019	CalPERS 1997-2011 Experience Study Mortality projected fully generational with Scale MP-2017
Affordable Care Act (ACA) Excise Tax	Not included. Repealed in December 2019.	2% load on retiree medical premium subsidy

As of June 30, 2019, the date of the most recent OPEB actuarial report, the unfunded actuarial accrued liability was estimated to be \$164.3 million and projected to be \$156.7 million at June 30, 2020. The amortization period for the unfunded actuarial accrued liability is 23 years closed with 17 years remaining as of fiscal year end 2020 and the amortization period of actuarial gains and losses is 15 years closed. Adjustments to the ADC include amortization of the unfunded actuarial accrued liability and actuarial gains and losses.

In September 2013, Metropolitan’s Board established an irrevocable OPEB trust fund with the California Employers’ Retiree Benefit Trust Fund. The market value of assets in the trust as of June 30, 2020 was \$287.7 million. As part of its biennial budget process, the Board approved the full funding of the ADC for fiscal years 2020-21 and 2021-22.

As noted above, the COVID-19 pandemic and related economic consequences have contributed to increased volatility in the financial markets. Declines in the market value of the OPEB trust fund or failure to achieve projected investment returns could negatively affect the funding status of the trust fund and increase ADCs in the future. See also “INTRODUCTION–COVID-19 Pandemic.”

The following tables show the changes in Net OPEB Liability and related ratios of Metropolitan’s OPEB plan for fiscal years 2019-20 and 2018-19, and for fiscal years 2018-19 and 2017-18.

<u>(Dollars in thousands)</u>	<u>06/30/20</u>	<u>6/30/19</u>	<u>Increase/ (Decrease)</u>
<b>Total OPEB Liability</b>	\$434,759	\$468,185	\$(33,426)
<b>Plan Fiduciary Net Position</b>	266,773	239,851	26,922
<b>Plan Net OPEB Liability</b>	\$167,986	\$228,334	\$(60,348)
Plan fiduciary net positions as a % of the total OPEB liability	61.36%	51.23%	
Covered payroll	\$212,558	\$204,635	
Plan net OPEB liability as a % of covered payroll	79.03%	111.58%	

<u>(Dollars in thousands)</u>	<u>06/30/19</u>	<u>6/30/18</u>	<u>Increase/ (Decrease)</u>
<b>Total OPEB Liability</b>	\$468,185	\$448,095	\$ 20,090
<b>Plan Fiduciary Net Position</b>	239,851	207,526	32,325
<b>Plan Net OPEB Liability</b>	\$228,334	\$240,569	\$(12,235)
Plan fiduciary net positions as a % of the total OPEB liability	51.23%	46.31%	
Covered payroll	\$204,635	\$199,186	
Plan net OPEB liability as a % of covered payroll	111.58%	120.78%	

The Net OPEB Liability for the fiscal years ended June 30, 2020 and 2019 was measured as of June 30, 2019 and June 30, 2018, respectively, and the Total OPEB Liability used to calculate the Net OPEB Liability as of such dates was determined by an annual actuarial valuation as of June 30, 2019 and June 30, 2017, respectively.

#### HISTORICAL AND PROJECTED REVENUES AND EXPENSES

The "Historical and Projected Revenues and Expenses" table below provides a summary of revenues and expenses of Metropolitan prepared on a modified accrual basis. This is consistent with the biennial budget for fiscal years 2020-21 and 2021-22, which includes a ten-year financial forecast. The table does not reflect the accrual basis of accounting, which is used to prepare Metropolitan's annual audited financial statements. The modified accrual basis of accounting varies from the accrual basis of accounting in the following respects: depreciation and amortization are not recorded and payments for debt service and pay-as-you-go construction are recorded when paid. Under the modified accrual basis of accounting, revenues are recognized in the fiscal year in which they are earned, and expenses are recognized when incurred. Thus, water revenues are recognized in the month the water transaction occurs and expenses are recognized when goods have been received and services have been rendered. The change to modified accrual accounting is for budgeting purposes and Metropolitan will continue to calculate compliance with its rate covenant, limitations on additional bonds and other financial covenants in the Revenue Bond Resolutions in accordance with their terms.

The projections are based on assumptions concerning future events and circumstances that may impact revenues and expenses and represent management's best estimates of results at this time. See the

footnotes to the table below entitled “HISTORICAL AND PROJECTED REVENUES AND EXPENSES” and “MANAGEMENT’S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES” for relevant assumptions, including projected water transactions and the average annual increase in the effective water rate, and “MANAGEMENT’S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES” for a discussion of potential impacts. Some assumptions inevitably will not materialize, and unanticipated events and circumstances may occur. Therefore, the actual results achieved during the projection period will vary from the projections and the variations may be material. The budget and projection information, and all other forward-looking statements in this Appendix A, are based on current expectations and are not intended as representations of facts or guarantees of future results.

The COVID-19 outbreak is a significant recent development that is currently materially adversely affecting global, national, State, and local economic activity and prospects. Because of the unprecedented nature of the COVID-19 pandemic, historical data may not be an accurate predictor of future performance. Accordingly, any trends that may be suggested by historical data and budgets or projections described herein which pre-date the onset of the COVID-19 emergency or do not include information regarding its impact should be considered in light of a possible or probable negative impact of COVID-19. Moreover, the COVID-19 pandemic is ongoing and possible future impacts involve many developing and unknown outcomes, several of which are identified in the discussion included under “INTRODUCTION- COVID-19 Pandemic.”

As discussed under “INTRODUCTION–COVID-19 Pandemic,” Metropolitan modified certain assumptions made in its preliminary biennial budget as initially presented to the Board in February 2020 following the onset of the COVID-19 outbreak to consider certain then-anticipated effects of COVID-19, primarily potential effects on the regional economy, financial impacts to member agencies and impacts on construction schedules and timing of capital expenditures. The biennial budget for fiscal years 2020-21 and 2021-22, and water rates and charges for calendar years 2021 and 2022 as adopted by the Board on April 14, 2020, reflect these adjustments. In recognition of the changed circumstances and the ongoing uncertainties related to COVID-19 (including those referenced above), as was contemplated in connection with its approval of the biennial budget for fiscal years 2020-21 and 2021-22, Metropolitan’s Board reviewed the adopted budget and rates in September 2020 to consider further impacts resulting from the COVID-19 crisis.

As noted herein, the financial projection for fiscal year 2020-21 reflects revised projections based on results through November 2020, and the financial projections for fiscal years 2021-22 through 2024-25 reflect the biennial budget for fiscal years 2020-21 and 2021-22 and ten-year financial forecast provided therein. The financial projections include Metropolitan’s share of the forecasted costs associated with the planning of a single tunnel Bay-Delta conveyance project. See “METROPOLITAN’S WATER SUPPLY–State Water Project –Bay-Delta Proceedings Affecting State Water Project – Bay-Delta Planning Activities; Delta Conveyance” in this Appendix A.

Metropolitan’s resource planning projections are developed using a comprehensive analytical process that incorporates demographic growth projections from recognized regional planning entities, historical and projected data acquired through coordination with local agencies, and the use of generally accepted empirical and analytical methodologies. See “METROPOLITAN’S WATER SUPPLY–Integrated Water Resources Plan” in this Appendix A. Due to the variability of supplemental wholesale water transactions and unpredictability of future hydrologic conditions, projections of the volume of annual water transactions are based on projections in Metropolitan’s latest Board adopted Integrated Resources Plan, the 2015 IRP Update and recently recalibrated by Metropolitan’s Water Resource Management for the biennial budget for fiscal years 2020-21 and 2021-22 and ten-year financial forecast provided therein.

Nevertheless, Metropolitan’s assumptions have been questioned by directors representing SDCWA on Metropolitan’s Board. Metropolitan has reviewed SDCWA’s concerns and, while recognizing that

assumptions may vary, believes that the estimates and assumptions that support Metropolitan's projections are reasonable based upon history, experience and other factors as described herein.

Metropolitan's projections of the level of water transactions are the result of a comprehensive retail demand, conservation, and local supply estimation process, including supply projections from member agencies and other water providers within Metropolitan's service area. Retail demands for water are estimated with a model driven by projections of relevant demographics provided by SCAG and SANDAG. Retail demands are adjusted downward for conservation savings and local supplies, with the remainder being the estimated demand for Metropolitan supplies. Conservation savings estimates include all conservation programs in place to date as well as estimates of future conservation program goals outlined in the 2015 IRP Update. See "CONSERVATION AND WATER SHORTAGE MEASURES" in this Appendix A. Local supplies include water produced by local agencies from various sources including but not limited to groundwater, surface water, locally-owned imported supplies, recycled water, and seawater desalination (see "REGIONAL WATER RESOURCES" in this Appendix A). For additional description of Metropolitan's water transactions projections, see "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A.

The water transactions projections used to determine water rates and charges assume an average year hydrology. Actual water transactions are likely to vary from projections. As shown in the chart entitled "Historical Water Transactions" below, transactions can vary significantly from average and demonstrates the degree to which Metropolitan's commitments to meet supplemental demands can impact transactions. In years when actual transactions exceed projections, the revenues from water transactions during the fiscal year will exceed budget, potentially resulting in an increase in financial reserves. In years when actual transactions are less than projections, Metropolitan uses various tools to manage reductions in revenues, such as reducing expenses below budgeted levels, reducing funding of capital from revenues, and drawing on reserves. See "METROPOLITAN REVENUES—Financial Reserve Policy" in this Appendix A. Metropolitan considers actual transactions, revenues and expenses, and financial reserve balances in setting rates for future fiscal years.

Projections in the following table reflect revised projections for fiscal year 2020-21 based on results through November 2020. Financial projections for fiscal years 2021-22 through 2024-25 reflect the biennial budget for fiscal year 2020-21 and 2021-22 and ten-year financial forecast provided therein. This includes the issuance of \$585 million of bonds for fiscal years 2020-21 through 2024-25 to finance the CIP. See "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES" and "CAPITAL INVESTMENT PLAN—Capital Investment Plan Financing" in this Appendix A.

Water transactions with member agencies were 1.37 million acre-feet in fiscal year 2019-20. Water transactions with member agencies are projected to be 1.48 million acre-feet for fiscal year 2020-21, 1.60 million acre-feet for fiscal years 2021-22 and 2022-23, 1.64 million acre-feet for fiscal year 2023-24, and 1.69 million acre-feet for fiscal year 2024-25. Rates and charges increased by 3.0 percent on January 1, 2021 and will increase by 4.0 percent on January 1, 2022. Rates and charges are projected to increase 5.0 percent for each of calendar years 2023 and 2024, and 4.0 percent for calendar year 2025. Actual rates and charges to be effective in 2023 and thereafter are subject to adoption by Metropolitan's Board.

The projections were prepared by Metropolitan and have not been reviewed by independent certified public accountants or any entity other than Metropolitan. Dollar amounts are rounded.

**HISTORICAL AND PROJECTED REVENUES AND EXPENSES<sup>(a)</sup>**  
**Fiscal Years Ended June 30**  
**(Dollars in Millions)**

	Actual				Projected				
	2017	2018	2019	2020	2021	2022	2023	2024	2025
Water Revenues <sup>(b)</sup>	\$1,151	\$1,285	\$1,149	\$1,188	\$1,328	\$1,476	\$1,542	\$1,667	\$1,793
Additional Revenue Sources <sup>(c)</sup>	184	172	170	165	165	175	183	189	202
<b>Total Operating Revenues</b>	<b>1,335</b>	<b>1,457</b>	<b>1,319</b>	<b>1,353</b>	<b>1,493</b>	<b>1,651</b>	<b>1,725</b>	<b>1,856</b>	<b>1,995</b>
O&M, CRA Power and Water Transfer Costs <sup>(d)</sup>	(559)	(568)	(569)	(642)	(710)	(750)	(796)	(847)	(877)
Total SWC OMP&R and Power Costs <sup>(e)</sup>	(368)	(395)	(347)	(384)	(424)	(513)	(546)	(507)	(529)
<b>Total Operation and Maintenance</b>	<b>(927)</b>	<b>(963)</b>	<b>(916)</b>	<b>(1,026)</b>	<b>(1,134)</b>	<b>(1,263)</b>	<b>(1,342)</b>	<b>(1,354)</b>	<b>(1,406)</b>
<b>Net Operating Revenues</b>	<b>\$ 408</b>	<b>\$ 494</b>	<b>\$ 403</b>	<b>\$ 327</b>	<b>\$ 359</b>	<b>\$ 388</b>	<b>\$ 383</b>	<b>\$ 502</b>	<b>\$ 589</b>
Miscellaneous Revenue <sup>(f)</sup>	18	27	22	14	8	26	27	27	28
Transfer from Reserve Funds <sup>(g)</sup>	33	1	--	--	--	--	--	--	--
Sales of Hydroelectric Power <sup>(h)</sup>	21	24	18	16	15	22	23	14	14
Interest on Investments <sup>(i)</sup>	4	8	34	20	18	18	18	18	19
<b>Adjusted Net Operating Revenues<sup>(j)</sup></b>	<b>484</b>	<b>554</b>	<b>477</b>	<b>377</b>	<b>400</b>	<b>454</b>	<b>451</b>	<b>561</b>	<b>650</b>
Senior and Subordinate Obligations <sup>(k)</sup>	(308)	(340)	(333)	(272)	(279)	(298)	(306)	(323)	(320)
<b>Funds Available from Operations</b>	<b>\$ 176</b>	<b>\$ 214</b>	<b>\$ 144</b>	<b>\$ 105</b>	<b>\$ 121</b>	<b>\$ 156</b>	<b>\$ 145</b>	<b>\$ 238</b>	<b>\$ 330</b>
<b>Debt Service Coverage on all Senior and Subordinate Bonds<sup>(l)</sup></b>	<b>1.57</b>	<b>1.63</b>	<b>1.43</b>	<b>1.39</b>	<b>1.43</b>	<b>1.52</b>	<b>1.47</b>	<b>1.74</b>	<b>2.03</b>
<b>Funds Available from Operations</b>	<b>\$ 176</b>	<b>\$ 214</b>	<b>\$ 144</b>	<b>\$ 105</b>	<b>\$ 121</b>	<b>\$ 156</b>	<b>\$ 145</b>	<b>\$ 238</b>	<b>\$ 330</b>
Other Revenues (Expenses)	(4)	(5)	(6)	(6)	(7)	(7)	(7)	(8)	(8)
Pay-As-You Go Construction	(132)	(98)	(128)	(39)	(110)	(135)	(180)	(180)	(210)
Pay-As-You Go Funded from Replacement & Refurbishment Fund Reserves	1	1	--	1	--	--	--	--	--
<b>Total SWC Capital Costs Paid from Current Year Operations</b>	<b>(45)</b>	<b>(21)</b>	<b>(4)</b>	<b>(1)</b>	<b>1</b>	<b>(10)</b>	<b>12</b>	<b>(8)</b>	<b>(24)</b>
<b>Remaining Funds Available from Operations</b>	<b>(4)</b>	<b>91</b>	<b>6</b>	<b>60</b>	<b>5</b>	<b>4</b>	<b>(30)</b>	<b>42</b>	<b>88</b>
Fixed Charge Coverage <sup>(m)</sup>	1.37	1.53	1.42	1.38	1.44	1.47	1.53	1.69	1.89
Property Taxes	116	131	145	147	140	140	140	140	140
General Obligation Bonds Debt Service	(22)	(20)	(14)	(13)	(7)	(8)	(2)	(2)	(2)
SWC Capital Costs Paid from Taxes	(94)	(111)	(131)	(134)	(133)	(132)	(138)	(138)	(138)
<b>Net Funds Available from Current Year</b>	<b>\$ (4)</b>	<b>\$ 91</b>	<b>\$ 6</b>	<b>\$ 60</b>	<b>\$ 5</b>	<b>\$ 4</b>	<b>\$ (30)</b>	<b>\$ 42</b>	<b>\$ 88</b>

Source: Metropolitan.

(Footnotes on next page)



(Footnotes to table on prior page)

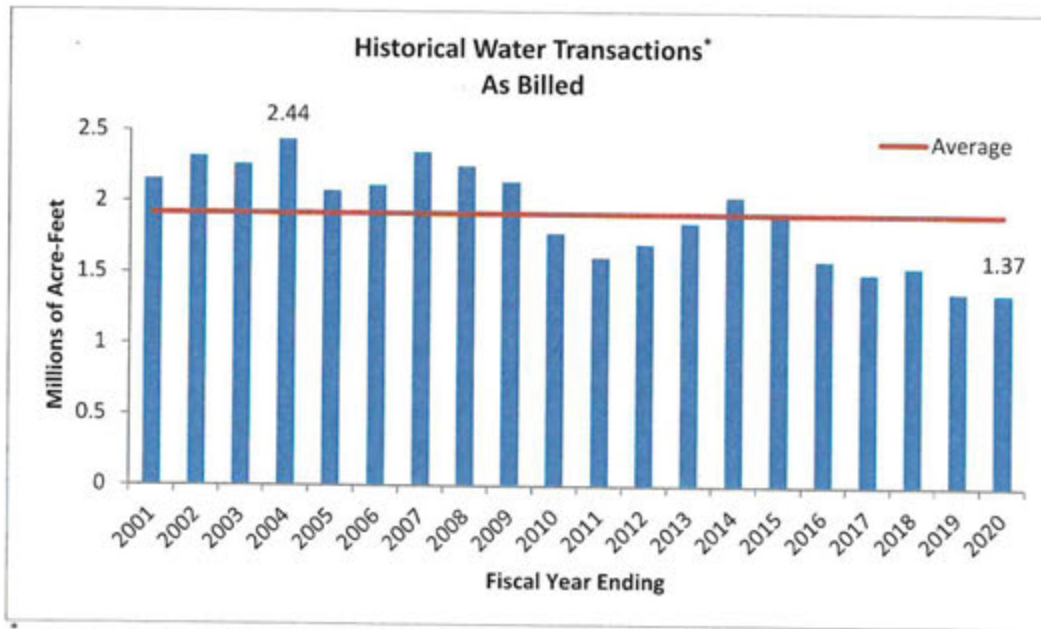
- (a) Unaudited. Prepared on a modified accrual basis. Projected revenues and expenses in fiscal year 2020-21 are based on results through November 2020 and revised from the projections provided in the adopted biennial budget for fiscal years 2020-21 and 2021-22. Projections for fiscal year 2021-22 through fiscal year 2024-25 are based on assumptions and estimates used in the biennial budget for fiscal years 2020-21 and 2021-22 and ten-year financial forecast provided therein, and reflect the projected issuance of additional bonds. See "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A.
- (b) Water Revenues include revenues from water sales, exchanges, and wheeling. During the fiscal years ended June 30, 2018 through June 30, 2020, annual water transactions with member agencies (in acre-feet) were 1.55 million, 1.37 million, and 1.37 million, respectively. See the table entitled "Summary of Water Transactions and Revenues" under "METROPOLITAN REVENUES—Water Revenues" in this Appendix A. The water transactions projections (in acre-feet) are 1.48 million acre-feet for fiscal year 2020-21, 1.60 million acre-feet for fiscal years 2021-22 and 2022-23, 1.64 million acre-feet for fiscal year 2023-24, and 1.69 million acre-feet for fiscal year 2024-25. Projections reflect adopted overall rate and charge increases of 3.0 percent effective on January 1, 2021 and 4.0 percent effective on January 1, 2022. Rates and charges are projected to increase an average of 5.0 percent in each of calendar years 2023 and 2024, and an average of 4.0 percent for calendar year 2025, subject to adoption by Metropolitan's Board. See "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A.
- (c) Includes revenues from water standby, readiness-to-serve, and capacity charges. The term Operating Revenues excludes *ad valorem* taxes. See "METROPOLITAN REVENUES—Other Charges" in this Appendix A.
- (d) Water Transfer Costs and Regional Recycled Water Program planning costs (described under "REGIONAL WATER RESOURCES—Local Water Supplies – Recycled Water-Metropolitan Regional Recycled Water Program") are included in operation and maintenance expenses for purposes of calculating the debt service coverage on all Obligations.
- (e) Includes on- and off-aqueduct power and operation, maintenance, power and replacement costs payable under the State Water Contract and Bay-Delta conveyance planning costs. See "METROPOLITAN EXPENSES—State Water Contract Obligations" in this Appendix A. See also "METROPOLITAN'S WATER SUPPLY—State Water Project –Bay-Delta Proceedings Affecting State Water Project – Bay-Delta Planning Activities; Delta Conveyance" in this Appendix A.
- (f) May include lease and rental net proceeds, net proceeds from sale of surplus property, reimbursements, and historically, federal interest subsidy payments for Build America Bonds.
- (g) Reflects transfers from the Water Management Fund, the Water Stewardship Fund, and the Water Rate Stabilization Fund, of \$33 million in fiscal year 2016-17, and \$1 million in fiscal year 2017-18, to fund a like amount of costs for conservation and supply programs. See "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A.
- (h) Includes CRA power sales.
- (i) Does not include interest applicable to Bond Construction Funds, the Excess Earnings Funds, other trust funds and the Deferred Compensation Trust Fund.
- (j) Adjusted Net Operating Revenues is the sum of all available revenues that the revenue bond resolutions specify may be considered by Metropolitan in setting rates and issuing additional Senior Revenue Bonds and Senior Parity Obligations and Subordinate Revenue Bonds and Subordinate Parity Obligations.
- (k) Includes debt service on outstanding Senior Revenue Bonds, Senior Parity Obligations, Subordinate Revenue Bonds, Subordinate Parity Obligations, and additional Revenue Bonds (projected). Assumes issuance of approximately \$255 million in additional Revenue Bonds in fiscal year 2020 21, approximately \$120 million in each of fiscal years 2022 23 and 2023-24, and approximately \$90 million in fiscal year 2024 25. Fiscal year 2017-18 debt service increased by \$15.3 million for debt service prepaid through bond refunding transactions in June 2018, rather than on July 1, 2018 and fiscal year 2018-19 debt service is therefore reduced by \$15.3 million. Fiscal year 2018-19 debt service increased by \$28.5 million for debt service prepaid in June 2019, rather than on July 1, 2019 and fiscal year 2019-20 debt service is therefore reduced by \$28.5 million. See "CAPITAL INVESTMENT PLAN—Capital Investment Plan Financing" in this Appendix A.
- (l) Adjusted Net Operating Revenues, divided by the sum of debt service on outstanding Senior Revenue Bonds, Senior Parity Obligations, Subordinate Revenue Bonds and Subordinate Parity Obligations, including the subordinate lien California Safe Drinking Water Revolving Fund Loan (prior to its discharge in 2017) and projected Revenue Bonds. See "METROPOLITAN EXPENSES—Outstanding Senior Revenue Bonds and Senior Parity Obligations" and "—Outstanding Subordinate Revenue Bonds and Subordinate Parity Obligations" in this Appendix A.
- (m) Adjusted Net Operating Revenues, divided by the sum of State Water Contract capital costs paid from current year operations and debt service on outstanding Senior Revenue Bonds, Senior Parity Obligations, Subordinate Revenue Bonds and Subordinate Parity Obligations, including the subordinate lien California Safe Drinking Water Revolving Fund Loan (prior to its discharge in 2017) and additional Revenue Bonds (projected).

## MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES

### Water Transactions Projections

The water transactions with member agencies in the table above for fiscal year 2019-20 were 1.37 million acre-feet. The water transactions forecast is 1.48 million acre-feet for fiscal year 2020-21 (reflecting the revised projections based on results through November 2020), and 1.60 million acre-feet for fiscal years 2021-22 and 2022-23, 1.64 million acre-feet for fiscal year 2023-24, and 1.69 million acre-feet for fiscal year 2024-25, consistent with the biennial budget and ten-year financial forecast. For purposes of comparison, Metropolitan's highest level of water transactions during the past 20 fiscal years was approximately 2.44 million acre-feet in fiscal year 2003-04 and the lowest was 1.37 million acre-feet in fiscal

year 2019-20. The chart below shows the volume of water transactions with member agencies over the last 20 fiscal years.



### Water Revenues

Metropolitan relies on revenues from water transactions for about 75 percent of its total revenues. In adopting the budget and rates and charges for each fiscal year, Metropolitan’s Board reviews the anticipated revenue requirements and projected water transactions to determine the rates necessary to produce the required revenues to be derived from water transactions during the fiscal year. Metropolitan sets rates and charges estimated to provide operating revenues sufficient, with other sources of funds, to provide for payment of its expenses. See “HISTORICAL AND PROJECTED REVENUES AND EXPENSES” in this Appendix A.

Metropolitan’s Board has adopted annual increases in water rates each year beginning with the rates effective January 1, 2004. See “METROPOLITAN REVENUES–Rate Structure” and “–Classes of Water Service” in this Appendix A. On April 14, 2020, the Board adopted average increases in rate and charges of 3.0 percent, to become effective on January 1, 2021, and 4.0 percent, to become effective on January 1, 2022. Rates and charges are projected to increase 5.0 percent for each of calendar years 2023 and 2024, and 4.0 percent for calendar year 2025. Actual rates and charges to be effective in 2023 and thereafter are subject to adoption by Metropolitan’s Board.

### Projected Fiscal Year 2020-21 Results

Projections for fiscal year 2020-21, in the table above, are revised from the projections adopted in the fiscal year 2020-21 and 2021-22 biennial budget and based on results through November 2020. Financial projections for fiscal years 2021-22 through 2024-25 are reflected in the fiscal year 2020-21 and 2021-22 biennial budget and ten-year financial forecast provided therein. The fiscal year 2020-21 and 2021-22 biennial budget and rates set the stage for predictable and reasonable rate increases over the ten-year planning period, with Board adopted overall rate increases of 3.0 percent for calendar year 2021 and 4.0 percent for calendar year 2022. The fiscal year 2020-21 and 2021-22 biennial budget and ten-year financial forecast includes rate increases of 5.0 percent for each of calendar years 2023 and 2024, and

4.0 percent for calendar year 2025. Actual rates and charges to be effective in 2023 and thereafter are subject to adoption by Metropolitan's Board as part of the biennial budget process, at which point the ten-year forecast will be updated as well. Increases in rates and charges reflect the impact of reduced water transactions projections, increasing operations and maintenance costs, and increasing State Water Project costs, when compared to prior fiscal years.

Operation and maintenance expenses in fiscal year 2020-21 are projected to be \$1,134 million, which represents approximately 68.1 percent of total costs. These expenses include the costs of labor, electrical power, materials and supplies of both Metropolitan and its contractual share of the State Water Project. Metropolitan's operation and maintenance expenses are projected to be \$96 million under budget in fiscal year 2020-21. Comparatively, operations and maintenance expenses in fiscal year 2019-20 were \$1,026 million, which represents approximately 69.0 percent of total costs. Overall, projected expenses for the twelve months ending June 30, 2021 are \$1.7 billion. This is \$112 million, or 6.3 percent, less than budgeted expenses.

Fiscal year 2020-21 revenue bond debt service coverage is projected to be 1.43x and fixed charge coverage to be 1.44x. Fiscal year 2020-21 capital expenditures, currently estimated at \$304.6 million, will be partially funded by the proceeds of bonds issued for Fiscal Year 2020-21 for such purpose and the remainder from pay-as-you-go funding. Metropolitan's unrestricted reserves are projected to be approximately \$429 million at June 30, 2021. See "METROPOLITAN REVENUES--Financial Reserve Policy" in this Appendix A. This amount does not include funds held in the Exchange Agreement Set-Aside Fund.

As discussed under "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" and noted above, projections for fiscal year 2020-21 are based on results through November 2020. Metropolitan's biennial budget for fiscal years 2020-21 and 2021-22, adopted by the Board on April 14, 2020, and the financial projections for fiscal years 2020-21 through 2024-25 included in the ten-year financial forecast provided therein, reflect adjustments made to the underlying assumptions to consider certain then-identified potential effects of the COVID-19 outbreak. Metropolitan is continuing to monitor the pandemic but is not able to fully predict the effect it will have on Metropolitan's financial performance or operations. Metropolitan's financial results during the fiscal years 2020-21 through 2024-25 projection period may be impacted by subsequent developments relating to the COVID-19 pandemic and its consequences. Metropolitan's Board action on April 14, 2020 to adopt the biennial budget for fiscal years 2020-21 and 2021-22, and water rates and charges for calendar years 2021 and 2022, included a review of the adopted budget and rates in September 2020 to consider further impacts resulting from the COVID-19 crisis. In September 2020, the Board determined to maintain the previously adopted rates and charges for calendar years 2021 and 2022. Among other things, at that time, the Board took certain other actions, including approving cost containment measures for fiscal years 2020-21 and 2021-22, and directing staff to develop a payment deferral program for member agencies that record and report significant customer payment delinquencies and likewise grant deferrals to their customers; evaluate potential new revenue-generating programs; and place a moratorium on on-emergency unbudgeted spending.

See also the "Management's Discussion and Analysis" contained in APPENDIX B--"THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA INDEPENDENT AUDITORS' REPORT AND BASIC FINANCIAL STATEMENTS FOR FISCAL YEARS ENDED JUNE 30, 2020 AND JUNE 30, 2019 AND BASIC FINANCIAL STATEMENTS FOR THE THREE MONTHS ENDED SEPTEMBER 30, 2020 AND 2019 (UNAUDITED)."

## Appendix G

### Water Supply Assessment Checklist

## Water Supply Assessment Checklist

Water Code Section	Water Supply Assessment Content	Page # in WSA
10910(c)(2)	Incorporate data from UWMP.	1-37
10910(d)(1)	Identification of existing water supply entitlements, water rights, or water service contracts relevant to identified water supply for proposed project, and description of quantity of water received in prior years.	22-37
10910(d)(2)(A)	Written contracts or other proof of entitlement to an identified water supply.	22-37
10910(d)(2)(B)	Capital outlay program for financing the delivery of a water supply that has been adopted.	36
10910(d)(2)(C)	Federal, state, and local permits for construction of necessary infrastructure associated with delivering the water supply.	13-36
10910(d)(2)(D)	Any necessary regulatory approval to deliver/convey the water supply.	13-36
10910(f)(1)	Review of any information contained in the UWMP relevant to the identified water supply for the proposed project.	1-37
10910(f)(2)	Description of any groundwater basin(s) from which proposed project will be supplied. For basins with adjudicated groundwater pumping rights, include a copy of the order/decreed adopted by the court or the board and a description of quantity of groundwater public water system has the legal right to pump under the order/decreed.	20-22, 24-26 Appendix D
10910(f)(3)	Description and analysis of amount and location of groundwater pumped for the past 5 years from any groundwater basin from which the proposed project will be supplied.	24-26
10910(f)(4)	Description and analysis of amount and location of groundwater that is projected to be pumped from any basin to provided water to the proposed project.	20-22, 24-26
10910(f)(5)	Analysis of sufficiency of groundwater from the basins from which the proposed project will be supplied to meet projected water demand of the proposed project.	20-22, 24-26



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**APPENDIX K.4**

**Site 3 Resolution and Water Supply Assessment**





RESOLUTION NO. \_\_\_\_\_

BOARD LETTER APPROVAL

A blue ink signature of Richard F. Harasick, consisting of stylized initials and a surname.

**RICHARD F. HARASICK**  
Senior Assistant General Manager  
Water System

A blue ink signature of Martin L. Adams, featuring a cursive style with a prominent initial.

**MARTIN L. ADAMS**  
General Manager and Chief Engineer

**DATE:** May 5, 2021

**SUBJECT:** Water Supply Assessment – Downtown Los Angeles South Park  
Properties Site 3 Project

**SUMMARY**

The Water Supply Assessment (WSA) is for the Downtown Los Angeles South Park Properties Site 3 Project (Project) located within the City of Los Angeles (City). LADWP staff determined the net additional water demand for the Project is 92 acre-feet per year (AFY) and has concluded that this additional water demand can be accommodated by the City's water supply. The Project's base water demand was further reduced by 67 AFY through implementation of the conservation ordinance and code requirements and an additional 1 AFY through the project implementing additional voluntary conservation measures. The WSA will meet the requirements of California Water Code Sections 10910-10915. The governing body of each public water system is required to make a determination on WSAs for major projects.

City Council approval is not required.

**RECOMMENDATION**

It is recommended that the Board of Water and Power Commissioners (Board) adopt the attached Resolution authorizing the WSA for the Project.

**ALTERNATIVES CONSIDERED**

LADWP is required by state law, as set forth in California Water Code Sections 10910-10915, to prepare this WSA for the Project. There are no other alternatives.

## **FINANCIAL INFORMATION**

DTLA South Park Properties Propco II, LLC (Applicant) paid \$17,000 to cover LADWP's expenses for preparation of this WSA.

## **BACKGROUND**

WSAs are prepared in conformance with California law and the City ordinances to ensure proposed projects that utilize water resources are consistent with the City's conservation goals and long-term water supply availability, as detailed in LADWP's 2015 Urban Water Management Plan (UWMP). The UWMP is the water supply planning document for the City and is prepared by LADWP.

Each WSA performed by LADWP is carefully evaluated within the context of LADWP's most recent UWMP and current conditions, such as the federal and state restrictions on State Water Project (SWP) and Central Valley Project pumping from the Sacramento-San Joaquin River Delta (Delta). The Metropolitan Water District of Southern California (MWD), from whom the City purchases its SWP and Colorado River water supplies, has also been actively developing plans and making efforts to provide additional water supply reliability for the entire Southern California region. LADWP coordinates closely with MWD to ensure implementation of MWD's water resource development plans.

Part of MWD's planning effort is the update and implementation of its Integrated Water Resources Plan (IRP) and its UWMP, which are designed to address potential reductions in water supply due to the effects of variable hydrologic conditions and regulatory restrictions on exports from the Delta and Colorado River. The 2015 IRP update resulted in the development of the following six main findings and conclusions:

1. Action is needed to minimize unacceptable level of shortage allocation frequency in the future.
2. Maintain Colorado River supplies.
3. Stabilize SWP supplies.
4. Develop/protect local supplies and water conservation.
5. Maximize effectiveness of storage and transfers.
6. Continue with adaptive management approach.

The UWMP contains a water shortage contingency plan for multi-year dry hydrological periods. This water shortage contingency plan was implemented on June 1, 2009, when the Board adopted Shortage Year Rates and the City Council implemented the landscape irrigation and prohibited use restrictions contained in the City's Water

Conservation Ordinance. The UWMP also contained the City's Water Rate Ordinance, adopted June 1995, was last amended by the Board and became effective April 15, 2016. This water rate structure increases the number of tiers from two to four for single-family residential customers. The goal is to incentivize conservation while recovering the higher costs of providing water to high volume users. In keeping with cost of service principles, the incremental pricing for the tiers is based on the cost of water supply and, for the third and fourth tiers, added pumping and storage costs.

### Projected Water Use and Conservation

On November 20, 2020, the Los Angeles Department of City Planning (Planning Department), lead agency for the Project, requested LADWP to perform a WSA. The Project's scope of work includes the development of approximately 1.07 acres within the Central City Community Plan area of the City. The Project's site is generally bounded by 11<sup>th</sup> Street to the north, an alley to the east, an office building to the south, and Olive Street to the west.

The Project will propose a new 60-story mixed use development and replace the existing surface parking lot. It will include 713 new residential units with residential amenities. The residential amenities include a swimming pool, fitness space, lounges, and shared office spaces for the residents' use only. The ground floor will include commercial offices, a 4,221 square feet (sf) retail space, and a 7,056 square feet restaurant. Furthermore, the Project will include covered parking, landscaping throughout the building, and a 1,200-ton cooling tower to support the building.

LADWP staff recommended implementation of additional voluntary water conservation measures to maximize the potential water-use efficiency for the Project. The recommended voluntary conservation measures are in addition to those required by the City's current codes and ordinances. Based on LADWP staff recommendations, the Applicant has voluntarily committed to implement additional measures for the entire project. LADWP will request Planning Department to include the implementation of the water conservation commitments as part of their Sustainable Communities Environmental Assessment, which is in accordance with the California Environmental Quality Act approval process for the Project. The Applicant's written commitment of the Project's planned voluntary water conservation measures is attached with the WSA in Appendix B, and summarized as follows:

- Fixtures
  - Showerheads with a flow rate of 1.75 gallons per minute, or less
- Landscape and irrigation
  - Artificial Turf

- California Friendly® plants or native plants
- Drip/ Subsurface Irrigation (Micro-Irrigation)
- Micro-Spray
- Proper Hydro-zoning/Zoned Irrigation (groups plants with similar water requirements together)
  
- Pool
  - Install a meter on the pool make-up line so water use can be monitored and leaks can be identified and repaired
  - Leak Detection System for swimming pools and Jacuzzi
  - Pool splash troughs around the perimeter that drain back into the pool.
  - Pool/Spa recirculating filtration equipment
  - Water-Saving Pool Filter
  
- Utilities
  - Individual metering and billing for water use for every commercial unit.
  - Leak detector at main building water boiler system

With the addition of these voluntary water conservation measures, which yield additional savings of approximately 1 AFY, the net additional water demand is approximately 92 AFY.

The Applicant has also committed to comply with the City of Los Angeles Low Impact Development Ordinances (City Ordinance Nos. 181899 and 183833) and to implement Best Management Practices (BMP) that have stormwater recharge or reuse benefits for the entire Project as applicable and feasible. BMPs may include, but are not limited to:

- Pretreatment BMPs – As appropriate, a combination of the following:
  - Catch Basin Insert – a device that can be inserted into an existing catch basin to provide some level of runoff contaminant removal.
  - Downspout Filter – a device that can be inserted into a downspout pipe to provide some level of runoff contaminant removal.
  - Hydrodynamic Separator – a prefabricated in-line chamber which removes debris and pollutants through screening and settlement of influent stormwater.
  - Pre-settling Chamber – a prefabricated in-line chamber which removes debris and pollutants through settlement and controlled discharge.
- Infiltration BMPs – If feasible for the Project
  - Drywell(s) – a vertical system which allows for stormwater infiltration deep beneath proposed foundations/surfaces.
- Capture and Re-use BMPs – If infiltration is considered infeasible

- Cistern – captures stormwater runoff as it comes down through the roof gutter system to offset domestic water demand.

The Planning Department has indicated that the Project conforms with the City's General Plan. The Planning Department has also determined that the Project is consistent with the demographic projections for the City from both the 2012 and 2016 Regional Transportation Plans (RTP) by the Southern California Association of Governments. The City's water demand projection in 2015 UWMP was developed based on the 2012 RTP demographic projection using the 2010 U.S. Census for the City. LADWP used a modified-unit-use approach to develop its service area-wide water demand projections. This methodology does not rely on individual development demands to determine area-wide growth. 2015 UWMP concluded there are adequate water supplies to meet projected water demand through 2040. Therefore, projected water supplies available during normal, single-dry, and multiple-dry water years as included in the 25-year projection of 2015 UWMP are sufficient to meet the projected water demand associated with the Project, in addition to the existing and planned future demand on LADWP.

### **ENVIRONMENTAL DETERMINATION**

Determine item is exempt pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15060(c)(2). In accordance with this section, an activity is not subject to CEQA if it will not result in a direct or reasonably foreseeable indirect physical change in the environment. The Downtown Los Angeles South Park Properties Site 3 Project water supply assessment will not result in any physical change in the environment. Therefore, this activity is not subject to CEQA.

### **CITY ATTORNEY**

The Office of the City Attorney reviewed and approved the Resolution as to form and legality.

### **ATTACHMENTS**

- Map of Proposed Project
- Resolution
- Water Supply Assessment





SOURCE: Google Earth - 2020; Meridian Consultants, LLC - February 2020



Site 3 Location

RESOLUTION NO. \_\_\_\_\_

WHEREAS, Los Angeles Department of Water and Power (LADWP) constitutes a public water system pursuant to California Water Code Section 10912, subdivision (c); and

WHEREAS, the Downtown Los Angeles South Park Properties Site 3 Project (Project) qualifies as a Project under California Water Code Section 10912, subdivision (a) (1); and

WHEREAS, the Project is located in the service area of LADWP's water supply system, and LADWP would serve the area of the Project development; and

WHEREAS, on November 20, 2020, the City of Los Angeles (City) Department of City Planning (Planning Department) requested the LADWP conduct a Water Supply Assessment (WSA) for the Project, and LADWP has prepared a WSA for the Project in compliance with California Water Code (CWC) Sections 10910-10915; and

WHEREAS, the Project would redevelop approximately 1.07 acres within the Central City Community Plan area of the City; and

WHEREAS, the applicant, DTLA South Park Properties Propco II, LLC, has agreed to implement additional conservation measures, as described in WSA, that are in addition to those required by law; and

WHEREAS, LADWP staff performed the water demand analysis and determined the net increase in total water demand for the Project is 92 acre-feet per year; and

WHEREAS, the Project is determined by Planning Department to be consistent with the demographic projections for the City from both the 2012 and 2016 Regional Transportation Plans by the Southern California Association of Governments; and

WHEREAS, LADWP anticipates that its projected water supply that is available during normal, single-dry, and multiple-dry water years as included in the 25-year projection contained in its adopted 2015 Urban Water Management Plan can accommodate the projected water demand associated with the Project, in addition to the existing and planned future demands on LADWP; and

WHEREAS, in accordance with CWC Section 10910 (g) (1) the Board of Water and Power Commissioners (Board) has the responsibility for approval and certification of WSAs prepared by LADWP; and the Board has independently reviewed and considered the WSA and documentation making up the administrative record; and



WHEREAS, a publicly noticed Board hearing was held with respect to this item, and the Board considered evidence presented by LADWP's Water Resources Section staff, the staff recommendation to approve the WSA, and other comments from interested parties at the public hearing.

NOW, THEREFORE, BE IT RESOLVED that the Board finds that LADWP can provide sufficient domestic water supplies to the Project area and approves the WSA prepared for the Project, now on file with the Secretary of the Board, and directs that the WSA and a certified copy of Resolution be transmitted to the Planning Department.

BE IT FURTHER RESOLVED that the Board finds that LADWP's total projected water supplies available during normal, single-dry, and multiple-dry water years during a 20-year projection will meet the projected water demands associated with the Project in addition to existing and planned future uses including agricultural and industrial uses.

BE IT FURTHER RESOLVED that the Board has considered the WSA prior to making a decision to approve the WSA, and finds that the WSA is adequate and was prepared in accordance with Water Code Section 10910 (c) (2), and meets the requirements of Water Code Section 10910 (d), (e), (f), and (g).

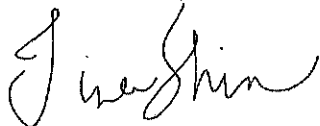
I HEREBY CERTIFY that the foregoing is a full, true, and correct copy of a Resolution adopted by the Board of Water and Power Commissioners of the City of Los Angeles at its meeting held

---

Secretary

APPROVED AS TO FORM AND LEGALITY  
MICHAEL N. FEUER, CITY ATTORNEY

APRIL 29, 2021



BY \_\_\_\_\_

TINA SHIM  
DEPUTY CITY ATTORNEY



**WATER SUPPLY ASSESSMENT**

**FOR THE DOWNTOWN LOS ANGELES SOUTH PARK  
PROPERTIES SITE 3 PROJECT**

Prepared by:  
Water Resources Division

Prepared on  
April 19, 2021

## Table of Contents

Introduction .....	4
Findings.....	5
The Downtown Los Angeles South Park Properties Site 3 Project Description.....	6
The Downtown Los Angeles South Park Properties Site 3 Project Water Demand Estimate .....	7
Water Demand Forecast .....	10
Los Angeles Department of Water and Power – 2015 UWMP .....	10
Near-Term Conservation Strategies.....	11
Long-Term Local Supply Strategies .....	13
1.0 Increase Water Conservation Through Reduction of Outdoor Water Use and New Technology .....	13
2.0 Water Recycling.....	16
3.0 Enhancing Stormwater Capture.....	17
4.0 Accelerating Clean-Up of SFB.....	19
Water Supplies.....	22
1.0 Los Angeles Aqueducts .....	22
2.0 Groundwater .....	24
3.0 Metropolitan Water District of Southern California.....	26
4.0 Secondary Sources and Other Considerations.....	34
Water System Financing Program .....	36
Conclusion .....	37

## References

California Department of Water Resources California's Groundwater Bulletin 118 Update 2003

Upper Los Angeles River Area Watermaster Report for 2017/2018  
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Los Angeles Department of Water and Power 2015 Urban Water Management Plan  
Metropolitan Water District of Southern California Integrated Water Resources Plan  
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California Code of Regulations Title 23. Waters, Division 2. Department of Water  
Resources, Chapter 2.7. Model Water Efficient Landscape Ordinance

City of Los Angeles Department of Public Works Bureau of Sanitation (LASAN) Sewer  
Generation Rates Table

## Appendix

- A. City of Los Angeles, Department of City Planning letter, Request for Water Supply Assessment, received on November 20, 2020, and Scope Confirmation e-mail received on April 16, 2021
- B. Water Conservation Commitment Letter
- C. Project Location Map
- D. Adjudicated Groundwater Basin Judgments
- E. Water Supply Assessment Provisions – California Water Code Section 10910-10915
- F. MWD of Southern California (Appendix A)
- G. Water Supply Assessment Checklist

## **Introduction**

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Proposed major projects subject to certain requirements in the California Water Code Sections 10910-10915 require that a city or county identify any public water system that may supply water to the Downtown Los Angeles South Park Properties Site 3 Project (Project) and request the public water system provide a Water Supply Assessment (WSA). The WSA is a determination by the water supplier that the demands associated with the Project were included in its most recently adopted 2015 Urban Water Management Plan (2015 UWMP) showing that there is an adequate 20-year water supply. The UWMP serves as the City of Los Angeles' (City) master plan for reliable water supply and resources management.

The City of Los Angeles Department of City Planning (Planning Department), serving as the lead agency as prescribed by the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.), for the Project, has identified Los Angeles Department of Water and Power (LADWP) as the public water system that will supply water. In response to Planning Department's request for a WSA on November 20, 2020, LADWP has performed the assessment contained herein.

LADWP has supplied the City with a safe and reliable water supply for over a century. Over time, the City's water supplies have evolved from primarily local groundwater to predominantly imported supplies. As of Fiscal Year Ending (FYE) 2020, the City relies on over 85 percent of its water from imported sources. To reduce the City's dependence on purchased imported supplies, LADWP's 2015 UWMP outlines the City's strategy to achieve its goals and policy objectives. In April 2019, LADWP, in conjunction with the City, developed short-term and long-term sustainability targets through LA's Green New Deal (Green New Deal), to form a more reliable and resilient water supply. LADWP is committed to meet all the City's water needs while increasing supply reliability, stabilizing imported water purchases, and increasing locally produced water. For more information on the Green New Deal, it is available for download at [http://plan.lamayor.org/sites/default/files/pLAn\\_2019\\_final.pdf](http://plan.lamayor.org/sites/default/files/pLAn_2019_final.pdf).

The WSA is prepared to meet the applicable requirements of state law as set forth in California State Water Code Sections 10910-10915. Significant references and data for this WSA are from the LADWP's 2015 UWMP, adopted by the Board of Water and Power Commissioners (Board) on June 7, 2016. LADWP's 2015 UWMP is incorporated by reference and is available through LADWP's Web site, [www.ladwp.com/uwmp](http://www.ladwp.com/uwmp).



## Findings

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The Project is estimated to increase the total net water demand within the site by 92 acre-feet (AF) annually based on review of information submitted by Planning Department. The total net water demand included additional water use efficiency measures that DTLA South Park Properties Propco II, LLC (Applicant) has committed to include in the Project. Therefore, LADWP finds adequate water supplies will be available to meet the total additional water demand of 92 AF annually for the Project. LADWP anticipates the projected water demand from the Project can be met during normal, single-dry, and multiple-dry water years, in addition to the existing and planned future demands on LADWP.

The basis for approving WSAs for developments is LADWP's most recently adopted UWMP. LADWP's water demand forecast, as contained in LADWP's 2015 UWMP, uses long-term demographic projections for population, housing, and employment. The California Urban Water Management Planning Act requires water suppliers to develop a UWMP every five years to identify short-term and long-term water resources management measures to meet growing water demands during normal, single-dry, and multiple-dry years. If the projected water demand associated with the Project was not accounted for in the most recently adopted LADWP 2015 UWMP, the WSA must include a discussion with regard to whether LADWP's total projected water supplies available during normal, single-dry, and multiple-dry water years during a 20-year projection will meet the projected water demand associated with the Project, in addition to LADWP's existing and planned future uses.

The City's water demand projection in LADWP's 2015 UWMP was developed based on the 2012 Regional Transportation Plan (RTP) demographic projection by the Southern California Association of Governments (SCAG) using the 2010 United States (U.S.) Census for the City. LADWP's 2015 UWMP identified water supplies to meet projected water demands through 2040. Therefore, the City's water supply projections in LADWP's 2015 UWMP are sufficient to meet the water demand for projects that are determined by the CEQA lead agency to be consistent with the 2012 RTP by SCAG.

The Planning Department has indicated that the Project conforms with the use and intensity of development permitted by the City's General Plan. The Planning Department has also determined that the Project is consistent with the demographic projections for the City from both the 2012 and 2016 RTPs. Based on the information provided by Planning Department, anticipated water demand for the Project is within LADWP's 2015 UWMP's projected water supplies for normal, single-dry, and multiple-dry years through the year 2040 and is within the LADWP 2015 UWMP's 25-year water demand growth projection. This WSA can be approved based on the fact that the Project's water demand falls within the LADWP 2015 UWMP's projected increase in citywide water demands, while anticipating multi-dry year water supply conditions occurring at the same time. Additionally, LADWP's 2015 UWMP contains a water shortage contingency plan for multi-year dry hydrological periods and the City's Water Rate Ordinance. This water shortage contingency plan was based on the City's



Emergency Water Conservation Plan (Conservation Ordinance), which was implemented on June 1, 2009, when the Board adopted Shortage Year Rates, and the City Council implemented the landscape irrigation and prohibited use restrictions contained in the City's Water Conservation Ordinance. This water shortage contingency plan helps to ensure sufficient use of water during multi-year dry periods. The City's Water Rate Ordinance, originally adopted in June 1995, was last amended by the Board, and became effective April 15, 2016. The revised rate ordinance restructured the rates to help further promote conservation, which is reflected in the 2015 UWMP's 25-year water demand projections. For example, single family rates switched to a four-tier system that sends a strong price signal to deter against wasteful water use. The Board finds that the price signals contained in the Water Rate Ordinance encourage conservation and support further reduction in City-wide demand. Past and current implementation of water rate price signals and higher ordinance phases have resulted in reducing the total customer water usage.

This WSA approval addresses the City's long-term water supply and demand forecasts to accommodate the Project. It is not an approval for water service connection. A separate request shall be made to LADWP requesting an evaluation of water service connection for the Project.

### **The Downtown Los Angeles South Park Properties Site 3 Project Description**

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The following project information was obtained from Planning Department's WSA Request Letter and the scope confirmation e-mail (Appendix A):

Project Name: Downtown Los Angeles South Park Properties Site 3  
Lead Agency: Planning Department  
Community Plan: Central City Community Plan

The Project will develop an approximately 1.07-acre site within the Central City Community Plan area of the City for residential and commercial land use. The Project site is generally bounded by 11<sup>th</sup> Street to the north, an alley to the east, an office tower to the south, and Olive Street to the west. The Project site currently contains a surface parking lot and does not contain any vegetation or landscaping.

The Project is proposing a 60-story mixed use development. It will include 713 new residential units. There will be residential amenities such as a swimming pool, fitness space, lounges, recreation space, and shared office spaces for the resident's use only. The ground floor will contain commercial offices, retail, and a 7,056 square feet (sf) restaurant. The Project will also include covered parking, a 1,200 ton cooling tower, and landscaping on the ground floor and throughout the building.

LADWP staff performed the water demand analysis and determined the net increase in water demand for the Project is 92 AFY.

A subsequent revised WSA may be required if one or more of the following occurs:

1. Changes in the Project result in a substantial increase in water demand for the Project.
2. Changes in the circumstances or conditions substantially affecting the ability of LADWP to provide a sufficient supply of water for the Project.
3. Significant new information becomes available which was not known and could not have been known at the time when WSA was prepared.

If deemed necessary, the Applicant may request a revised WSA through the CEQA lead agency.

### **The Downtown Los Angeles South Park Properties Site 3 Project Water Demand Estimate**

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Projected total net water demand increase for the Project is estimated to be 92 AF annually. This amount takes into account savings due to water conservation ordinances which are approximately 67 AFY, and savings due to additional voluntary conservation measures which are approximately 1 AFY.

In evaluating the Project's water demand, the Sewer Generation Factors (SGF), published by the City of Los Angeles Department of Public Works Bureau of Sanitation (LASAN) in 2012, are applied to the Project scope for calculating indoor water use. SGFs are factors of how much wastewater is generated (gallons per day) per unit (per sf, per dwelling unit, per seat, etc.). LASAN publishes a list of SGFs for approximately 175 different building use types in the City, and updates factors to make necessary adjustments due to water conservation efforts and increased efficiencies in new appliances and plumbing fixtures. Outdoor landscape water demand is estimated per California Code of Regulations Title 23 Division 2 Chapter 2.7 Model Water Efficient Landscape Ordinance. Historical billing records are used to establish existing baseline water demand on the property. LADWP also encouraged the Project to implement additional water conservation measures above and beyond the current water conservation ordinance requirements.

The net increase in water demand, which is the projected additional water demand of the Project, is calculated by subtracting the existing baseline water demand and water saving amount from the total proposed water demand.

Table I shows a breakdown of the existing and proposed new types of uses for the Project, and the corresponding estimated volume of water usage with the implementation of the required and voluntary conservation measures for this project. Types of use were derived from the WSA Request Letter and the scope confirmation e-mail in Appendix A.

Table II shows an estimation of the total volume of additional water conservation based on conservation measures the Applicant has committed for the Project (Appendix B).



TABLE I Downtown Los Angeles South Park Properties - Site 3 Calculated Total Additional Water Demand						
Existing Use to be Removed <sup>1</sup>	Quantity	Unit	Water Use Factor <sup>2</sup> (gpd/unit)		Existing Water Use to be Removed (gpd) (af/y)	
Surface Parking Lot	46,807	sf	0		0	
<b>Existing to be Removed Total</b>					<b>0</b>	<b>0.00</b>
Proposed Use <sup>1</sup>	Quantity	Unit	Water Use Factor <sup>2</sup> (gpd/unit)	Base Demand (gpd)	Required Ordinances Water Savings <sup>3</sup> (gpd)	Proposed Water Demand (gpd) (af/y)
Residential: Studios	188	du	75.00	14,100		
Residential: 1 bd	366	du	110.00	40,260		
Residential: 2 bd	156	du	150.00	23,400		
Residential: 3 bd	3	du	190.00	570		
Base Demand Adjustment (Residential Units) <sup>4</sup>				8,424		
<b>Residential Units Total</b>	<b>713</b>	<b>du</b>		<b>86,754</b>	<b>15,321</b>	<b>71,433 80.02</b>
Dog Spa (lvl 4 mezz) <sup>5</sup>	406	sf	0.18	74		
Dog Lounge (lvl 4 mezz) <sup>5</sup>	491	sf	0.18	89		
Synthetic Turf Areas (lvl 4 Dog Park, lvl 5 pool and flex deck, lvl 5B Roof deck)	3,201	sf		0.05		
Pool/Spa on Landscape Amenity Deck (lvl 5) <sup>6</sup>	2,529	sf		241		
Club Room and Lounge (lvl 5) <sup>7</sup>	51	seats	12.86	656		
Fitness and Spin Studio (lvl 5)	5,076	sf	0.22	1,100		
Sky Lounge (lvl 5B) <sup>7</sup>	39	seats	12.86	501		
Business/Co-Lab/Office (lvl 6)	4,269	sf	0.06	256		
Office (lvl 1)	2,586	sf	0.12	310		
Restaurant-seating area (lvl 1) <sup>8</sup>	235	seats	30.00	7,056		
Restaurant- kitchen/storage/etc (lvl 1) <sup>8</sup>	3,528	sf	0.300	1,058		
Retail (lvl 1)	4,221	sf	0.025	106		
<b>Residential Amenities/Commercial Total</b>				<b>11,447</b>	<b>1,784</b>	<b>9,663 10.82</b>
Landscaping <sup>9</sup>	13,291	sf		1,262	577	685 0.77
Covered Parking <sup>10</sup>	325,995	sf	0.02	214	0	214 0.24
<b>Cooling Tower Total</b>	<b>1,200</b>	<b>ton</b>	<b>35.64</b>	<b>42,768</b>	<b>42,330</b>	<b>438 0.49</b>
<b>Proposed Subtotal</b>				<b>142,445</b>	<b>60,012</b>	<b>82,433 92.34</b>
Less Existing to be Removed Total					0	0.00
Less Additional Conservation <sup>11</sup>					480	0.54
<b>Net Additional Water Demand</b>					<b>81,953 gpd</b>	<b>92.00 af/y</b>

<sup>1</sup> Provided by City of Los Angeles Department of City Planning in the Request for Water Supply Assessment letter and Scope Confirmation e-mail. See Appendix A. Proposed Uses that do not have additional water demands are not shown here.

<sup>2</sup> Indoor water uses are based on 2012 City of Los Angeles Department of Public Works, Bureau of Sanitation Sewer Generation Rates table available at <http://www.lacitysan.org/fmd/pdf/sfcfeerates.pdf>.

<sup>3</sup> The proposed development land uses will conform to City of Los Angeles Ordinance No. 186488, 184248, 2020 Los Angeles Plumbing Code, and 2020 Los Angeles Green Building Code.

<sup>4</sup> Base Demand Adjustment is the estimated savings due to Ordinance No. 180822 accounted for in the current version of Bureau of Sanitation Sewer Generation Rates.

<sup>5</sup> For a conservative estimate, the dog spa and lounge are assumed to have a water demand similar to beauty parlor.

<sup>6</sup> For the Landscape Amenity Deck, the water demand comes from the outdoor pool and spa.

<sup>7</sup> For a conservative estimate, only lounges containing plumbing fixtures will have a water demand.

<sup>8</sup> Restaurant space. Half the total area (7056 SF) is assumed for dining and the other half is kitchen/storage area.

<sup>9</sup> Landscaping water use is estimated per California Code of Regulations Title 23, Division 2, Chapter 2.7, Model Water Efficient Landscape Ordinance.

<sup>10</sup> Auto parking water uses are based on City of Los Angeles Department of Public Works, Bureau of Sanitation Sewer Generation Rates table, and 12 times/year cleaning assumption.

<sup>11</sup> Water conservation due to additional conservation commitments agreed by the Applicant. See Table II.

**Abbreviations:** sf - square feet du - dwelling gpd - gallons per day af/y - acre feet per year

**TABLE II**  
**Downtown Los Angeles South Park Properties - Site 3**  
**Estimated Additional Water Conservation**

Conservation Measures <sup>1</sup>	Quantity <sup>2</sup>	Units	Water Saving Factor <sup>3</sup> (gpd/unit)	Water Saved	
				(gpd)	(af/y)
Showerhead - Residential: studio Apartment	188	du	0.27	50	0.06
Showerhead - Residential: 1 bd Apartment	366	du	0.27	97	0.11
Showerhead - Residential: 2 bd Apartment	156	du	0.66	103	0.12
Showerhead - Residential: 3 bd Apartment	3	du	1.06	3	0.00
<b>Residential Unit Conservation Total</b>				<b>253</b>	<b>0.28</b>
Showerhead	7	ea	1.25	9	0.01
<b>Amenities/Commercial Total</b>				<b>9</b>	<b>0.01</b>
<b>Landscaping Total Conservation<sup>4</sup></b>				<b>218</b>	<b>0.24</b>
<b>Total Additional Water Conserved =</b>				<b>480</b>	<b>1.00</b>

<sup>1</sup> Water conservation measures agreed to by the Applicant. See Appendix B.

<sup>2</sup> Plumbing fixture quantities were provided by the Applicant.

<sup>3</sup> Based on LADWP estimates.

<sup>4</sup> Landscaping water conservation is estimated per California Code of Regulations Title 23, Division 2, Chapter 2.7, Model Water Efficient Landscape Ordinance.

## **Water Demand Forecast**

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LADWP's 2015 UWMP projects yearly water demand to reach 675,700 AF by fiscal-year-ending (FYE) 2040 with passive water conservation, or an increase of 31.6 percent from FYE 2015 actual water demand. Water demand projections in five-year increments through FYE 2040 are available in LADWP's 2015 UWMP for each of the major customer classes: single-family, multifamily, commercial/governmental, and industrial. Demographic data from the Southern California Association of Government's 2012 RTP, as well as billing data for each major customer class, weather, conservation, price of water, personal income, family size, economy, and dry period conservation effect were factors used in forecasting future water demand growth.

LADWP's 2015 UWMP used a modified-unit-use approach to develop its service area-wide water demand projections. This methodology does not rely on individual development demands to determine area-wide growth, because such an inventory in LADWP service area in the next 25 years is only a subset of the total development potential. Therefore, the growth or decline in population, housing units, and employment for the entire service area was considered in developing long-term water projections for the City through FYE 2040. The historical water demand for a unit of customer class, such as gallons-per-day per single family, is modified to account for future changes, including water conservation, and applied to the 2012 RTP demographic projections by SCAG. This modified-unit-use-approach has proven to be a reliable forecast historically, when compared with actual consumption, excluding the effects of conservation.

Collaboration between LADWP and Metropolitan Water District of Southern California (MWD) is critical in ensuring that the City's anticipated water demands are incorporated into the development of MWD's long-term Integrated Water Resources Plan (MWD's IRP). MWD's IRP is a continuous regional effort to develop regional water resources involving all of MWD's member agencies, which includes the City. Successful implementation of MWD's IRP has resulted in reliable supplemental water supplies for the City from MWD.

## **Los Angeles Department of Water and Power – 2015 UWMP**

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The California Urban Water Management Planning Act (first effective on January 1, 1984) requires every urban water supplier prepare and adopt a UWMP every five years. The main goals of UWMPs are to forecast future water demands and water supplies under average and dry year conditions, identify future water supply projects such as recycled water, provide a summary of water conservation Best Management Practices (BMP), and provide a single and multi-dry year management strategy.<sup>1</sup>

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<sup>1</sup> *City of Los Angeles Department of Water and Power 2015 Urban Water Management Plan*, at ES-2.



LADWP's 2015 UWMP, available for reference through [www.ladwp.com/uwmp](http://www.ladwp.com/uwmp), serves two purposes: (1) achieve full compliance with requirements of California's Urban Water Management Planning Act; and (2) serve as a master plan for water supply and resources management consistent with the City's goals and policy objectives.<sup>2</sup>

A number of new requirements have been added to the Urban Water Management Planning Act and incorporated LADWP's 2015 UWMP, including: an extension of the submittal deadline from December 31, 2015 to July 1, 2016, a narrative description of water demand measures implemented over the past five years and future measures planned to meet 20 percent demand reduction targets by 2020, implementation of a standard methodology for calculating system water loss, a mandatory electronic filing of UWMPs, a voluntary reporting of passive conservation savings, energy intensity, and climate change, and a requirement to analyze and define water features that are artificially supplied with water. Currently, LADWP has implemented a Water Loss Task Force to develop strategies to reduce water losses and increase efficiencies in the water distribution system, LADWP continues to track the energy intensity of water, update its climate change study, and maintain a daily per capita water use below the 2020 target of 142 gallons per capita per day (gpcd). The 142 gpcd target meets the Senate Bill X7-7's requirement to achieve 20 percent reduction in urban per capita water use by December 31, 2020.

## **Near-Term Conservation Strategies**

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***Enforcing prohibited uses of water.*** Prohibited uses of water are intended to eliminate waste and increase awareness of the need to conserve water. In effect at all times, prohibited uses have been in place since the early 1990s. Under enforcement, failure to comply would be subject to penalties, which can range from a written warning for a first violation to monetary fines and water service shutoff for continued non-compliance.

***Prohibited uses of water.*** The City's Emergency Water Conservation Plan (Conservation Ordinance), Ordinance Nos. 181288, 183608, and 184250, prohibits uses of water, sets certain water conservation requirements, and contains phases of conservation depending on the severity of water shortages. The Conservation Ordinance, last updated in May 2016, was developed for the City to implement water demand management measures in case of a water supply shortage and to respond to the ongoing dry conditions. Some of the prohibited uses in effect at all times (Phase I) include<sup>3</sup>:

- Outdoor irrigation between the hours of 9 a.m. to 4 p.m.

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<sup>2</sup> *Id.* at ES-2.

<sup>3</sup> *Id.* at 3-11.



- Outdoor irrigation during and 48 hours after rain events.

Currently, LADWP is in Phase II of the Conservation Ordinance. All prohibited uses in Phase I apply to Phase II. In addition, prohibited uses in Phase II include:

- Outdoor irrigation is restricted to three days a week with different watering days assigned to odd-numbered and even-numbered street addresses.

For a full list of Conservation Ordinance Phases and prohibited uses, please refer to LADWP's 2015 UWMP.

On January 17, 2014, with California facing water shortfalls in the driest year in recorded state history, Governor Brown proclaimed a Drought State of Emergency. Responding to the executive order, in 2015, SWRCB imposed mandatory cutbacks ranging from four percent to 36 percent. LADWP was required to reduce its water use by 16 percent compared to the 2013 levels. LADWP met the state mandated reduction goal and saved 16.1 percent between June 2015 and May 2016.

On October 14, 2014, Mayor Garcetti issued the Executive Directive No. 5 (ED5) to set accelerated short-term conservation targets for the City to address the dry conditions including per capita water use reduction goal of 20 percent by 2017. On January 1, 2017, the City was able to meet the short-term target of 20 percent reduction through dry period response measures that reduced per capita water use to 104 gallons per day. By April 7, 2017, Governor Brown issued Executive Order B-40-17 formally ending the emergency. While this extraordinary achievement will have lasting effects on the City's water use efficiency, LADWP continues to work together with residents and businesses to achieve additional permanent conservation savings and further reduce per capita water use.

***Extending outreach efforts.*** Over the last several years, LADWP has expanded conservation outreach and educational efforts. Some activities to promote conservation include: increased communication with ratepayers through Twitter, Facebook, newspapers, radio, television, bus benches/shelters, and movie theaters, among other types of media; outreach to Homeowner Associations and Neighborhood Councils; distribution of hotel towel door hangers and restaurant table tent cards; and ramping up marketing of expanded water conservation incentive and rebate programs.

On April 9, 2015, the "Save the Drop" Water Conservation Outreach Campaign was launched. This campaign is a partnership between LADWP and the Mayor's Office. Outreach materials include public service announcements, radio spots, event handouts, and signage on the sides of LASAN trucks. The campaign has partnered with celebrities for public service announcements airing on television, cinema, and radio.

## **Long-Term Local Supply Strategies**

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On May 31, 2018, Governor Brown signed two long-term water-use efficiency bills: Assembly Bill 1668 and Senate Bill 606. These bills are designed to help the State better prepare for dry periods and climate change. They require that until January 1, 2025, the indoor residential use will reduce to 55 gpcd, 52.5 gpcd from January 1, 2025 to January 1, 2030, and 50 gpcd beginning January 1, 2030. The California State Water Resources Control Board (Water Board) and Department of Water Resources (DWR) may provide a recommendation to change these standards by 2021.

While the State has these set goals, LADWP has and continues to implement various long-term strategies to develop and provide resilient and sustainable local water supplies for the City.

### **1.0 Increase Water Conservation Through Reduction of Outdoor Water Use and New Technology**

#### Goal

Increase water conservation savings to improve water supply reliability while reducing costs, by cutting back on outdoor water use, expanding rebates and incentives, improving water use efficiency at public facilities, and enhancing savings through review of new developments.

#### Action Plan

**Conservation Rebates and Incentives.** LADWP is continuing to expand rebates and incentives for homeowners and business owners to encourage them to purchase water-efficient technology. Rebate and incentive programs include the following: Commercial Rebate Program, Residential Rebate Program, Direct Install Partnership Program, and Technical Assistance Program. For a full list of LADWP's rebate programs, please refer to [www.ladwp.com](http://www.ladwp.com).

Some highlights from the list of LADWP's numerous water conservation accomplishments are:

- LADWP's Water Conservation Program has achieved a total cumulative hardware water savings of over 150,000 AFY as of FYE 2020, through installation of water efficient devices subsidized by rebates and incentives.



- Water conservation achievements have helped keep water usage lower than the 1970s average water usage despite a population increase of over one million people.
- Turf Removal – Since FYE 2010, LADWP has rebated over 50 million square feet of turf replacements, saving over 2.3 billion gallons of water per year.

**Enhancing Conservation through New Developments.** LADWP continues to work with the City's Green Building Team to pursue desired changes in local codes and standards to promote water efficiency in new construction projects and major building renovations. The most updated revisions to local codes are 2020 Los Angeles Plumbing Code and 2020 Los Angeles Green Building Code, effective January 1, 2020.

On April 8, 2015, the California Energy Commission adopted new efficiency standards for toilets, faucets and other appliances effective January 1, 2016. Also, on July 15, 2015, in response to Governor Brown's Executive Order B-29-15, the California Water Commission approved the revised Model Water Efficient Landscape Ordinance, which reduces the maximum amount of water allowed from the 2009 version of the ordinance. Also, Ordinance No. 184248, *Green Building Codes Revision, Use of Greywater Systems, Water Conservation Measures*, became effective June 6, 2016, and mandates a number of new fixture requirements and methods of construction for plumbing and irrigation systems. California Plumbing Code, Los Angeles City Plumbing Code and amending ordinances apply to all newly constructed buildings, additions and alterations whenever new fixtures are installed in existing buildings. California Building Code, the LA Green Building Code and the amending ordinances also apply to new construction projects, but are limited to additions and alterations that exceed the Building Code's valuation or increase the building's conditioned volume.

In addition, the City adopted Ordinance No. 181899, also known as the "Low Impact Development" Ordinance, and Ordinance No. 183833, entitled "Stormwater and Urban Runoff Pollution Control." The purpose of these Ordinances includes rainwater harvesting and stormwater runoff management, water conservation, and recycled water reuse and grey water use. Ordinance No. 181899 was effective as of November 14, 2011, and Ordinance No. 183833 was effective October 3, 2015.

**Future Programs<sup>4</sup>.** In December 2014, LADWP started its Home Water Use Report Pilot Study, which provided 73,000 single family residential customers with bi-monthly home water use reports on their water usage, statistics on how they compare to similar households, customized water saving tips and rebate recommendations. In addition to the bimonthly home water reports, the recipients also have access to online historical water use, water use disaggregation estimates, and leak detection modules. LADWP plans to expand the availability of home water use reports to the entire single-family residential sector by mid-2021.

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<sup>4</sup> *Id.* at 3-33.

LADWP soft launched the Turf Replacement Design Service in March 2021 to provide customers interested in seeking a turf replacement rebate with free customized landscape design plans for a sustainable, low water use garden. Additionally, LADWP intends to resume Hands on Workshops throughout the service area in Fall 2021. Attendees participate in a landscape transformation at a residential home, learn how to remove turf, sheet mulch, grade for rainwater capture and install water efficient irrigation.

***LADWP Water Conservation Potential Study***<sup>5</sup>. In Fall 2017, LADWP completed the Water Conservation Potential Study (WCPS), which is one of the most comprehensive assessments of the potential for future water conservation ever taken by a municipal water utility. The WCPS conducted detailed single-family and multifamily surveys, completed comprehensive onsite audits of City-owned facilities, and developed a sophisticated water conservation model to project future conservation potential. The WCPS determined that approximately 140,000 AFY in additional water conservation potential is achievable by FYE 2035, and meeting the City's aggressive 2025 and 2035 conservation goals will require tapping into most of the remaining conservation potential in the City.

Going forward, LADWP will use the WCPS findings and conservation model to develop a balanced conservation plan that achieves the City's long-term conservation goals. Meeting the goals will require a combination of increased funding for LADWP's conservation and water use efficiency programs and continued commitment from LADWP customers to make conservation a way of life for Los Angeles. The WCPS findings show that a large portion of the remaining conservation potential will come from passive water savings through customers' actions to comply with all City conservation codes and ordinances and finding additional opportunities to improve water efficiency for their residential or commercial properties.

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<sup>5</sup> *Id.* at 3-34.



## 2.0 Water Recycling

LADWP's 2015 UWMP set a target of delivering 75,400 AFY of recycled water by 2040 to off-set imported water.<sup>6</sup> Some of the examples of the steps the City is taking in order to achieve this goal are listed below. There are other projects not listed below that will also contribute to recycled water use in the City's service area.

**Recycled Water Master Planning (RWMP).** In 2012, LADWP completed a three-year RWMP. RWMP documents guide near-term recycled water planning through 2035, as well as long-term recycled water planning for up to 50 years beyond the 2035 horizon. RWMP documents include an evaluation of recycling alternatives that integrate two strategies to increase recycling: Groundwater Replenishment (GWR), and non-potable reuse (NPR). The RWMP set goals for the GWR Project to replenish San Fernando Basin (SFB) with up to 30,000 AFY of recycled water, and for NPR projects to increase NPR recycled water use to 45,400 AFY by 2040.

**GWR Project.** The GWR Project is in the Planning phase. The Environmental Impact Report was certified in December 2016 by the Board of Water and Power Commissioners. The GWR Project is transitioning to a phased approach. The Initial Phase of the project will deliver up to 3,500 AFY of recycled water for indirect potable reuse in the San Fernando Valley by the end of 2021.

**The Machado Lake Pipeline Project (MLPP).** MLPP is a part of a joint agency project between LASAN, Los Angeles Bureau of Engineering, and LADWP to serve the Los Angeles Harbor area customers up to an additional 6 million gallons per day of advanced treated recycled water from an expanded Terminal Island Treatment Plant (TITP). The MLPP will construct 8,800 linear feet of 24-inch ductile iron pipeline that connects two segments of existing pipeline infrastructure, thus creating a looped pipeline service system within the Los Angeles Harbor Area. The project is split into two construction phases. Construction of Phase I was completed in late 2020 and Phase II is estimated to be completed by the end of 2021.

**Second Gap Connection Pipeline Project.** This pipeline project is to supply the LA County Dominguez Gap Seawater Intrusion Barrier (DGB) with a second supply line of advanced treated recycled water from the LASAN Terminal Island Water Reclamation Plant, and will increase service capacity to the DGB from 6 million gallons per day (mgd) up to 9.5 mgd. The pipeline is approximately 3000 linear feet of 24-inch diameter ductile iron pipe. LADWP and the Water Replenishment District of Southern California (WRD) negotiated an agreement that was executed in fall 2020 to construct this service pipeline as a joint agency project. Construction is anticipated to start in mid-2021 with an estimated completion in 2023.

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<sup>6</sup> *Id.* at 4-27.

***Harbor Recycled Water System Potable Backup Project.*** The purpose of this project is to maximize the reuse of water from the Terminal Island Water Reclamation Plant by increasing the reliability of the Harbor Recycled Water System. This project will provide the Harbor Recycled Water System with a potable water backup supply capacity of 14.4 million gallon per day by constructing a 250 foot, 24-inch connection between a 36-inch steel pipe in LADWP's 320-foot potable Service Zone and a 24-inch ductile iron pipe in the Harbor Recycled Water System. LADWP and WRD negotiated an agreement that was executed in fall 2020 to construct this project as a joint agency project. Design is anticipated to start in early 2021 and construction is scheduled to start in early 2022. The estimated in-service date is in late 2024.

For more information on LADWP's existing and planned recycled water pipelines and projects, please see Recycled Water Annual Report available at the following link: [www.ladwp.com/recycledwaterreport](http://www.ladwp.com/recycledwaterreport).

### **3.0 Enhancing Stormwater Capture**

Stormwater runoff from urban areas is an underutilized resource. Within the City, the majority of stormwater runoff is directed to storm drains and ultimately channeled into the ocean. Unused stormwater reaching the ocean carries with it many pollutants that are harmful to marine life. In addition, local groundwater aquifers that should be replenished by stormwater are receiving less recharge than in the past due to increased urbanization. Urbanization has increased the City's hardscape, which has resulted in less infiltration of stormwater and a decline in groundwater elevations.

LADWP's Stormwater Capture Master Plan (SCMP), which was completed in August 2015, comprehensively evaluated stormwater capture potential within the City. The goals of the SCMP are to quantify stormwater capture potential and identify new projects, programs, and policies to significantly increase stormwater capture for water supply within the 20-year planning period. Achieving these goals, will help LADWP achieve its long-term strategy of enhancing local water supply through stormwater capture.

Through intensive implementation of both centralized projects and distributed programs, SCMP provides a strategy to achieve an annual average capture of 132,000 to 178,000 AFY by 2035, which includes the 2015 UWMP baseline capture of 64,000 AFY. These projects include stormwater captured through infiltration type projects and programs that recharge aquifers as well as direct use programs that offset potable water demands, though the bulk of the capture is achieved through infiltration.

LADWP's 2015 UWMP projects that there will be a minimum of 15,000 AFY of increased groundwater pumping in SFB due to water supply augmentation through centralized stormwater infiltration by year 2040. Anticipating that stored groundwater will rebound in response to enhanced groundwater replenishment, LADWP will work with



the Upper Los Angeles River Area Watermaster to continue observing actual water levels and re-evaluate basin safe yield to allow additional increases in groundwater production over time as SFB elevations rebound.<sup>7</sup>

The San Fernando Valley spreading facilities are effective at capturing stormwater flowing down the tributaries; however, they are incapable of capturing significant portions of flow during wet years. Weather patterns in Los Angeles are highly variable, with many periods of dry years and wet years. Some climate studies predict that these patterns may become extreme in the future.

LADWP is currently partnering with other government and non-governmental agencies in various stormwater capture projects that include the following:

### **Completed Distributed Projects**

LADWP's already implemented distributed projects that have increased the amount of stormwater captured by 557 AFY during an average rainfall year. The following distributed projects were implemented within the last 5 years:

- Ben and Victory Green Stormwater Infrastructure
- Bradley Green Alley Project
- Great Street – Van Nuys Boulevard Project
- Laurel Canyon Green Street
- LAUSD Conserving for Our Kids Program
- Sun Valley Economic Development Administration Public Improvement Project

### **Future Centralized Projects**

By 2024, the following centralized projects are expected to be implemented that will provide an estimated 16,300 AFY of increased stormwater capture annually during an average rainfall year:

- Bull Creek Pipeline
- Pacoima Spreading Grounds Upgrade
- Tujunga Spreading Grounds Upgrade

### **Current/Future Distributed Projects**

The following distributed projects are expected to be implemented in the next three years that will provide an estimated 540 AFY of increased stormwater capture annually during an average rainfall year:

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<sup>7</sup> *City of Los Angeles Department of Water and Power 2015 Urban Water Management Plan, at 7-29.*

- Agnes and Vanowen Stormwater Capture Project
- Burbank Boulevard BMP Capture Project
- Ben and Victory Stormwater Capture Project
- Glenoaks and Filmore Stormwater Capture Project
- Glenoaks-Nettleton Stormwater Infiltration Project
- Great Street – Lankershim Boulevard Project
- Victory and Goodland Stormwater Capture Project

LADWP's current effort also includes the Stormwater Capture Parks Program. By 2026, the following projects are expected to be implemented that will provide an estimated 3,090 AFY of increased stormwater capture annually during an average rainfall year:

- Alexandria Park Stormwater Capture Project
- David M. Gonzales Recreation Center Stormwater Capture Project
- Fernangeles Park Stormwater Capture Project
- North Hollywood Park Stormwater Capture Project
- Strathern Park North Stormwater Capture Project
- Valley Plaza Park North Stormwater Capture Project
- Valley Plaza Park South Stormwater Capture Project
- Valley Village Park Stormwater Capture Project
- Whitsett Fields Park North Stormwater Capture Project

Additional information regarding stormwater capture projects can be found in LADWP's Stormwater Capture Master Plan (2015) and Urban Water Management Plan (2015).

#### **4.0 Accelerating Clean-Up of SFB**

The SFB is an aquifer that can provide sufficient drinking water to over 800,000 residents within the City. However, LADWP groundwater production wells in SFB have been impacted by contamination caused by improper handling and disposal of hazardous chemicals from the aircraft manufacturing industry and other, commercial activities dating back to the 1940s. Resolving the contamination problems and restoring the beneficial use of the SFB will help protect public health and the environment, and to recover LADWP's historical groundwater supply and valuable local water resource.

Since the 1980 discovery of volatile organic compound (VOC) contamination of groundwater in SFB, LADWP has been working with government agencies to contain and remediate man-made contaminants in SFB. Chlorinated solvents such as trichloroethylene (TCE), perchloroethylene (PCE) and carbon tetrachloride account for the majority of this groundwater contamination.



From 2009 to 2015<sup>8</sup>, LADWP completed an \$11.5 million, six-year study and development of a comprehensive remediation and cleanup strategy for all groundwater basin contamination in SFB.

#### ***Development of State-of-the-Art Groundwater Basin Remediation Facilities***

- Based on the available groundwater quality information, a groundwater basin remediation program consisting of centralized as well as localized/well-head remediation facilities will be needed for public and environmental benefits as well as to prevent further losses to the beneficial use of groundwater.
- Design and construction of the groundwater basin remediation facilities is estimated to cost approximately \$600 million, and operation and maintenance is estimated to cost an additional \$50 million per year.

#### **Groundwater and Treatment System Monitoring**

- In order to fully characterize SFB groundwater quality as required by SWRCB Board's Division of Drinking Water guidelines and policies, LADWP has drilled 26 new monitoring wells in SFB to fill in data gaps and utilized a network of over 70 existing monitoring and production wells.
- Cost to install the monitoring wells is approximately \$22 million.

With completion of SFB groundwater characterization, LADWP is proceeding with the necessary environmental reviews, design, permitting, construction, and start-up of the groundwater basin remediation program to effectively clean and remove contaminants from SFB.

The current groundwater remediation facilities in operation are:

- ***NHOU***: The NHOU began operations in the 1980s to treat 4.5 cfs of contaminated groundwater; however, changing groundwater conditions limited the ability of the remedy to contain the VOC plume. Implementation of a Second Interim Remedy is currently in progress to contain concentrated areas of the plume, but will not address contamination that has migrated to other well fields.
- ***Liquid-Phase GAC Pilot Treatment Plant at Tujunga Wellfield***: The Liquid-Phase GAC Pilot Treatment Plant removes VOCs from two of the twelve production wells in the Tujunga Wellfield at 8,000 gpm, and treats the extracted groundwater for potable use. This pilot facility is a joint project with MWD to demonstrate the effectiveness of utilizing certain liquid phase GAC media for removal of VOCs from the groundwater.

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<sup>8</sup> *Id.* at 6-9.

- ***Pollock Wells Treatment Plant:*** The plant provides four liquid-phase GAC vessels to remove VOC contamination from two groundwater wellheads. However, LADWP has recently identified 1,4-dioxane and hexavalent chromium as emerging contaminants that may impair the operation of the Pollock Wells Treatment Plant.

These facilities will work with the new remediation facilities to clean up the majority of contaminants impacting LADWP's highest producing wellfields, including TCE, PCE, and 1,4-dioxane. The proposed centralized and localized facilities are:

- North Hollywood West Wellhead Treatment – Operation expected by 2022
- North Hollywood Central Treatment – Operation expected by 2023
- Tujunga Central Treatment – Operation expected by 2023

The overall purpose of the San Fernando Groundwater Basin Remediation Project is to restore and protect the full beneficial use of the San Fernando Groundwater Basin as a source of water consistent with LADWP's long-term water rights and historic groundwater use.

More information about LADWP's SFB Groundwater Remediation program can be found at [www.ladwp.com/remediation](http://www.ladwp.com/remediation)

## Water Supplies

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The Los Angeles Aqueducts (LAA), local groundwater, purchased water from MWD, and recycled water are the primary sources of water supplies for the City. Table III shows LADWP water supplies from FYE 2016 to FYE 2020 from these sources.

**TABLE III**  
**LADWP Water Supply**

FYE	Los Angeles Aqueducts	Local Groundwater	MWD	Recycled Water	Transfer, Spread, Spills, and Storage	Total
2016	57,853	79,056	339,975	9,913	-3,509	490,306
2017	224,724	50,439	216,299	8,032	9,350	490,144
2018	307,671	21,760	182,706	9,778	-200	522,116
2019	312,456	32,233	137,775	7,512	1,710	488,266
2020	292,095	34,363	152,647	9,641	1,155	487,591

Note: Units are in AF.

### 1.0 Los Angeles Aqueducts

Snowmelt runoff from the Eastern Sierra Nevada Mountains is collected and conveyed to the City via Los Angeles Aqueducts (LAA). LAA supplies come primarily from snowmelt and secondarily from groundwater pumping and can fluctuate annually due to the varying hydrologic conditions. Since 1991, LAA supplies have been less than the historical average due to environmental obligations in Mono and Inyo Counties.

Within the Owens Valley, the primary framework that governs LADWP environmental operations is the Long Term Water Agreement (LTWA). The LTWA is a stipulated court order between Inyo County and LADWP, issued in 1991, which established an overall goal for managing groundwater resources within Inyo County. The intent is "to avoid certain described decreases and changes in vegetation, and to cause no significant effect on the environment which cannot be acceptably mitigated, while providing a reliable supply of water for export to Los Angeles and for uses in Inyo County." The LTWA does not impact LADWP's surface water rights, but manages LADWP's groundwater pumping, and groundwater use within Inyo County. The LTWA also requires LADWP to implement and maintain a variety of "Enhancement/Mitigation Projects." Prior to implementation of the LTWA, average water uses and losses in Owens Valley totaled 216,000 AFY. After implementation, these uses and losses increased to 287,000 AFY.

In the Mono Basin, LADWP historically diverted water from four tributary streams of Mono Lake. Between 1971 and 1988, LADWP averaged 83,400 AFY from the Mono Basin. Beginning in 1989, with the issuance of a landmark California Supreme Court



case, LADWP began to reduce exports to comply with legal requirements. In 1994, the State Water Resources Control Board (SWRCB) entered Decision 1631, which amended City water right licenses 10191 and 10192 to establish fishery protection flows for streams tributary to Mono Lake, and to protect public trust resources at Mono Lake and in the Mono Basin. Decision 1631 also set limits on LADWP water exports from the Mono Basin, which were set to a range of 0 to 16,000 AFY.

The City's water rights in the Eastern Sierra Nevada are comprised of riparian rights, pre-1914 appropriations, and post-1914 appropriation licenses held on various streams in the Mono Basin and Owens Valley. Riparian rights are for stream flow used on land adjacent to the stream. Appropriations by the City based on post-1914 water rights are made pursuant to licenses issued by the SWRCB. The majority of the City's water rights are pre-1914 water rights established prior to enactment of the State Water Commission Act. The most significant basis for export of surface water from the Eastern Sierra Nevada is an appropriation claim in 1905 to divert up to 50,000 miner's inches (1,250 cfs) from the Owens River at a location approximately 15 miles north of the town of Independence into the LAA for transport to Los Angeles. The City files supplemental statements (for riparian and pre-1914 water rights) and licensee reports (for post-1914 water rights) of water diversion and use with the SWRCB for its diversions during each calendar year.

The City's water right licenses in the Mono Basin were amended by the SWRCB in 1994 through the Mono Lake Basin Water Right Decision 1631. As of Runoff Year (RY) 2019/20, the Mono Lake water level was above the Water Right Decision 1631 trigger elevation of 6,380 feet; therefore, the amount of water now available for export from Mono Basin is 16,000 AF.

The primary groundwater right through which Los Angeles has developed groundwater resources in the Owens Valley is based on ownership of a majority of the land (approximately 252,000 acres) and associated water rights in the Owens Valley. Management of the groundwater supply in the Owens Valley is according to the LTWA. Groundwater Pumping is regulated under the LTWA by using vegetation water demand and available soil moisture to determine whether groundwater wells can be pumped. Groundwater is pumped from nine Owens Valley wellfields and began in 1970 after completion of the Second LAA.

Annual LAA deliveries to Los Angeles are dependent on snowfall in the Eastern Sierra Nevada. Years with abundant snowpack result in larger water deliveries from the LAA, and typically reduced purchases of supplemental water from MWD. Conversely, low LAA deliveries in dry years increase the demand for supplemental water from MWD. The impact to LAA water supplies due to varying hydrology in the Mono Basin and Owens Valley is amplified by the requirements to release supply water for environmental enhancement efforts in the Eastern Sierra Nevada.



Average deliveries from LAA system have been approximately 238,960 AF annually from Fiscal Year (FY) 2015/16 to 2019/20. This average delivery includes two of the five dry years that began in FY 2012/2013 and ended in FY 2016/2017. Since imported supplies vary from year to year depending on the hydrology, LADWP plans to increase resiliency to address hydrologic variability and natural disasters by developing sustainable local water supplies.

## 2.0 Groundwater

LADWP pumps from three adjudicated basins within the City. SFB and Sylmar Basin are subject to the judgment in the City of Los Angeles vs. City of San Fernando, et al. Groundwater pumping by LADWP and other parties is tracked and reported to the court-appointed Upper Los Angeles River Area (ULARA) Watermaster. The Central Basin is also subject to court judgment. Pumping is reported to WRD, the administrative member of the Central Basin Water Rights Panel.

The SFB is the largest of four basins within ULARA. The basin consists of 112,000-acres of land and comprises 91.2 percent of ULARA valley fill area. The City has accumulated 591,460 AF of stored water credits in the San Fernando Basin as of October 1, 2018. A portion of this water is available for the City to withdraw during normal and dry years, or in an emergency, in addition to the City's approximate 87,000 AF annual entitlement. With SFB remediation facilities estimated to be operational by 2023, the groundwater storage credits may be used to optimize pumping beyond the City's annual entitlement.

While the majority of the City's groundwater is extracted from the SFB, the Sylmar Basin also provides local groundwater supply. Sylmar is located in the northern part of ULARA, consists of 5,600 acres, and comprises 4.6 percent of ULARA valley fill area. The City's current annual entitlement per latest Sylmar Safe Yield is 3,570 AF. As of October 1, 2019, the City has accumulated 9,014 AF of stored water credits in the Sylmar Basin. Sylmar Basin production is anticipated to increase to 4,170 AFY from FYE 2021 to FYE 2036 to utilize groundwater the City has accumulated into storage and then return to the entitlement of 3,570 AFY in FYE 2037.<sup>9</sup>

The ULARA Judgment was adopted through court adjudication on January 26, 1979, dictating the water rights within the basins of ULARA. Enclosed with the assessment are copies of those pages from the judgment showing the entitlements (see Appendix D). Further information about ULARA is detailed in the annual ULARA Watermaster Report. Both the Watermaster Reports and Judgment are available for review at the office of the ULARA Watermaster or on-line at [www.ularawatermaster.com](http://www.ularawatermaster.com).

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<sup>9</sup> *Id.* at 11-4.

The City also has adjudicated groundwater extraction rights in the Central Basin. LADWP's annual entitlement is 17,236 AF. As of July 1, 2020, LADWP has accumulated 22,943 AF of stored water in the Central Basin, and pumping can be temporarily increased until stored water credits have been expended.<sup>10</sup> See Appendix D for copies of relevant portions of Central Basin third amended judgment. Judgment is available for review on the WRD Web site at <http://wrwater.org/>.

The City plans to continue to develop production from its groundwater basins in the coming years to offset reductions in imported supplies. Groundwater produced by the City from the San Fernando, Sylmar, and Central Basins for the last available five years are shown on Table IV. See LADWP 2015 UWMP Exhibit 6I for the projected groundwater production through FYE 2040.

**TABLE IV**  
**Local Groundwater Basin Supply**

Fiscal Year (July-June)	San Fernando	Sylmar	Central
2015-2016	75,958	683	8,395
2016-2017	55,116	0	3,005
2017-2018	22,259	0	0.77
2018-2019	36,871	1	5
2019-2020	35,948	2	10

Notes: Units are in AF. Historical data are from the Upper Los Angeles River Area Watermaster Monthly Reports, July 2014 to June 2019.

Per the Agreement for Interim Water System Connection and Water Delivery between the cities of Los Angeles and Burbank, the City has been receiving water from Burbank Water and Power via the LA-Burbank Interim Interconnection starting August 2019. This water is groundwater from SFB treated at the Burbank Operable Unit (BOU), blended with MWD treated surface water. The agreement also allows the City to be able to utilize its SFB entitlements and increase its local water supplies. The agreement will remain in effect until June 30, 2025, or earlier if terminated earlier by either party.

During the 2012-2016 dry period, California was challenged with several statewide water shortage issues, including over pumping which results in land subsidence and dry well issues. The State Legislature enacted the Sustainable Groundwater Management Act (SGMA), effective January 1, 2015, in order to equip and empower local agencies with tools to manage local groundwater basins in a sustainable manner. Actions necessary to achieve sustainability will vary with each basin, but SGMA generally requires local agencies to form Groundwater Sustainability Agencies (GSA) by January 30, 2017, develop and implement Groundwater Sustainability Plans (GSP), and

<sup>10</sup> *Id.* at 6-24.



monitor and report status of groundwater conditions of high- and medium-priority basins. GSPs for critically over drafted high- and medium-priority basins were due to DWR by January 31, 2020. GSPs for the remaining high- and medium-priority basins are due to DWR by January 31, 2022. SGMA will mitigate and prevent the occurrence of adverse effects caused by unreasonable use of groundwater, such as groundwater storage depletion, land subsidence, seawater intrusion, water quality degradation, critical overdraft basin conditions, and surface water depletions.

The City overlies both adjudicated and unadjudicated basins. LADWP is working with its regional partners towards compliance with the SGMA for the unadjudicated basins, such as the Santa Monica Basin (SMB). In September 2017, DWR approved the formation of the SMBGSA as the exclusive GSA in the SMB. The five member agencies include LADWP, the City of Beverly Hills, the City of Santa Monica, the City of Culver City, and the County of Los Angeles. In November 2019, the SMBGSA initiated the development of a GSP for the SMB. The final GSP will be submitted to DWR by January 31, 2022. Another unadjudicated basin within the City boundary is the Hollywood Basin, but it was classified as low priority and not mandated to develop a GSA/GSP. Similarly, areas associated with adjudicated basins, like the northern area of Central Basin, were eventually characterized as lower priority and exempt by DWR's compliance with SGMA.

### **3.0 Metropolitan Water District of Southern California**

MWD is the largest water wholesaler for domestic and municipal uses in Southern California. As one of the 26 member agencies, LADWP purchases supplemental water from MWD in addition to the supplies from local groundwater, recycled water and LAA. MWD imports a portion of its water supplies from Northern California through the State Water Project's (SWP) California Aqueduct and from the Colorado River through MWD's own Colorado River Aqueduct (CRA). LADWP will continue to rely on MWD to meet its current and future water needs.

In ongoing efforts to evaluate MWD's import reliability, an assessment was done to address changes in demand and supply conditions, and to provide additional resource reserves to mitigate against uncertainties in demand projections and risks in implementing supply programs. These efforts contributed to MWD's 2015 UWMP. [http://www.mwdh2o.com/PDF\\_About\\_Your\\_Water/2.4.2\\_Regional\\_Urban\\_Water\\_Management\\_Plan.pdf](http://www.mwdh2o.com/PDF_About_Your_Water/2.4.2_Regional_Urban_Water_Management_Plan.pdf). Preparation of the 2020 UWMP by MWD is underway and is scheduled for adoption in May 2021.

All 26 member agencies have preferential rights to purchase water from MWD. Pursuant to Section 135 of MWD Act, "Each member public agency shall have a preferential right to purchase from the district for distribution by such agency, or any public utility therein empowered by such agency for the purpose, for domestic and municipal uses within the agency a portion of the water served by the district which shall, from time to time, bear the same ratio to all of the water supply of the district as

the total accumulation of amounts paid by such agency to the district on tax assessments and otherwise, excepting purchase of water, toward the capital cost and operating expense of the district's works shall bear to the total payments received by the district on account of tax assessments and otherwise, excepting purchase of water, toward such capital cost and operating expense." This is known as preferential rights. As of June 30, 2020, LADWP has a preferential right to purchase 18.12 percent of MWD's total water supply.

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

The record dry and hot conditions of 2014 significantly impacted the water resources of both the State of California and MWD. DWR's SWP Table A allocation was limited to only five percent. MWD was able to meet demands in 2014 by relying heavily on storage reserves to make up for the historically low allocation on SWP. MWD's dry-year storage reserves ended 2014 at approximately 1.2 million AF.

On April 14, 2015, to support Governor Brown's Executive Order B-29-15, and to reduce withdrawals from MWD's dry-year storage reserves, MWD implemented WSAP at a Level 3 Regional Shortage Level, effective July 1, 2015, through June 30, 2016. MWD's dry-year storage reserves ended 2015 at approximately 0.87 million AF.

On May 10, 2016, citing the improved water supply conditions and reduced water use due to conservation, MWD voted to rescind the WSAP Regional Shortage Level 3 and declared a Condition 2 Water Supply Alert for allocation year 2016/17. MWD, however, called for member agencies to continue with conservation efforts to safeguard against future dry years. On May 9, 2017, citing the improved water supply conditions, the actions taken by the Governor and the projected storage reserves, MWD voted to declare a Condition 1 Water Supply Watch.

LADWP plans to reduce purchases of MWD water supplies by increasing conservation and recycled water production, and by enhancing groundwater pumping through stormwater capture and groundwater replenishment. This would allow LADWP to further reduce dependence on purchased imported water from MWD and maintain a resilient and sustainable water supply for the City.

### **State Water Project**

The SWP is owned by the State of California and operated by DWR, delivering water to two-thirds of the population of California and 750,000 acres of farmland. The SWP facilities include 30 dams, 20 reservoirs, 29 pumping and generating plants, and approximately 700 miles of aqueducts and pipelines. The water stored and delivered by the SWP originates from Northern California's watersheds, where most of the State's precipitation occurs. SWP facilities originate in Northern California at Lake Oroville on



the Feather River and is pumped from the Bay-Delta region to contractors in areas north and south of the San Francisco Bay and south of the Bay-Delta.

MWD receives SWP water at three locations: Castaic Lake in Los Angeles County at the terminus of SWP West Branch, Devil Canyon Afterbay in San Bernardino County at the terminus of SWP East Branch Extension, and Box Springs Turnout at Lake Perris in Riverside County at the terminus of SWP East Branch.

MWD began receiving water from the SWP in 1972. MWD is the largest of the 29 SWP contractors, holding a contract for 1.912 MAF per year, or 46 percent of the total contracted amount of the 4.173 MAF ultimate delivery capacity of the project. Variable hydrology, environmental issues, and regulatory restrictions in the San Francisco Bay/Sacramento-San Joaquin River Delta (Bay-Delta) have periodically reduced the quantity of water that the SWP delivers to MWD.

Contract allocations for SWP contractors are provided by DWR in "Table A," based on the original projected SWP maximum yield of 4.173 MAF. DWR annually approves the amount of contract allocations SWP contractors will receive. The contract allocation amount received by contractors varies based on contractor demands and projected available water supplies. Variables impacting projected water supplies include snowpack in the Sierra Nevada, capacity available in reservoirs, operational constraints, and demands of other water users.

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

### **Endangered Species Act Considerations**

DWR has altered the SWP's operations to accommodate certain species that are threatened or endangered, which impact SWP deliveries to MWD. On December 15, 2008, the United States Fish and Wildlife Service (USFWS) released a biological opinion on the impacts of the State Water Project and the federal Central Valley Project on Delta smelt. Based on the biological opinion's findings, the USFWS provided recommended actions to protect the Delta smelt. On June 4, 2009, the National Marine Fisheries Service (NMFS) released a biological opinion for salmonid species. The water supply restrictions imposed by these biological opinions on Delta smelt and salmonid species have a range of impacts on Metropolitan's deliveries from the SWP that are dependent on hydrologic conditions. The impact on total SWP deliveries to State Water Contractors attributable to the Delta smelt and salmonid species biological opinions combined is estimated to be one million AF in an average year, reducing total State Water Project deliveries to State Water Contractors from approximately 3.3 million AF to approximately 2.3 million AF during a year below average hydrology.

On October 22, 2019, USFWS and NMFS released new biological opinions. The Bureau of Reclamation completed its environmental review of the proposed action covered by the new biological opinions on February 19, 2020. The new opinions replace the existing federal permits for the Central Valley Project.

On March 31, 2020, the California Department of Fish and Wildlife (CDFW) issued an Incidental Take Permit (ITP) to DWR for long-term operations of the SWP. In April 2020, MWD, with the MWD Board approval, joined the State Water Contractors in their litigation against DWR and CDFW over the ITP. The impacts to MWD from the ongoing negotiation of Voluntary Agreements on the new biological opinions and incidental take permit, as well as litigation challenging them, remain unknown.

### **New Bay-Delta Conveyance Facility**

In 2006, multiple state and federal resource agencies, water agencies, and other stakeholder groups entered into a planning agreement for the Bay-Delta Conservation Plan (BDCP). The BDCP included alternatives for new water conveyance infrastructure and extensive habitat restoration in the Bay-Delta. In 2015, during the administration of the Governor Brown, the state and federal lead agencies proposed an alternative implementation strategy and new alternatives to the BDCP to provide for the protection of water supplies conveyed through the Bay-Delta and the restoration of the ecosystem of the Bay-Delta, termed "California WaterFix" and "California EcoRestore," respectively.

In July 2017, DWR certified a final EIR and approved the California WaterFix as an improvement to the State Water Project. As originally approved by DWR, the California WaterFix would provide new conveyance facilities for the transportation of State Water Project and Central Valley Project water from the north Delta, through two 30-mile long tunnels running under the Delta, to the existing aqueduct systems in the south Delta.

On April 29, 2019, Governor Newsom issued an executive order directing state agencies to develop a comprehensive statewide strategy to build a climate-resilient water system that included consideration of a single-tunnel conveyance facility instead of the approved two-tunnel WaterFix project. DWR began pursuing a new environmental review and planning process for the single tunnel "Delta Conveyance Project". The formal environmental review process commenced with the issuance by DWR of a Notice of Preparation under CEQA on January 15, 2020. In August 2020, the U.S. Army Corps of Engineers issued a Notice of Intent for the development of a new Environmental Impact Statement.

### **Colorado River**

MWD owns and operates the CRA, which since 1942 has delivered water from the Colorado River to Southern California. The Colorado River currently supplies approximately 17 percent of Southern California's water needs, and on average makes



up about 15 percent of LADWP's purchases from MWD. This source of supply has been secured to MWD through long-standing legal entitlements. However, extended dry conditions and increased demands by other users have recently impacted its reliability.

The Colorado River supplies come from watersheds of the Upper Colorado River Basin in the states of Colorado, Utah, and Wyoming. Due to the way that Colorado River supplies are apportioned, snowpack and runoff levels do not impact MWD water supplies in the current year. Instead, snowpack and runoff impact storage levels at Lake Powell and Lake Mead, which would then affect the likelihood of surplus or shortage conditions in the future.

Because MWD has two principal sources of supply that draw from two different watersheds, MWD is able to utilize supplies from the Colorado River to offset potential reductions in SWP supplies and buffer impacts during dry periods. MWD plans to use CRA deliveries, storage reserves, and supplemental water transfers and purchases to meet regional demands.

Under a permanent service contract with the U.S. Secretary of the Interior, MWD is entitled to receive water from the Colorado River and its tributaries. This water is also available to other users in California, as well as users in the states of Arizona, Colorado, Nevada, New Mexico, Utah, and Wyoming. Under a 1944 treaty, Mexico is allotted 1.5 million AF annually, except in extraordinary circumstances. There is long history of competition among users, but current conditions necessitate increased cooperation.

California is apportioned 4.4 million AFY, 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. Since 2003, due to increased consumption, there has been no such unused, apportioned water available to California. Of the California apportionment, MWD holds the fourth priority right to 550,000 AFY under the 1931 priority system governing allotments to California. This is the last priority within California's basic apportionment of 4.4 million AF. Beyond the basic apportionment, MWD holds the fifth priority right to 662,000 AF of water. See Appendix F for more details.

MWD has historically been able to claim most of its legal entitlement of Colorado River water and could divert over 1.2 million AF in any year, but persistent dry conditions since 1999 have contributed to a decrease in these claims. The recent 16-year dry period was so severe that it resulted in major reductions in water deliveries from the Colorado River. In response, the federal government, as well as state, urban, and agricultural water districts that depend on the Colorado River worked together toward a solution.

The Secretary of the Interior adopted the Interim Surplus Guidelines in 2001 to identify surplus Colorado River water available for use in California, Arizona, and Nevada (Lower Basin States) through 2016. In 2007, the Secretary of the Interior issued the

Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead through a Record of Decision. The Record of Decision provide water release criteria from Lake Powell and water storage and water release criteria from Lake Mead during shortage and surplus conditions in the Lower Basin, provided a mechanism for the storage and delivery of conserved system and non-system water in Lake Mead and extend the Interim Surplus Guidelines through 2026. The guidelines also created the Intentionally Created Surplus (ICS) program, which allows the Lower Basin States to store conserved water in Lake Mead. ICS water (water that has been conserved through an extraordinary conservation measure, such as land fallowing) is eligible for storage in Lake Mead by MWD.

Since the 2007 Lower Basin shortage guidelines were issued for the coordinated operations of Lake Powell and Lake Mead, the Colorado River has continued to experience dry conditions. In order to reduce the risk of Lake Powell and Lake Mead declining below critical elevations, the federal government, states and urban and agricultural water districts that depend on the Colorado River worked together to adopt and enact the Drought Contingency Plan in 2019. The Drought Contingency Plan is a collection of agreements within and among the seven western states in the Colorado River Basin to boost storage levels in Lake Mead and Lake Powell and prevent the reservoirs from reaching critically low levels.

The Lower Basin Drought Contingency Plan Agreement requires California, Arizona and Nevada to store defined volumes of water in Lake Mead at specified lake levels. California would begin making contributions if Lake Mead's elevation is projected to be at or below 1,045 feet above sea level on January 1. As of January 1, 2021, Lake Mead's elevation measured approximately 1,084 feet.

### **Reliability Efforts for Southern California**

MWD has been developing plans and making efforts to provide additional water supply reliability for the entire Southern California region. LADWP coordinates closely with MWD to ensure implementation of these water resource development plans. MWD's long-term plans to meet its member agencies' growing reliability needs include SWP improvements as outlined in the EcoRestore plans, conjunctive management efforts on the Colorado River, water transfer programs, outdoor conservation measures, and development of additional local resources such as recycling, brackish water desalination, and seawater desalination. These plans are contained in MWD's 2015 IRP and 2015 UWMP, which can be found at the following links:

- MWD 2015 IRP:  
[http://mwdh2o.com/PDF\\_About\\_Your\\_Water/2015%20IRP%20Update%20Report%20\(web\).pdf](http://mwdh2o.com/PDF_About_Your_Water/2015%20IRP%20Update%20Report%20(web).pdf)
- MWD 2015 UWMP:  
[http://www.mwdh2o.com/PDF\\_About\\_Your\\_Water/2.4.2\\_Regional\\_Urban\\_Water\\_Management\\_Plan.pdf](http://www.mwdh2o.com/PDF_About_Your_Water/2.4.2_Regional_Urban_Water_Management_Plan.pdf)



Additionally, MWD has more than 5.0 million AF of storage capacity available in reservoirs and banking/transfer programs. MWD has approximately 3.2 million AF of water in Water Surplus Drought Management storage and an additional 750,000 AF in emergency storage as of January 1, 2021. Continued efficiency in the region kept demands low in 2020, resulting in available water supplies far exceeding demands. With the implementation of new and modified storage programs to manage the available surplus supplies, MWD has been able to maintain historically high storage levels.

MWD's 2015 IRP was built upon the strong foundation of diversification and adaptation developed in previous IRPs. The 2015 IRP reinforced MWD commitment to meeting the region's water supply needs through an evolving long-term strategy that called for maintaining and stabilizing existing resources along with developing more conservation and new local supplies. Development for the 2020 IRP is currently underway with a tentative adoption in September 2021.

MWD's 2015 UWMP reports on water reliability and identifies projected supplies to meet the long-term demand within MWD's service area. Table V summarizes MWD's reliability in five-year increments extending to 2040 and is based on information contained in MWD's 2015 UWMP. As reported, MWD has supply capabilities that would be sufficient to meet expected demands from 2020 through 2040 under average year, single dry-year and multiple dry-year hydrologic conditions. An in-depth discussion on MWD is attached in Appendix F.

**Table V**  
**MWD System Forecast Supplies and Demands**  
**Average Year (1922 - 2012 Hydrology)**

Forecast year	Supply (Thousands of AF per Year)				
	2020	2025	2030	2035	2040
<i>Current Programs</i>					
In-Region Supplies and Programs	693	774	852	956	992
State Water Project <sup>1</sup>	1,555	1,576	1,606	1,632	1,632
Colorado River Aqueduct					
Colorado River Aqueduct Supply <sup>2</sup>	1,468	1,488	1,484	1,471	1,460
Aqueduct Capacity Limit <sup>3</sup>	1,200	1,200	1,200	1,200	1,200
Colorado Aqueduct Capability	1,200	1,200	1,200	1,200	1,200
<b>Capability of Current Programs</b>	<b>3,448</b>	<b>3,550</b>	<b>3,658</b>	<b>3,788</b>	<b>3,824</b>
<i>Demands</i>					
Total Demands on MWD	1,586	1,636	1,677	1,726	1,765
Imperial Irrigation District - San Diego County Water Authority Transfers and Canal Linings <sup>4</sup>	274	282	282	282	282
<b>Total Demands on MWD</b>	<b>1,860</b>	<b>1,918</b>	<b>1,959</b>	<b>2,008</b>	<b>2,047</b>
<b>Surplus</b>	<b>1,588</b>	<b>1,632</b>	<b>1,699</b>	<b>1,780</b>	<b>1,777</b>
<i>Programs Under Development</i>					
In-Region Supplies and Programs	43	80	118	160	200
State Water Project	20	20	268	268	268
Colorado River Aqueduct					
Colorado River Aqueduct Supply	5	25	25	25	25
Aqueduct Capacity Limit <sup>2</sup>	0	0	0	0	0
Colorado River Aqueduct Capability	0	0	0	0	0
<b>Capability of Programs Under Development</b>	<b>63</b>	<b>100</b>	<b>386</b>	<b>428</b>	<b>468</b>
<b>Maximum MWD Supply Capability</b>	<b>3,511</b>	<b>3,650</b>	<b>4,044</b>	<b>4,216</b>	<b>4,292</b>
<b>Potential Surplus</b>	<b>1,651</b>	<b>1,732</b>	<b>2,085</b>	<b>2,208</b>	<b>2,245</b>

1. Includes water transfers and groundwater banking associated with SWP.

2. Includes 296 TAF of non-MWD supplies conveyed in CRA for Imperial Irrigation District - San Diego County Water Authority Transfers and Canal Linings.

3. CRA has a capacity constraint of 1.20 MAF per year.

4. Does not include 16 TAF subject to satisfaction of conditions specified in agreement among MWD, the US, and the San Luis Rey Settlement.

#### **4.0 Secondary Sources and Other Considerations**

Stormwater capture, water conservation, and recycling will play an increasing role in meeting future water demands. LADWP has implemented stormwater capture, conservation, and recycling programs with efforts under way to further promote and increase the level of these programs. LADWP is committed to supply a higher percentage of the City's water demand through local water supply development.

LADWP works closely with MWD, LASAN, other regional water providers, and various stakeholders to develop and implement programs that reduce overall water use. One example of such collaboration is an integrated resources planning process.

#### **5.0 Summary of Water Demand and Supply Projections for 20 years**

Table VI tabulates the service reliability assessment for average weather year. Existing water conservation has been subtracted already from projected demands, but new water conservation is included as a supply source.

**Table VI**  
**Service Area Reliability Assessment for Average Weather Year**

Demand and Supply Projections (in acre-feet)	Average Weather Conditions (FY 1961/62 to 2010/11) Fiscal Year Ending on June 30				
	2020	2025	2030	2035	2040
<b>Total Water Demand<sup>1</sup></b>	<b>611,800</b>	<b>644,700</b>	<b>652,900</b>	<b>661,800</b>	<b>675,700</b>
<b>pLAn Water Demand Target</b>	<b>485,600</b>	<b>533,000</b>	<b>540,100</b>	<b>551,100</b>	<b>565,600</b>
<b>Existing / Planned Supplies</b>					
Conservation (Additional Active <sup>2</sup> and Passive <sup>3</sup> after FY14/15)	125,800	110,900	111,600	109,100	108,100
Los Angeles Aqueduct <sup>4</sup>	275,700	293,400	291,000	288,600	286,200
Groundwater <sup>5</sup> (Net)	112,670	110,670	106,670	114,670	114,070
Recycled Water					
- Irrigation and Industrial Use	19,800	29,000	39,000	42,200	45,400
- Groundwater Replenishment	0	30,000	30,000	30,000	30,000
Stormwater Capture					
- Stormwater Reuse (Harvesting)	400	800	1,200	1,600	2,000
- Stormwater Recharge (Increased Pumping)	<u>2,000</u>	<u>4,000</u>	<u>8,000</u>	<u>15,000</u>	<u>15,000</u>
Subtotal	536,370	578,770	587,470	601,170	600,770
<b>MWD Water Purchases</b>					
With Existing/Planned Supplies	75,430	65,930	65,430	60,630	74,930
<b>Total Supplies</b>	<b>611,800</b>	<b>644,700</b>	<b>652,900</b>	<b>661,800</b>	<b>675,700</b>
<b>Potential Supplies</b>					
Water Transfers <sup>6</sup>	<u>40,000</u>	<u>40,000</u>	<u>40,000</u>	<u>40,000</u>	<u>40,000</u>
Subtotal	40,000	40,000	40,000	40,000	40,000
<b>MWD Water Purchases</b>					
With Existing/Planned/Potential Supplies	35,430	25,930	25,430	20,630	34,930
<b>Total Supplies</b>	<b>611,800</b>	<b>644,700</b>	<b>652,900</b>	<b>661,800</b>	<b>675,700</b>

<sup>1</sup> Total Demand with existing passive conservation

<sup>2</sup> Cumulative hardware savings since late 1980s reached 118,034 AFY by 2014-15.

<sup>3</sup> Additional non-hardware conservation required to meet water use reduction goals set in the Sustainable City pLAn.

<sup>4</sup> LADWP anticipates conserving 20,000 AFY of water usage for dust mitigation on Owens Lake after the Master Project is implemented in FY 2023-24. Los Angeles Aqueduct supply is estimated to decrease 0.1652% per year due to climate change impact.

<sup>5</sup> Net GW excludes Stormwater Recharge and Groundwater Replenishment supplies that contribute to increased pumping. The LADWP Groundwater Remediation project in the San Fernando Basin is expected in operation in 2021-22. Storage credit of 5,000 AFY will be used to maximize pumping in 2019-20 and thereafter. Sylmar Basin production will increase to 4,170 AFY from 2015-16 to 2038-39 to avoid the expiration of stored water credits, then go back to its entitlement of 3,570 AFY in 2039-40.

<sup>6</sup> Potential water transfer occurs in dry years with stored water acquired in average and wet years.



Service area reliability assessments for single-dry year and multiple-dry year conditions are shown in LADWP 2015 UWMP Exhibits 11F through 11H. Demands are met by the available supplies under all scenarios.

## **Water System Financing Program**

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Capital costs to finance facilities for the delivery of water supply to LADWP's service area are supported through customer-billed water rates. The Board sets rates subject to approval of City Council by ordinance. The Board is obligated by City Charter to establish water rates and collect charges in an amount sufficient to service the water system indebtedness and to meet its expenses for operation and maintenance.

On March 15, 2016, City Council approved the new water rates and rate structure. New water rates, which became effective April 15, 2016, through Ordinance 184130 provide for modest rate increases each year over a five-year period for infrastructure improvements, meeting regulatory water quality requirements, Owens Valley mitigation measures, and expanding the local water supply, which includes recycled water, stormwater capture, conservation, and groundwater remediation. New water rate structure increases the number of tiers from two to four for single-family residential customers. Goal is to incentivize conservation while recovering the higher costs of providing water to high volume users. In keeping with cost of service principles, the incremental pricing for the tiers is based on the cost of water supply.

Another method to finance projects and help achieve LADWP's commitment to developing sustainable local water supplies is through grants and loans. Critical funding from Proposition 1 (Prop 1) – the Water Quality, Supply, and Infrastructure Improvement Act of 2014 was passed on November 4, 2014 to support groundwater cleanup, stormwater capture, recycled water, water conservation, regional water management, and Los Angeles River revitalization projects. Prop 1 is a bond measure that provides \$7.545 billion to fund investments in water projects and programs as part of a statewide, comprehensive water plan for California. As of FYE 2020, LADWP has been awarded \$327.9 million in grants and \$3 million in zero-interest loans.

## **Conclusion**

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The Project is estimated to increase the total water demand within the site by 92 AF annually. This additional water demand for the Project site has been accounted for in the City's overall total demand projections in the LADWP 2015 UWMP using a service area-wide approach that does not rely on individual development demand. The LADWP 2015 UWMP utilized SCAG's RTP data that provide for more reliable water demand forecasts, considering changes in population, housing units, and employment.

Based on the Planning Department's determination that the Project is consistent with the demographic forecasts for the City from the 2012 SCAG RTP, LADWP finds that the Project water demand is included in the City's LADWP 2015 UWMP. Furthermore, the LADWP 2015 UWMP forecasts adequate water supplies to meet all projected water demands in the City through the year 2040. LADWP therefore concludes that the projected 92 AFY increase in the total water demand for this Project is accounted for in the 2015 UWMP's 25-year water demand projections. LADWP finds it will be able to meet the proposed water demand of the Project as well as existing and planned future water demands of its service area.

## Appendix A

City of Los Angeles Department of City Planning  
Request for Water Supply Assessment,  
and Scope Confirmation e-mail

DEPARTMENT OF  
CITY PLANNING

COMMISSION OFFICE  
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November 20, 2020

Mr. Richard F. Harasick

Senior Assistant General Manager for Water Systems

Water Resources Development Group

City of Los Angeles Department of Water and Power

111 North Hope Street, Room 1455

Los Angeles, CA 90012

**RE: REQUEST FOR WATER SUPPLY ASSESSMENT FOR THE DTLA SOUTH PARK PROPERTIES SITE 3  
PROJECT LOCATED AT 1100-1130 SOUTH OLIVE STREET, LOS ANGELES, CA 90015**

Dear Mr. Harasick,

California Senate Bill (SB) 610, effective January 1, 2002, states that a water supply assessment must be provided to local governments for inclusion in any environmental documentation for certain projects subject to the California Environmental Quality Act (CEQA). Specifically, SB 610 requires that for certain projects, the CEQA lead agency must identify any public water system that may supply water to a proposed project and request the public water system to determine the water demand associated with the project and whether such demand was included as part of the most recently adopted Urban Water Management Plan (UWMP). Per Section 10912 of the California Water Code (CWC), a project which is subject to the requirements of SB 610 includes, but is not limited to: (1) a proposed residential development of more than 500 dwelling units; (2) a proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space; (3) a proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space; (4) a proposed hotel or motel, or both, having more than 500 rooms; (5) a proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area; (6) a mixed-use project that includes one or more of the projects specified in this subdivision; or (7)

a project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling-unit project.

The City of Los Angeles Department of City Planning (the City) is preparing a Sustainable Communities Environmental Assessment (SCEA) in accordance with CEQA for two projects known as the Downtown Los Angeles (DTLA) South Park Properties Site 2 and Site 3 (Projects). These two Projects are separated by Olive Street in downtown Los Angeles. While both developments will be evaluated in one SCEA document for the purposes of CEQA, the Applicants have filed separate applications for each site and the City is considering requested entitlements separately. As such, two separate WSAs are being requested. This request is for the development at Site 3 proposed by DTLA South Park Properties Propco II, LLC (Project). The request for Site 2 is being submitted separately.

The proposed Project constitutes a "project" as defined in Section 10912(a) of the CWC and thus, is subject to the provisions for determining water availability as outlined in Sections 10910-10915 of the CWC. As such, the Department of City Planning requests your assistance in preparing a Water Supply Assessment (WSA) pursuant to the requirements of SB 610 to determine the Los Angeles Department of Water and Power's (LADWP) ability to meet the water demands of the proposed Project. Provided below is a brief description of the Project and an estimate of potential water demand.

#### **Project Location**

As described above, while the Projects consist of two separate sites, this request is for the development located at Site 3. Site 3 occupies the southeast corner of the intersection of 11th Street and S Olive Street in downtown Los Angeles. The current addresses associated with Site 3 are 218, 220, 222, 224, 226, 228 W 11th Street and 1100, 1114, 1118, 1120, 1124, 1126, 1128, 1130 South Olive Street, Los Angeles, CA 90015 (see Attachment A Location Map).

#### **Existing Conditions**

Site 3 is approximately 46,807 square feet and consists of Assessor's Parcel Numbers (APNs) 5139-019-040, 5139-019-015 and 5139-019-011. Site 3 is bounded by 11th Street to the north, an alley to the east, an office tower to the south and Olive Street to the west. The site is currently occupied by active surface parking facilities. There are four street trees adjacent to the Project Site along Olive Street. Otherwise, the site is paved with impervious surfaces and do not contain any vegetation or landscaping. The site is designated for Regional Center Commercial General Plan Land Uses by the Central City Community Plan and zoned C2-4D-O. The Project does not involve a General Plan Amendment or a Zone Change.

## **Proposed Project**

The proposed Project for Site 3 would include a 60-story, mixed use building with a six-level subterranean parking, a ground floor with retail and lobby space and parking spaces, a three-level above-grade parking podium, and a 57-story residential tower (see Attachment B Plot Plan). The building will be approximately 698 feet in height with a total of 608,977 square feet of floor area including 597,700 square feet of residential floor area and 11,277 square feet of retail space consisting of 7,095 square feet of retail space along the 11<sup>th</sup> Street frontage and 4,221 square feet of retail space on Olive Street. The residential component of the proposed mixed-use building would contain 188 studios, 366 one-bedroom units, 156 two-bedroom units, and 3 three-bedroom units for a total of 713 residential units. The building would feature multiple amenity decks on various floors including a 1,469-square-foot outdoor dog run and 897 square feet of lounge space at Level 4 Mezzanine; a 33,448-square-foot amenity deck on Level 5 with a swimming pool, community recreation, lounge, spa and fitness areas; 6,845 square feet of lounge areas and 1,343 square feet of covered deck on Level 6; and a 4,689-square foot roof deck and a 1,977-square-foot sky lounge at Level 59. The Project would provide 764 automobile parking spaces; 31 short-term bicycle racks and 259 long term-bicycle lockers. Pedestrian improvements would be made along the 11th Street and S. Olive Street frontages of the Project. The Project would remove four existing trees in the public right-of-way and plant 128 trees on-site, including 9 trees at the ground level in the public right-of-way, 110 trees at Levels 4 Mezzanine and 5, and 9 trees at Level 59. The Project proposes to provide approximately 12,331 square feet of landscaping (see Attachment C Landscape Plans).

Information about the Project is summarized in the **Table 1, Project Data** below. Estimated fixture count is included in **Table 2, Estimated Fixture Count**. Landscaping information is provided in **Table 3, Landscaping Water Usage Estimate**. A site plan is attached to this letter.

The Project would comply with the requirements in the City's Green Building Code and Title 24, which requires buildings to be designed to include green building measures for energy efficiency, water conservation, recycling, light pollution reduction, electric vehicle charging stations, Energy Star-rated appliances, eco-friendly building materials, non-volatile organic compound paints/adhesives, drought-tolerant planting, high performance building envelopment, etc. to the extent feasible. For cooling purposes, the Site 2 building would include a 1,200-ton capacity cooling tower. The cooling tower would operate 24 hours per day using 100% non-potable water.

For the purposes of analysis, Site 3 is expected to be built by 2027.



**Table 1, Project Data**

General Information	Street Address	1100-1130 S Olive St. & 218-228 W. 11 <sup>th</sup> St.
	APN No's.	5139-019-011, 5139-019-015, & 5139-019-040
	Existing Zoning	C2-4D-O
	Proposed Zoning	C2-4D-O
	General Plan Designation	Regional Center Commercial
	Lot Area	46,807 square feet / 1.07 acres
	Buildable Lot Area (LAMC 14.5.3)	67,679 square feet
	Proposed total floor area	608,977 square feet
	Proposed FAR	9:1 (Based on Buildable Lot Area)
	Building Height	698 feet (60 Stories)
Project Details	Residential Units	713 Units
	Residential Units	713 Units
	Studio	188
	One Bedroom	366
	Two Bedrooms	156
	Three Bedrooms	3
	Residential Amenities (Covered)	
	Dog Lounge	897 square feet
	Fitness Room	4,494 square feet
	Co-Working Space	4,269 square feet
	Movie Lounge	575 square feet
	Sky Lounge	1,977 square feet
	Game Lounge	2,001 square feet
	Club Room	4,643 square feet
	Residential Amenities (Uncovered)	
	Outdoor Dog Run	1,469 square feet
	Outdoor Terraces	29,000 square feet
	Residential Balconies	26,100 square feet
	Total Amenity Space	75,425 square feet
	Commercial	11,277 square feet
	Parking	
	Total Automobile Parking	764 (Required & Provided)
	Total Bicycle Parking	290 (Required & Provided)
Total Covered Parking Area	409,486 square feet	

Table 2, Estimated Fixture Count

	Residential Dwelling Units	Residential Common Area	Restaurant /Bar	Retail/ Commercial	Office	Hotel Rooms	Hotel Common Facility
Water Closets	N/A	15	11	0	0	N/A	0
Urinals	N/A	3	2	0	0	N/A	0
Lavatory Faucets	N/A	14	8	0	0	N/A	0
Kitchen Faucets	N/A	7	2	0	0	N/A	0
Commercial Kitchen Pre-Rinse Spray Faucets	N/A	0	2	0	0	N/A	0
Showerheads	N/A	7	0	0	0	N/A	0
Clothes Washer (Residential)	713	0	0	0	0	0	0
Clothes Washer (Commercial)	0	0	0	0	0	0	0
Dishwasher (Residential)	713	2	0	0	0	0	0
Dishwasher (Commercial)	0	0	2	0	0	0	0

**Table 3, Landscaping Water Usage Estimate**

Hydrozone	Plant Factor (PF)	Irrigation Method	Irrigation Efficiency (IE)	ETAF (PF/IE)	Landscape Area	ETAF x Area	Estimated Water Use (gallons per year)
Ground Level	0.3	Drip	0.81	0.37	960.00	355.56	11,044.27
Podium	0.3	Drip	0.81	0.37	6,233.00	2,308.52	71,707.20
Roof Deck	0.3	Drip	0.81	0.37	1,219.00	451.48	14,023.92
Synthetic turf	0.1	Spray	0.75	0.13	3,201.00	426.80	13,257.26
Pool	0.8	-	1.00	0.80	2,354.00	1,883.20	58,495.96
Spa	0.8	-	1.00	0.80	175.00	140.00	4,348.68
<b>TOTAL:</b>					14,142.00	5,565.56	172,877.29
Source: EPT Design (Project Landscape Architect)							

**Project Conformance with the General Plan and Municipal Code**

The Project site is located within the Central City Community Plan Area and designated for Regional Center Commercial Land Uses. The residential objectives of the Central City Community Plan are:

- Objective 1-1 To promote development of residential units in South Park.
- Objective 1-2 To increase the range of housing choices available to Downtown employees and residents.
- Objective 1-3 To foster residential development which can accommodate a full range of incomes
- Objective 1-4 To facilitate the conversion of historic buildings in the Historic Core to housing, office, art, and cultural uses in order to attract new residents.

- Objective 1-5 To preserve the existing low-income housing stock, including single room occupancy (SRO) units.
- Objective 1-6 To support additions to the housing stock in Little Tokyo.

The Project is generally consistent with these objectives as it develops residential units in South Park without removing any historic buildings or existing housing stock.

Consistent with the Community Plan Land Use Designation, the Project site is zoned C2-4D. The C2 Commercial Zone permits a variety of uses, such as multi-family residential; retail with limited manufacturing; service stations and garages; and office uses, hotels, and hospitals. The Project site is in Height District No. 4, which permits a maximum floor area ratio (FAR) of 13:1, with no limitation for building height. However, the "D" Development Limitation restricts the FAR to 6:1, unless the Project obtains Transfer of Floor Area Rights approval. The development proposed for Site 2 would require the following entitlements from the City:

- Transfer of Floor Area Rights (TFAR) of approximately 328,135 square feet of floor area from the Los Angeles Convention Center (Donor Site) to the Project Site on Site 3 (Receiver Site) pursuant to LAMC Section 14.5.7;
- Zone Variance to allow reduced parking stall dimensions of a minimum 8'-6" wide by 16' deep in lieu of the otherwise required 9'-4" wide by 18' deep parking stall and to allow reduced drive aisle widths of a minimum 25-foot-1-inch in lieu of the otherwise required 27-foot, 4-inch drive aisle, pursuant to LAMC Section 12.27;
- Director's Decision to provide less than one on-site tree per four dwelling units (128 trees in lieu of 178 trees required), pursuant to LAMC Section 12.21 G.3 and Ordinance No. 185,573;
- Site Plan Review, pursuant to LAMC Section 16.05;
- Master Conditional Use Permit for three off-site sale establishments and three on-site sale establishments for alcoholic beverages, pursuant to LAMC Section 12.24.W.1; and
- Vesting Tentative Tract Map No. 82141, pursuant to LAMC Section 17.01 et seq.

### **Project Conformance with the SCAG 2016-2040 RTP/SCS**

The Project is consistent with the general land use designation, density, and building intensity outlined in the SCAG 2016-2040 RTP/SCS. The Project site is within an area designated by the 2016-2040 RTP/SCS as "Urban," a land development category (LDC) with the highest density and intensity of land development. The 2016-2040 RTP/SCS describes the Urban LDC as areas often found within and/or directly adjacent to moderate and high-density urban centers, where virtually all new development would be considered infill or redevelopment. Housing tends to be higher density multi-family and attached single-family (townhome) varieties which, overall, consume less water and energy than detached residences in less urban locations. Urban LDC areas have high levels of mobility, particularly for people who choose not to drive or do not have access to a vehicle, seen through the presence of a variety of regional and local transit services and a development pattern that is conducive to walking. The proposed Project is consistent with the Urban Land Use Development Category.

The proposed Project is located within a highly urbanized area within the City of Los Angeles. The California State Department of Finance (DOF) average household size for the City of Los Angeles at 2.83 persons per household. The current DOF estimated City population as of January 2019 is approximately 4,040,079 people. Therefore, the proposed Project would represent an increase of less than one percent of the City's current population. According to growth estimates from SCAG's 2016-2040 RTP/SCS, the City had an estimated population of 3,845,500 people in 2012 and is projected to have a population of 4,609,400 in 2040. The addition of the Project would be within the SCAG's population forecasts for the City.

### **Existing Water Consumption**

The site is a surface parking lot with no on-site facilities. As such, for purposes of this request, it is assumed that there is no existing water consumption associated with the site.

**Forecasted Water Demand**

The following table presents estimated water demand for the Project as provided by the Applicant.

<b>DTLA Site 4 Estimated Proposed Water Consumption</b>				
<b>Building Use</b>	<b>Water Consumption (GPD)<sup>(a)</sup></b>	<b>Units</b>	<b>Quantity</b>	<b>Total Consumption (GPD)</b>
APT - BACHELOR	90	DU	188	16,920
1 BDR APT	132	DU	366	48,312
2 BDR APT	180	DU	156	28,080
3 BDR APT/PH	228	DU	3	684
RETAIL AREA	30	KGSF	7,056	212
RESTAURANT	36	SEAT	169	6,084
SWIMMING POOL	600	-	1	600
SPA/JACUZZI	600	-	1	600
LANDSCAPING <sup>(c)</sup>				474
<b>Total Estimated Proposed Water Consumption (GPD)</b>				<b>101,966</b>
(a) The average daily flow based on 120% of City of Los Angeles sewerage generation factors. (b) 25 sf / seat is used to determine seat count. (c) See Table 3 above, converted to GPD				

**Contact Information**

- **Lead Agency:**  
 Nuri Cho, City Planner  
 Los Angeles City Planning  
 200 N. Spring St., Room 621  
 Los Angeles, CA 90012  
 nuri.cho@lacity.org  
 (213) 978-1177
  
- **Applicant:**  
 DTLA South Park Properties Propco II LLC  
 Kevin Linqvist, Chief Operating Officer  
 Mack Real Estate Development  
 1150 S. Olive Street, Suite 2250  
 Los Angeles, CA 90015  
 klindquist@mackregroup.com  
 (213) 542-4316



- CEQA Consultant:  
Meridian Consultants  
920 Hampshire Road, Suite A-5  
Westlake Village, California 91361  
[nbaldwin@MeridianConsultantsLLC.com](mailto:nbaldwin@MeridianConsultantsLLC.com)  
(805) 413-4185

Based on the above projections, the Department of City Planning is requesting your assistance in preparing a WSA pursuant to the requirements of SB 610. SB 610 requires a water supply assessment to evaluate whether total projected water supplies will meet the projected water demand for certain development projects that are otherwise subject to CEQA review.

Thank you for your assistance with this request. Your expert evaluation will help ensure that our analysis of the Project's impacts related to water demand is accurate and complete. If you have any questions or comments, please contact Nuri Cho at (213) 978-1177 or [Nuri.Cho@lacity.org](mailto:Nuri.Cho@lacity.org).

Sincerely,

VINCENT P. BERTONI, AICP  
Director of Planning



---

Nuri Cho, City Planner  
Central Project Planning Division  
Department of City Planning  
200 N. Spring Street, Room 621  
Los Angeles, CA 90012

Attachments:  
A – Location Map  
B – Plot Plan  
C – Landscape Plans

Request for Water Supply Assessment

DTLA South Park Properties Site 3

1100-1130 South Olive Street, Los Angeles, CA 90015

Attachment A

Location Map





**Legend**

Project Site

0 75 150 300

APPROXIMATE SCALE IN FEET

N

SOURCE: Google Earth - 2020; Meridian Consultants, LLC - February 2020

SITE 3-A

Site 3 Location



**Request for Water Supply Assessment**  
**DTLA South Park Properties Site 3**  
**1100-1130 South Olive Street, Los Angeles, CA 90015**

**Attachment B**

**Plot Plan**



Callison|TKI, Inc.  
1000 North 10th Street, Suite 1000  
Portland, Oregon 97228  
503.461.1000  
www.callison-tki.com

**DTLA SOUTH PARK PROPERTIES SITE 3  
PROJECT SUMMARY**

PROJECT: THE SOUTH PARK PROPERTIES PERIOD, LLC  
11TH STREET PROJECT, PERIOD, LLC  
ADDRESS: 11TH STREET AND OLIVE ST, SEASIDE  
PREPARED BY: CALLISON|TKI  
DATE: 12/21/23

**LEGAL DESCRIPTION**

ALL RIGHTS RESERVED BY CALLISON|TKI. THIS PLAN IS THE PROPERTY OF CALLISON|TKI AND IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF CALLISON|TKI. THIS PLAN IS THE PROPERTY OF CALLISON|TKI AND IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF CALLISON|TKI.

**ZONING**

ALL RIGHTS RESERVED BY CALLISON|TKI. THIS PLAN IS THE PROPERTY OF CALLISON|TKI AND IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF CALLISON|TKI.

**FLOOR AREA**

ALL RIGHTS RESERVED BY CALLISON|TKI. THIS PLAN IS THE PROPERTY OF CALLISON|TKI AND IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF CALLISON|TKI.

**PARKING**

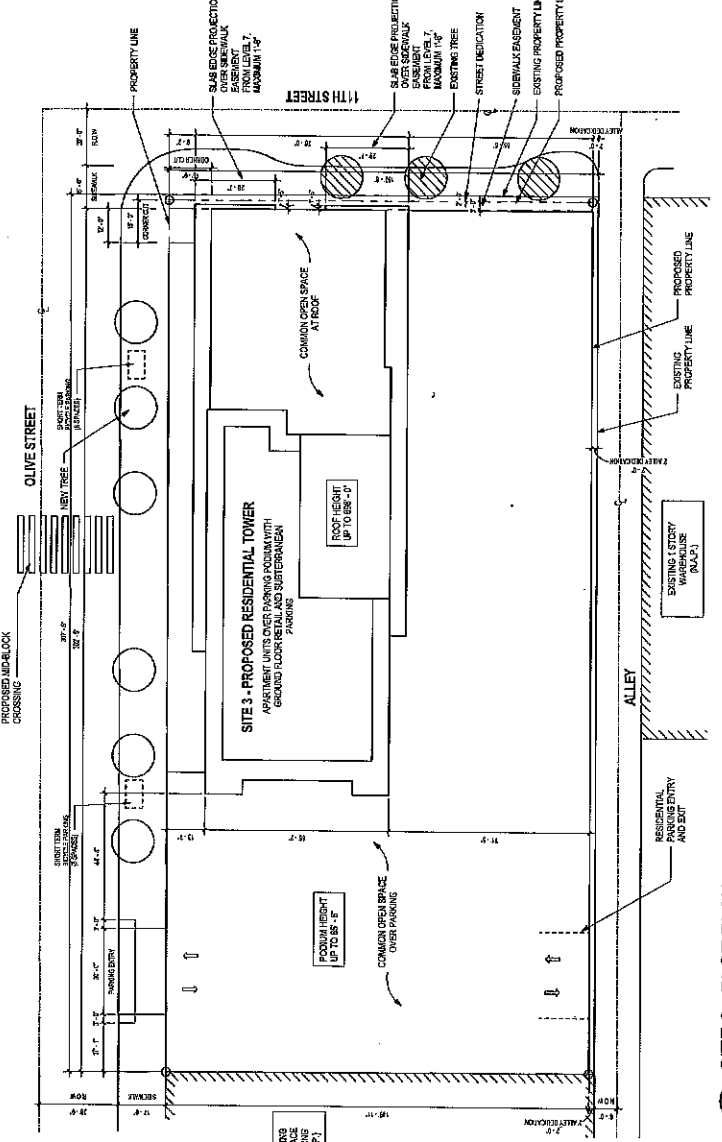
ALL RIGHTS RESERVED BY CALLISON|TKI. THIS PLAN IS THE PROPERTY OF CALLISON|TKI AND IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF CALLISON|TKI.

**OPEN SPACE**

ALL RIGHTS RESERVED BY CALLISON|TKI. THIS PLAN IS THE PROPERTY OF CALLISON|TKI AND IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF CALLISON|TKI.

**LANDSCAPE**

ALL RIGHTS RESERVED BY CALLISON|TKI. THIS PLAN IS THE PROPERTY OF CALLISON|TKI AND IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF CALLISON|TKI.



**1 SITE 3 - PLOT PLAN**  
12/21/23

**DTLA South Park  
Properties Site 3**

Client Address: 11TH STREET AND OLIVE ST, SEASIDE  
Callison|TKI, Inc.  
1000 North 10th Street, Suite 1000  
Portland, Oregon 97228  
503.461.1000  
www.callison-tki.com

NO.	REVISION	DATE
01	ISSUE FOR PERMIT	12/21/23
02	REVISED PERMITTING REQUIREMENTS	12/21/23
03	REVISED PERMITTING REQUIREMENTS	12/21/23
04	REVISED PERMITTING REQUIREMENTS	12/21/23
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100	REVISED PERMITTING REQUIREMENTS	12/21/23

Request for Water Supply Assessment

DTLA South Park Properties Site 3

1100-1130 South Olive Street, Los Angeles, CA 90015

Attachment C

Landscape Plans



# DTLA South Park Properties Site 3

11th Street  
Olive Street  
Alley



**Legend**

- ① 11th Street Improvements per MyFig Streetscape Plans; Not in Project Scope
- ② Upgraded Paving within Property Line
- ③ City Standard Concrete within Right of Way
- ④ 18" Wide Brick Band per City Guidelines
- ⑤ 7' x 15' Planter
- ⑥ Entry Drive
- ⑦ Existing Street Light
- ⑧ Proposed Bicycle Parking
- ⑨ Mid-Block Crosswalk

 **Proposed Street Tree:**  
London Plane/rees  
(Platanus acerifolia)

**Required Quantity of Trees: 178**  
**Proposed Quantity of Trees: 128**

Ground Level:	9
Level 4 Mezzanine:	0
Amenity Deck:	110
Penthouse:	9

**Common Open Space: 30,469 SF**  
**Planted Open Space Required: 7,617 SF**  
**Planted Open Space Provided: 8,562 SF**

Ground Level:	0
Level 4 Mezzanine:	1,414 SF
Amenity Deck:	5,950 SF
Penthouse:	1,218 SF

Issue Summary Log	
Issue ID	Issue Description

**SITE 3 -  
LANDSCAPE -  
LEVEL 1**

SCALE: 1"=10'-0"

**NOT FOR CONSTRUCTION**

**L1b.01**

**DTLA South Site 3**

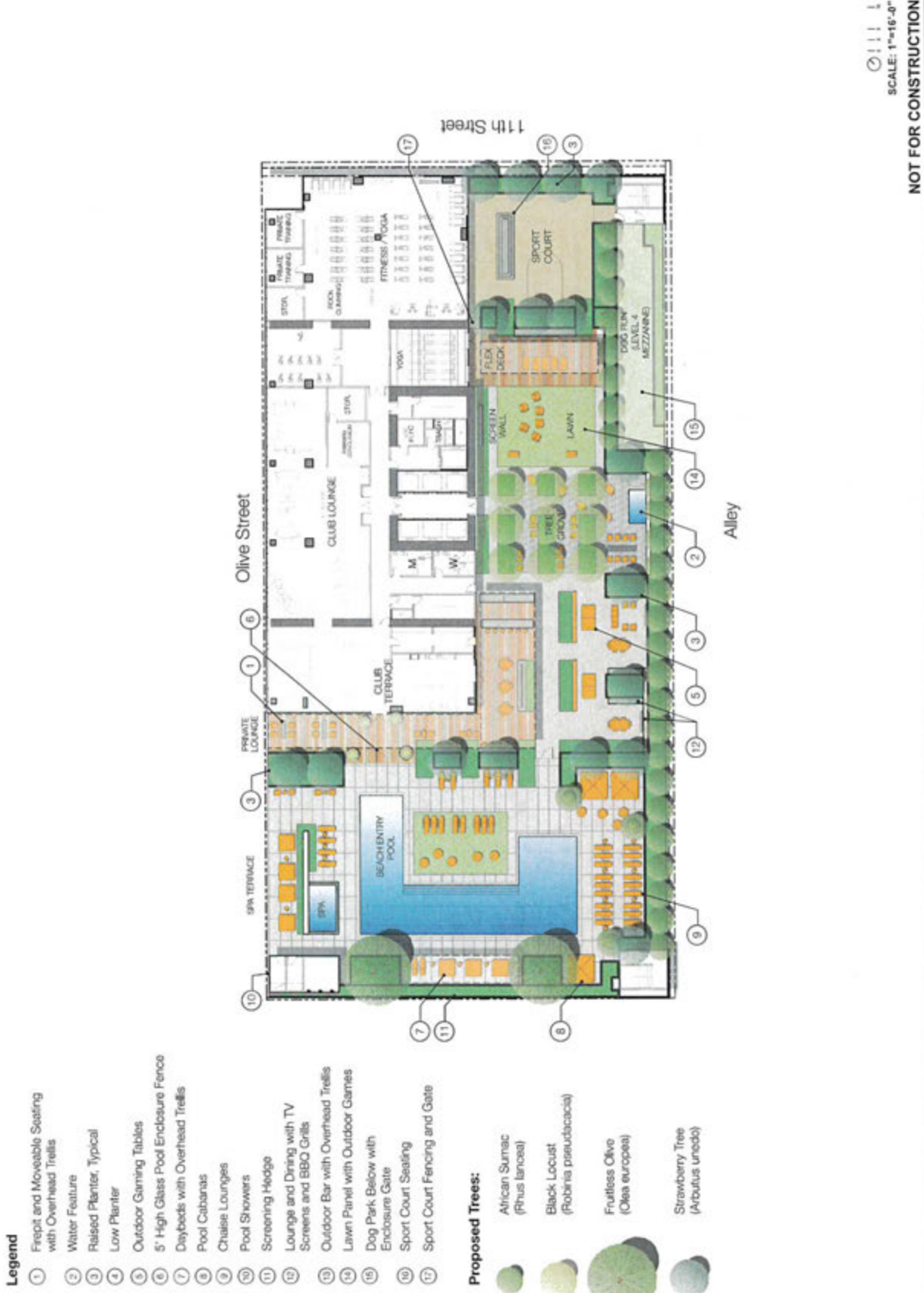
Client/Project Address:  
1111 11th Street, Los Angeles, CA 90015

Scale: 1"=15'-0"

Sheet Number: 100  
TOTAL SHEETS: 100

SITE 3 -  
LANDSCAPE -  
LEVEL 4 MEZZ &  
LEVEL 5

**L1b.02**



**Legend**

- 1 Frepit and Moveable Seating with Overhead Trellis
- 2 Water Feature
- 3 Raised Planter, Typical
- 4 Low Planter
- 5 Outdoor Gaming Tables
- 6 5' High Glass Pool Enclosure Fence
- 7 Daybeds with Overhead Trellis
- 8 Pool Cabanas
- 9 Chaise Lounges
- 10 Pool Showers
- 11 Screening Hedge
- 12 Lounge and Dining with TV Screens and BBQ Grills
- 13 Outdoor Bar with Overhead Trellis
- 14 Lawn Panel with Outdoor Games
- 15 Dog Park Below with Enclosure Gate
- 16 Sport Court Seating
- 17 Sport Court Fencing and Gate

**Proposed Trees:**

- African Sumac (Rhus tinctoria)
- Black Locust (Robinia pseudoacacia)
- Fruitless Olive (Olea europaea)
- Strawberry Tree (Arbutus unedo)

SCALE: 1"=15'-0"

**NOT FOR CONSTRUCTION**

**DTLA South Site 3**  
Properties Site 3

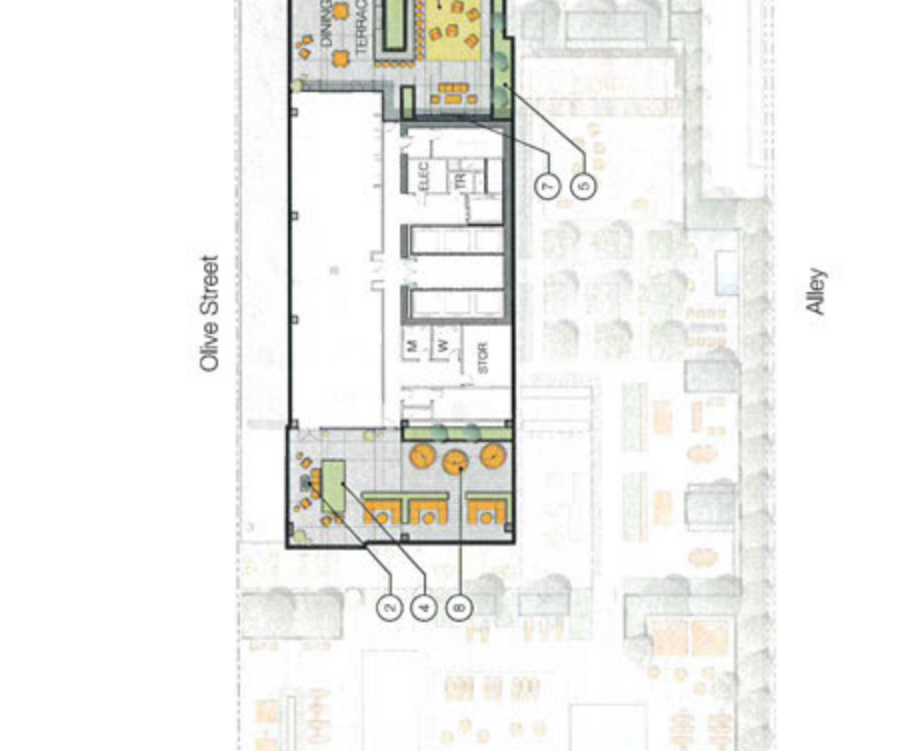
**Client/Project/Address**  
1500 11th Street, San Francisco, CA 94103

Date	Issued For	Issued By	Project	Phase	Revision
	PROJECT	FOR EXHIBIT DEVELOP			

**Legend**  
1 Bar Top and BBQ Counter  
2 Fire Pit and Lounge Seating  
3 Water Feature  
4 Low Planter  
5 Raised Planter  
6 Lawn Panel with Moveable Seating  
7 Projection Wall  
8 Lounge Seating

Scale: 1"=16'-0"  
DATE: 02/20/19

**NOT FOR CONSTRUCTION**



**From:** [Nuri Cho](#)  
**To:** [Kim, Theresa](#)  
**Cc:** [Paul Garry](#); [Andrew Dutton](#); [markwareham@warehamconsultingllc.com](mailto:markwareham@warehamconsultingllc.com); [Dana Allen \(Dana.Allen@crtkl.com\)](mailto:Dana.Allen@crtkl.com)  
**Subject:** [EXTERNAL] Re: Updated - WSA for DTLA South Park Properties Site 3- Scope Confirmation  
**Date:** Friday, April 16, 2021 10:05:30 AM

---

**EXTERNAL EMAIL!** This email was generated from a non-LADWP address. If any links exist, do not click/open on them unless you are 100% certain of the associated site or source. ALWAYS hover over the link to preview the actual URL/site and confirm its legitimacy.

---

Hi Theresa,

I would like to confirm that the scope of work is accurate in this table, thank you.

On Fri, Apr 16, 2021 at 9:20 AM Kim, Theresa <[Theresa.Kim@ladwp.com](mailto:Theresa.Kim@ladwp.com)> wrote:

Dear Nuri,

We are in the process of completing the Water Supply Assessment (WSA) Board Package for the Downtown Los Angeles South Park Properties Site 3 Project. The LADWP requests that the Department of City Planning confirm, by e-mail, the correct detail scope (shown in the table below) for the Proposed Project. Your scope confirming e-mail will be included as part of the WSA and the confirmed scope is used for calculating the water demand in the WSA.

LADWP received the WSA Request Letter for the Proposed Project on November 20, 2020. The scope considered in LADWP's water demand calculations, as received in the initial WSA Request Letter and subsequent information from the Project Team, is as follows:

Existing Use to be Removed <sup>1</sup>	Quantity	Unit
Surface Parking Lot	46,807	sf
<b>Existing to be Removed Total</b>		
Proposed Use <sup>1</sup>	Quantity	Unit
<b>RESIDENTIAL UNITS</b>		
Residential: Studios	188	du
Residential: 1 bd	366	du
Residential: 2 bd	156	du
Residential: 3 bd	3	du
Base Demand Adjustment (Residential Units) <sup>5</sup>		

Residential Units Total	713	du
<b>RESIDENTIAL AMENITIES AND COMMERCIAL USE</b>		
Dog Spa (lvl 4 mezz)	406	sf
Dog Lounge (lvl 4 mezz)	491	sf
Synthetic Turf Areas (lvl 4 Dog Park, lvl 5 pool and flex deck, lvl 59 roof deck)	3,201	sf
Pool and Spa on Landscape Amenity Deck (lvl 5)	2529	sf
Club Room and Lounge (lvl 5) <sup>2</sup>	51	seats
Fitness and Spin Studio (lvl 5)	5,076	sf
Sky Lounge (lvl 59) <sup>2</sup>	39	seats
Business/Co-Lab/Office (lvl 6)	4,269	sf
Office (lvl 1)	2,586	sf
Restaurant-seating area (lvl 1) <sup>3</sup>	235	seats
	Assume half the space of 7056 SF is used for dining	
Restaurant- kitchen/storage/etc (lvl 1) <sup>3</sup>	3,528	sf
	Assume half the space of 7056 SF is used for kitchen and storage	
Retail (lvl 1)	4,221	sf
<b>Landscaping<sup>7</sup></b>	<b>13,291</b>	<b>sf</b>
<b>Covered Parking<sup>8</sup></b>	<b>325,995</b>	<b>sf</b>
<b>Cooling Tower Total</b>		
Chiller Capacity	1,200	ton
Operating Hours	24 hrs/day, 365 days/year	

### Notes

1. Proposed Uses that do not have a water demand are not shown here.
2. Only Lounge Areas that contain a preparation area with plumbing fixtures were included in the water demand.
3. Restaurant area's water demand was calculated based on 50% dining and 50% kitchen area for water demand

Also, the Proposed Project is consistent with the demographic projections in both the 2012 and 2016 Regional Transportation Plan (RTP) by Southern California Association of Governments (SCAG) for the City of Los Angeles.

**If the above listed project scope information is accurate and consistent with the Proposed Project, please reply to this e-mail to confirm. If not, please edit the scope accordingly and send back to me by e-mail.**

Theresa Vu Kim

Los Angeles Department of Water and Power



111 N. Hope Street, Room 314

Los Angeles, CA 90012

O: (213) 367-1491

-----Confidentiality Notice-----

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--



**Nuri Cho**

Pronouns: She, Her, Hers

City Planner

**Los Angeles City Planning**

200 N. Spring St., Room 620

Los Angeles, CA 90012

T: (213) 978-1177 | [Planning4LA.org](http://Planning4LA.org)





## Appendix B

Water Conservation Commitment Letter

**DTLA South Park Properties Propco II, LLC**  
1150 S. Olive Street  
Suite 2250  
Los Angeles, CA 90015

February 26, 2021

Richard F. Harasick  
Senior Assistant General Manager for Water Systems  
Los Angeles Department of Water & Power  
111 North Hope Street, Room 1455  
Los Angeles, CA 90012-5701

Re: WATER CONSERVATION COMMITMENTS FOR THE DOWNTOWN LOS ANGELES (DTLA) SOUTH PARK PROPERTY AT SITE 3 PROJECT  
1100-1130 S. Olive Street  
City Planning Department Case No. VTT-82141, CPC-2018-2599 TDR-MCUP-ZV-DD-SPR

Dear Mr. Harasick:

DTLA South Park Properties Propco II, LLC proposes to develop the DTLA South Park Property at Site 3 Project (Project) within the Central City Community Plan Area of the City of Los Angeles. The Project site, which encompasses approximately 1.07 acres, is generally bounded by 11<sup>th</sup> Street to the north, Olive Street to the west, an office tower to the south, and an alley to the east. The proposed project would develop approximately 11,277 square feet of retail/restaurant space and 713 residential units. The Project would also include approximately 325,995 square feet of covered parking and 13,291 square feet of landscaping. As part of the project, an existing surface parking lot would be removed.

The Applicant understands the City of Los Angeles' policy that future water needs shall be met by expanding water recycling and conservation. In order to reduce the Project's water demand, the Applicant has committed to implement the following water conservation measures that are in addition to those required by codes and ordinances for the entire Project:

- Fixtures
  - Showerheads with a flow rate of "1.75" gallons per minute, or less.
- Landscape and irrigation
  - Artificial Turf
  - California Friendly® plants or native plants
  - Drip/ Subsurface Irrigation (Micro-Irrigation)
  - Micro-Spray
  - Proper Hydro-zoning/Zoned Irrigation—(groups plants with similar water requirements together).
- Pool
  - Install a sub-meter on the pool make-up line so water use can be monitored and leaks can be identified and repaired
  - Leak Detection System for swimming pools and Jacuzzi
  - Pool splash troughs around the perimeter that drain back into the pool

- Pool/Spa recirculating filtration equipment
- Water-Saving Pool Filter.
  
- Cooling Plant
  - Ownership shall provide an approved Los Angeles County Health Department /Los Angeles Department of Building and Safety Gray Water System for 100% of Cooling Tower Make up Water.
  
- Utilities
  - Individual metering and billing for water use for every commercial unit.
  - Leak detector at main building water boiler system.

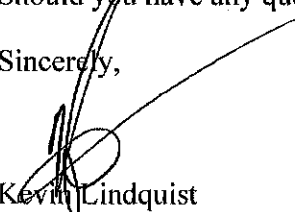
The Applicant has also committed to comply with the City of Los Angeles Low Impact Development Ordinances (City Ordinance No. 181899 and No. 183833) and to implement Best Management Practices that have stormwater recharge or reuse benefits for the entire Project as applicable:

(Note: BMPs listed based on hierarchy established by City of Los Angeles Low Impact Development Handbook)

- Pretreatment BMPs – As appropriate, a combination of the following:
  - Catch Basin Insert – a device that can be inserted into an existing catch basin to provide some level of runoff contaminant removal.
  - Downspout Filter – a device that can be inserted into a downspout pipe to provide some level of runoff contaminant removal.
  - Hydrodynamic Separator – a prefabricated in-line chamber which removes debris and pollutants through screening and settlement of influent stormwater.
  - Pre-settling Chamber – a prefabricated in-line chamber which removes debris and pollutants through settlement and controlled discharge.
- Infiltration BMPs – As feasible for the Project
  - Drywell(s) – a vertical system which allows for stormwater infiltration deep beneath proposed foundations/surfaces.
- Capture and Re-use BMPs – If infiltration is considered infeasible
  - Cistern – captures stormwater runoff as it comes down through the roof gutter system to offset domestic water demand.

Should you have any questions, please do not hesitate to call at 213-542-4316.

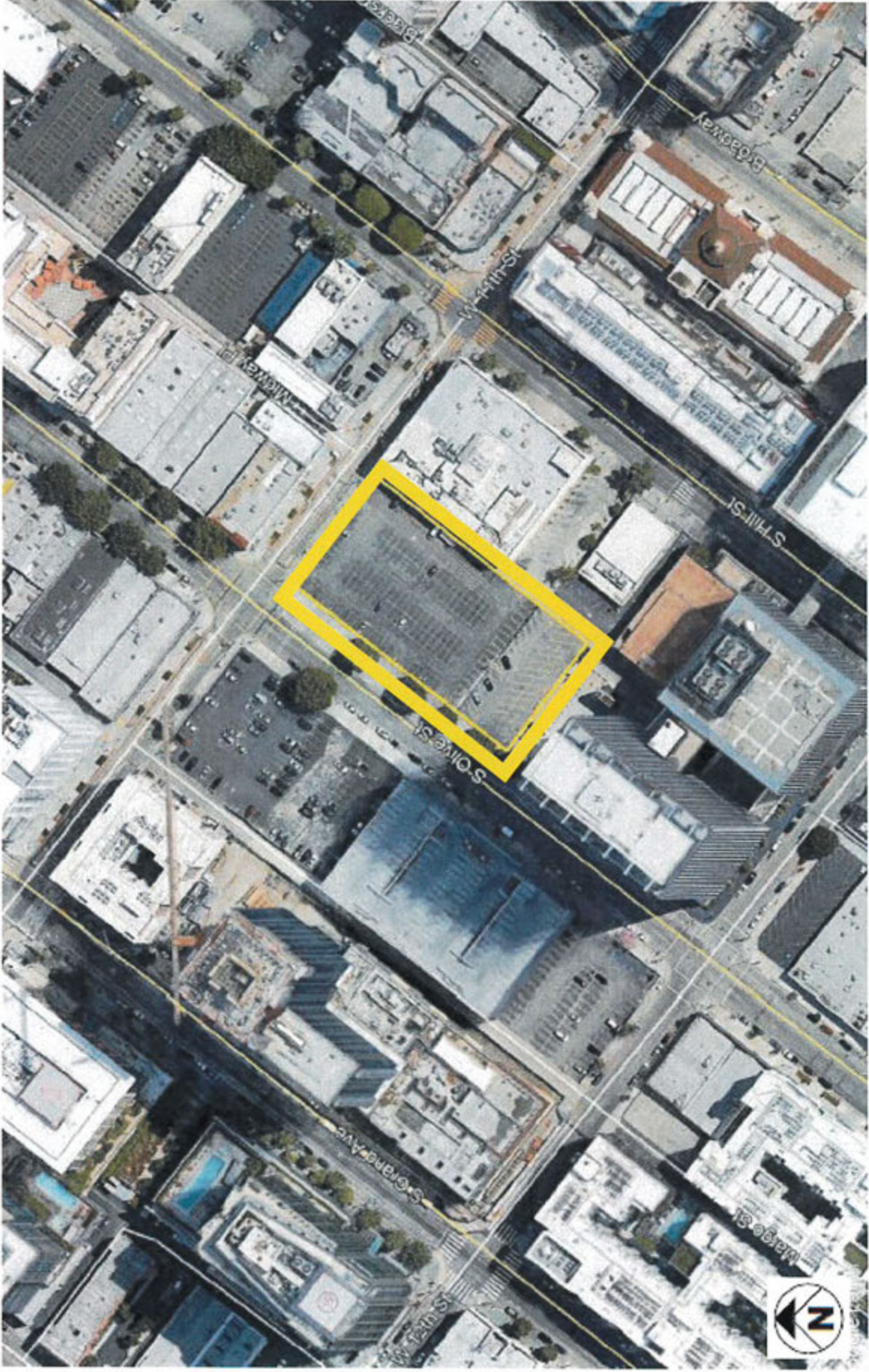
Sincerely,



Kevin Lindquist  
 Authorized Signatory  
 DTLA South Park Properties Propco II, LLC

## Appendix C

### Project Location Map



SOURCE: Google Earth - 2020; Meridian Consultants, LLC - February 2020



# Site 3 Location

## Appendix D

### Adjudicated Groundwater Basin Judgments

- San Fernando Basin – Judgment No. 650079
- Sylmar Basin – Judgment No. 650079
- Central Basin – Judgment No, 786656



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SUPERIOR COURT OF THE STATE OF CALIFORNIA  
FOR THE COUNTY OF LOS ANGELES

THE CITY OF LOS ANGELES,

Plaintiff,

vs.

CITY OF SAN FERNANDO, ET AL.

Defendants.

No. 650079

JUDGMENT

There follows by consecutive paging Recitals (page 1), Definitions and List of Attachments (pages 1 to 6), Designation of Parties (page 6), Declaration re Geology and Hydrology (pages 6 to 12), Declaration of Rights (pages 12 to 21), Injunctious (pages 21 to 22), Continuing Jurisdiction (page 23), Watermaster (pages 23 to 29), Physical Solution (pages 29 to 34), and Miscellaneous Provisions (pages 34 to 35), and Attachments (pages 36 to 46). Each and all of said several parts constitute a single integrated Judgment herein.

1           4.2.3 Separate Ground Water Basins. The physical and geologic characteristics of each  
 2 of the ground water basins, Eagle rock, Sylmar, Verdugo and San Fernando, cause impediments  
 3 to inter-basin ground water flow whereby there is created separate underground reservoirs. Each  
 4 of said basins contains a common source of water supply to parties extracting ground water from  
 5 each of said basins. The amount of underflow from Sylmar Basin, Verdugo Basin and Eagle  
 6 Rock Basin to San Fernando Basin is relatively small, and on the average has been  
 7 approximately 540 acre feet per year from the Sylmar Basin; 80 acre feet per year from Verdugo  
 8 Basin; and 50 acre feet per year from Eagle Rock Basin. Each has physiographic, geologic and  
 9 hydrologic differences; one from the other, and each meets the hydrologic definition of "basin".  
 10 The extractions of water in the respective basins affect the other water users within that basin but  
 11 do not significantly or materially affect the ground water levels in any of the other basins. The  
 12 underground reservoirs of Eagle Rock, Verdugo and Sylmar Basins are independent of one  
 13 another and of the San Fernando Basin.

14           4.2.4 Safe Yield and Native Safe Yield. The safe yield and native safe yield, stated in  
 15 acre feet, of the three largest basins for the year 1964-65 was as follows:

<u>Basin</u>	<u>Safe Yield</u>	<u>Native Safe Yield</u>
San Fernando	90,680	43,660
Sylmar	6,210	3,850
Verdugo	7,150	3,590

16  
 17  
 18  
 19  
 20 The safe yield of Eagle Rock Basin is derived from imported water delivered by Los Angeles.  
 21 There is no measurable native safe yield.

22           4.2.5 Separate Basins -- Separate Rights. The rights of the parties to extract ground  
 23 water within ULARA are separate and distinct as within each of the several ground water basins  
 24 within said watershed.

25           4.2.6 Hydrologic Condition of Basins. The several basins within ULARA are in varying  
 26 hydrologic conditions, which result in different legal consequences.

27           4.2.6.1 San Fernando Basin. The first full year of overdraft in San Fernando  
 28 Basin was 1954-55. It remained in overdraft continuously until 1968, when an injunction

1 LAGERLOF, SENICAL, DRESCHER & SWIFT  
2 301 North Lake Avenue, 10th Floor  
3 Pasadena, California 91101  
4 (818) 793-9400 or (213) 385-4345  
5  
6  
7

8 SUPERIOR COURT OF THE STATE OF CALIFORNIA  
9 FOR THE COUNTY OF LOS ANGELES  
10

11 CENTRAL AND WEST BASIN WATER ) No. 786,656  
REPLENISHMENT DISTRICT, etc., ) SECOND AMENDED  
12 ) JUDGMENT  
Plaintiff, )  
13 v. ) (Declaring and establishing water rights in  
14 CHARLES E. ADAMS, et al., ) Central Basin and enjoining extractions  
15 ) therefrom in excess of specified quantities.)  
Defendants: )  
16 CITY OF LAKEWOOD, a municipal )  
17 corporation, )  
Cross-Complaint, )  
18 v. )  
19 )  
20 CHARLES E. ADAMS, et al., )  
Cross-Defendants, )  
21 )  
22 )

23 The above-entitled matter duly and regularly came on for trial in Department 73  
24 of the above-entitled Court (having been transferred thereto from Department 75 by order of the  
25 presiding Judge), before the Honorable Edmund M. Moor, specially assigned Judge, on May 17,  
26 1965, at 10:00 a.m. Plaintiff was represented by its attorneys BEWLEY, KNOOP,  
27

1 of the close of the water year ending September 30, 1978 in accordance with the Watermaster  
2 Reports on file with this Court and the records of the Plaintiff. This tabulation does not take into  
3 account additions or subtractions from any Allowed Pumping Allocation of a producer for the  
4 1978-79 water year, nor other adjustments not representing change in fee title to water rights,  
5 such as leases of water rights, nor does it include the names of lessees of landowners where the  
6 lessees are exercising the water rights. The exercise of all water rights is subject, however, to the  
7 provisions of this Judgment is hereinafter contained. All of said rights are of the same legal  
8 force and effect and are without priority with reference to each other. Each party whose name is  
9 hereinafter set forth in the tabulation set forth in Appendix "2" of this judgment, and after whose  
10 name there appears under the column "Total Water Right" the figure "0" owns no rights to  
11 extract any ground water from Central Basin, and has no right to extract any ground water from  
12 Central Basin.

13 (b) Defendant The City of Los Angeles is the owner of the right to extract fifteen  
14 thousand (15,000) acre feet per annum of ground water from Central Basin. Defendant  
15 Department of Water and Power of the City of Los Angeles has no right to extract ground water  
16 from Central Basin except insofar as it has the right, power, duty or obligation on behalf of  
17 defendant The City of Los Angeles to exercise the water rights in Central Basin of defendant The  
18 City of Los Angeles. The exercise of said rights are subject, however, to the provisions of this  
19 judgment hereafter contained, including but not limited to, sharing with other parties in any  
20 subsequent decreases or increases in the quantity of extractions permitted from Central Basin,  
21 pursuant to continuing jurisdiction of the Court, on the basis that fifteen thousand (15,000) acre  
22 feet bears to the Allowed Pumping Allocations of the other parties.

23 (c) No party to this action is the owner of or has any right to extract ground water  
24 from Central Basin except as herein affirmatively determined.

25 2. Parties Enjoined as Regards Quantities of Extractions.  
26  
27

## Appendix E

Water Supply Assessment Provisions  
California Water Code Section 10910-10915

**State of California**

**WATER CODE**

**Section 10910**

---

10910. (a) Any city or county that determines that a project, as defined in Section 10912, is subject to the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) under Section 21080 of the Public Resources Code shall comply with this part.

(b) The city or county, at the time that it determines whether an environmental impact report, a negative declaration, or a mitigated negative declaration is required for any project subject to the California Environmental Quality Act pursuant to Section 21080.1 of the Public Resources Code, shall identify any water system whose service area includes the project site and any water system adjacent to the project site that is, or may become as a result of supplying water to the project identified pursuant to this subdivision, a public water system, as defined in Section 10912, that may supply water for the project. If the city or county is not able to identify any public water system that may supply water for the project, the city or county shall prepare the water assessment required by this part after consulting with any entity serving domestic water supplies whose service area includes the project site, the local agency formation commission, and any public water system adjacent to the project site.

(c) (1) The city or county, at the time it makes the determination required under Section 21080.1 of the Public Resources Code, shall request each public water system identified pursuant to subdivision (b) to determine whether the projected water demand associated with a proposed project was included as part of the most recently adopted urban water management plan adopted pursuant to Part 2.6 (commencing with Section 10610).

(2) If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f), and (g).

(3) If the projected water demand associated with the proposed project was not accounted for in the most recently adopted urban water management plan, or the public water system has no urban water management plan, the water supply assessment for the project shall include a discussion with regard to whether the public water system's total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the public water system's existing and planned future uses, including agricultural and manufacturing uses.



(4) If the city or county is required to comply with this part pursuant to subdivision (b), the water supply assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry, and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses.

(d) (1) The assessment required by this section shall include an identification of any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, and a description of the quantities of water received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts.

(2) An identification of existing water supply entitlements, water rights, or water service contracts held by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall be demonstrated by providing information related to all of the following:

(A) Written contracts or other proof of entitlement to an identified water supply.

(B) Copies of a capital outlay program for financing the delivery of a water supply that has been adopted by the public water system.

(C) Federal, state, and local permits for construction of necessary infrastructure associated with delivering the water supply.

(D) Any necessary regulatory approvals that are required in order to be able to convey or deliver the water supply.

(e) If no water has been received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts, the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall also include in its water supply assessment pursuant to subdivision (c), an identification of the other public water systems or water service contractholders that receive a water supply or have existing water supply entitlements, water rights, or water service contracts, to the same source of water as the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has identified as a source of water supply within its water supply assessments.

(f) If a water supply for a proposed project includes groundwater, the following additional information shall be included in the water supply assessment:

(1) A review of any information contained in the urban water management plan relevant to the identified water supply for the proposed project.

(2) (A) A description of any groundwater basin or basins from which the proposed project will be supplied.

(B) For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the public water system, or the city

or county if either is required to comply with this part pursuant to subdivision (b), has the legal right to pump under the order or decree.

(C) For a basin that has not been adjudicated that is a basin designated as high- or medium-priority pursuant to Section 10722.4, information regarding the following:

(i) Whether the department has identified the basin as being subject to critical conditions of overdraft pursuant to Section 12924.

(ii) If a groundwater sustainability agency has adopted a groundwater sustainability plan or has an approved alternative, a copy of that alternative or plan.

(D) For a basin that has not been adjudicated that is a basin designated as low- or very low priority pursuant to Section 10722.4, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current bulletin of the department that characterizes the condition of the groundwater basin, and a detailed description by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), of the efforts being undertaken in the basin or basins to eliminate the long-term overdraft condition.

(3) A detailed description and analysis of the amount and location of groundwater pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), for the past five years from any groundwater basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(4) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), from any basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(5) An analysis of the sufficiency of the groundwater from the basin or basins from which the proposed project will be supplied to meet the projected water demand associated with the proposed project. A water supply assessment shall not be required to include the information required by this paragraph if the public water system determines, as part of the review required by paragraph (1), that the sufficiency of groundwater necessary to meet the initial and projected water demand associated with the project was addressed in the description and analysis required by paragraph (4) of subdivision (b) of Section 10631.

(g) (1) Subject to paragraph (2), the governing body of each public water system shall submit the assessment to the city or county not later than 90 days from the date on which the request was received. The governing body of each public water system, or the city or county if either is required to comply with this act pursuant to subdivision (b), shall approve the assessment prepared pursuant to this section at a regular or special meeting.

(2) Prior to the expiration of the 90-day period, if the public water system intends to request an extension of time to prepare and adopt the assessment, the public water

system shall meet with the city or county to request an extension of time, which shall not exceed 30 days, to prepare and adopt the assessment.

(3) If the public water system fails to request an extension of time, or fails to submit the assessment notwithstanding the extension of time granted pursuant to paragraph (2), the city or county may seek a writ of mandamus to compel the governing body of the public water system to comply with the requirements of this part relating to the submission of the water supply assessment.

(h) Notwithstanding any other provision of this part, if a project has been the subject of a water supply assessment that complies with the requirements of this part, no additional water supply assessment shall be required for subsequent projects that were part of a larger project for which a water supply assessment was completed and that has complied with the requirements of this part and for which the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has concluded that its water supplies are sufficient to meet the projected water demand associated with the proposed project, in addition to the existing and planned future uses, including, but not limited to, agricultural and industrial uses, unless one or more of the following changes occurs:

(1) Changes in the project that result in a substantial increase in water demand for the project.

(2) Changes in the circumstances or conditions substantially affecting the ability of the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), to provide a sufficient supply of water for the project.

(3) Significant new information becomes available that was not known and could not have been known at the time when the assessment was prepared.

(i) For the purposes of this section, hauled water is not considered as a source of water.

(Amended by Stats. 2016, Ch. 594, Sec. 2. (SB 1262) Effective January 1, 2017.)

**State of California**

**WATER CODE**

**Section 10911**

---

10911. (a) If, as a result of its assessment, the public water system concludes that its water supplies are, or will be, insufficient, the public water system shall provide to the city or county its plans for acquiring additional water supplies, setting forth the measures that are being undertaken to acquire and develop those water supplies. If the city or county, if either is required to comply with this part pursuant to subdivision (b), concludes as a result of its assessment, that water supplies are, or will be, insufficient, the city or county shall include in its water supply assessment its plans for acquiring additional water supplies, setting forth the measures that are being undertaken to acquire and develop those water supplies. Those plans may include, but are not limited to, information concerning all of the following:

(1) The estimated total costs, and the proposed method of financing the costs, associated with acquiring the additional water supplies.

(2) All federal, state, and local permits, approvals, or entitlements that are anticipated to be required in order to acquire and develop the additional water supplies.

(3) Based on the considerations set forth in paragraphs (1) and (2), the estimated timeframes within which the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), expects to be able to acquire additional water supplies.

(b) The city or county shall include the water supply assessment provided pursuant to Section 10910, and any information provided pursuant to subdivision (a), in any environmental document prepared for the project pursuant to Division 13 (commencing with Section 21000) of the Public Resources Code.

(c) The city or county may include in any environmental document an evaluation of any information included in that environmental document provided pursuant to subdivision (b). The city or county shall determine, based on the entire record, whether projected water supplies will be sufficient to satisfy the demands of the project, in addition to existing and planned future uses. If the city or county determines that water supplies will not be sufficient, the city or county shall include that determination in its findings for the project.

(Amended by Stats. 2001, Ch. 643, Sec. 5. Effective January 1, 2002.)

**State of California**

**WATER CODE**

**Section 10912**

---

10912. For the purposes of this part, the following terms have the following meanings:

- (a) "Project" means any of the following:
- (1) A proposed residential development of more than 500 dwelling units.
  - (2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.
  - (3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
  - (4) A proposed hotel or motel, or both, having more than 500 rooms.
  - (5) A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.
  - (6) A mixed-use project that includes one or more of the projects specified in this subdivision.
  - (7) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.
- (b) If a public water system has fewer than 5,000 service connections, then "project" means any proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of the public water system's existing service connections, or a mixed-use project that would demand an amount of water equivalent to, or greater than, the amount of water required by residential development that would represent an increase of 10 percent or more in the number of the public water system's existing service connections.
- (c) "Public water system" means a system for the provision of piped water to the public for human consumption that has 3,000 or more service connections. A public water system includes all of the following:
- (1) Any collection, treatment, storage, and distribution facility under control of the operator of the system that is used primarily in connection with the system.
  - (2) Any collection or pretreatment storage facility not under the control of the operator that is used primarily in connection with the system.
  - (3) Any person who treats water on behalf of one or more public water systems for the purpose of rendering it safe for human consumption.
- (d) This section shall become operative on January 1, 2018.

(Amended (as added by Stats. 2011, Ch. 588, Sec. 2) by Stats. 2016, Ch. 669, Sec. 2. (AB 2561) Effective September 26, 2016. Section operative January 1, 2018, by its own provisions.)

**State of California**

**WATER CODE**

**Section 10914**

---

10914. (a) Nothing in this part is intended to create a right or entitlement to water service or any specific level of water service.

(b) Nothing in this part is intended to either impose, expand, or limit any duty concerning the obligation of a public water system to provide certain service to its existing customers or to any future potential customers.

(c) Nothing in this part is intended to modify or otherwise change existing law with respect to projects which are not subject to this part.

(d) This part applies only to a project for which a notice of preparation is submitted on or after January 1, 1996.

(Added by Stats. 1995, Ch. 881, Sec. 4. Effective January 1, 1996.)



**State of California**

**WATER CODE**

**Section 10915**

---

10915. The County of San Diego is deemed to comply with this part if the Office of Planning and Research determines that all of the following conditions have been met:

(a) Proposition C, as approved by the voters of the County of San Diego in November 1988, requires the development of a regional growth management plan and directs the establishment of a regional planning and growth management review board.

(b) The County of San Diego and the cities in the county, by agreement, designate the San Diego Association of Governments as that review board.

(c) A regional growth management strategy that provides for a comprehensive regional strategy and a coordinated economic development and growth management program has been developed pursuant to Proposition C.

(d) The regional growth management strategy includes a water element to coordinate planning for water that is consistent with the requirements of this part.

(e) The San Diego County Water Authority, by agreement with the San Diego Association of Governments in its capacity as the review board, uses the association's most recent regional growth forecasts for planning purposes and to implement the water element of the strategy.

(f) The procedures established by the review board for the development and approval of the regional growth management strategy, including the water element and any certification process established to ensure that a project is consistent with that element, comply with the requirements of this part.

(g) The environmental documents for a project located in the County of San Diego include information that accomplishes the same purposes as a water supply assessment that is prepared pursuant to Section 10910.

(Amended by Stats. 2001, Ch. 643, Sec. 8. Effective January 1, 2002.)

## Appendix F

Metropolitan Water District of Southern California

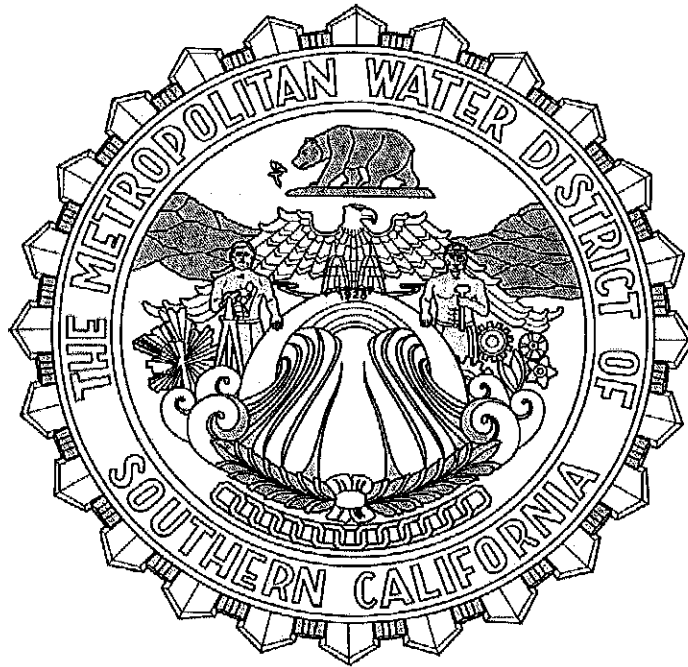
(APPENDIX A)

## APPENDIX A

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### The Metropolitan Water District of Southern California

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## TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION .....	A-1
Formation and Purpose .....	A-1
Member Agencies .....	A-1
Service Area.....	A-2
COVID-19 Pandemic.....	A-3
GOVERNANCE AND MANAGEMENT.....	A-5
Board of Directors.....	A-5
Management.....	A-6
Employee Relations .....	A-8
Risk Management .....	A-8
Cybersecurity .....	A-8
METROPOLITAN’S WATER SUPPLY .....	A-8
General.....	A-8
Current Water Conditions .....	A-9
Integrated Water Resources Plan .....	A-10
State Water Project .....	A-12
Colorado River Aqueduct .....	A-21
Endangered Species Act and Other Environmental Considerations .....	A-27
Water Transfer, Storage and Exchange Programs .....	A-30
Storage Capacity and Water in Storage .....	A-36
CONSERVATION AND WATER SHORTAGE MEASURES .....	A-38
General.....	A-38
Water Surplus and Drought Management Plan.....	A-39
Water Supply Allocation Plan .....	A-39
Increased Drought Resiliency .....	A-39
REGIONAL WATER RESOURCES .....	A-40
Los Angeles Aqueduct.....	A-41
Local Water Supplies.....	A-42
METROPOLITAN’S WATER DELIVERY SYSTEM.....	A-45
Primary Facilities and Method of Delivery.....	A-45
Water Quality and Treatment.....	A-46
Seismic Considerations and Emergency Response Measures .....	A-49
Security Measures.....	A-51
CAPITAL INVESTMENT PLAN.....	A-52
General Description .....	A-52
Projection of Capital Investment Plan Expenditures .....	A-52
Capital Investment Plan Financing .....	A-53
Major Projects of Metropolitan’s Capital Investment Plan.....	A-53
METROPOLITAN REVENUES.....	A-55
General.....	A-55

**TABLE OF CONTENTS**  
**(Continued)**

	<u>Page</u>
Summary of Revenues by Source .....	A-56
Revenue Allocation Policy and Tax Revenues .....	A-56
Water Revenues .....	A-57
Principal Customers .....	A-58
Rate Structure .....	A-58
Member Agency Purchase Orders .....	A-60
Other Charges .....	A-61
Classes of Water Service .....	A-62
Water Rates .....	A-63
Financial Reserve Policy.....	A-64
California Ballot Initiatives.....	A-65
Preferential Rights .....	A-66
Litigation Challenging Rate Structure .....	A-66
Other Revenue Sources.....	A-72
Investment of Moneys in Funds and Accounts.....	A-72
<b>METROPOLITAN EXPENSES.....</b>	<b>A-74</b>
General.....	A-74
Revenue Bond Indebtedness and Other Obligations.....	A-74
Limitations on Additional Revenue Bonds.....	A-75
Variable Rate Exposure Policy .....	A-76
Outstanding Senior Revenue Bonds and Senior Parity Obligations .....	A-77
Outstanding Subordinate Revenue Bonds and Subordinate Parity Obligations .....	A-83
Other Junior Obligations.....	A-86
General Obligation Bonds.....	A-86
State Water Contract Obligations .....	A-87
Power Sources and Costs; Related Long-Term Commitments.....	A-90
Defined Benefit Pension Plan and Other Post-Employment Benefits .....	A-92
<b>HISTORICAL AND PROJECTED REVENUES AND EXPENSES.....</b>	<b>A-97</b>
<b>MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND</b>	
<b>EXPENSES.....</b>	<b>A-101</b>
Water Transactions Projections .....	A-101
Water Revenues .....	A-102
Projected Fiscal Year 2020-21 Results .....	A-102



## INTRODUCTION

*This Appendix A provides general information regarding The Metropolitan Water District of Southern California ("Metropolitan"), including information regarding Metropolitan's operations and finances. Certain statements included or incorporated by reference in this Appendix A constitute "forward-looking statements." Such statements are generally identifiable by the terminology used such as "plan," "project," "expect," "estimate," "budget" or other similar words. Such statements are based on facts and assumptions set forth in Metropolitan's current planning documents including, without limitation, its most recent biennial budget. The achievement of results or other expectations contained in such forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Actual results may differ from Metropolitan's forecasts. Metropolitan is not obligated to issue any updates or revisions to the forward-looking statements in any event.*

*Metropolitan maintains a website that may include information on programs or projects described in this Appendix A; however, none of the information on Metropolitan's website is incorporated by reference or intended to assist investors in making an investment decision or to provide any additional information with respect to the information included in this Appendix A. The information presented on Metropolitan's website is not part of the Official Statement and should not be relied upon in making investment decisions.*

### **Formation and Purpose**

Metropolitan is a metropolitan water district created in 1928 under authority of the Metropolitan Water District Act (California Statutes 1927, Chapter 429, as reenacted in 1969 as Chapter 209, as amended (herein referred to as the "Act")). The Act authorizes Metropolitan to: levy property taxes within its service area; establish water rates; impose charges for water standby and service availability; incur general obligation bonded indebtedness and issue revenue bonds, notes and short-term revenue certificates; execute contracts; and exercise the power of eminent domain for the purpose of acquiring property. In addition, Metropolitan's Board of Directors (the "Board") is authorized to establish terms and conditions under which additional areas may be annexed to Metropolitan's service area.

Metropolitan's primary purpose is to provide a supplemental supply of water for domestic and municipal uses at wholesale rates to its member public agencies. If additional water is available, such water may be sold for other beneficial uses. Metropolitan serves its member agencies as a water wholesaler and has no retail customers.

The mission of Metropolitan, as promulgated by the Board, is to provide its service area with adequate and reliable supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way.

Metropolitan's charges for water transactions and availability are fixed by its Board and are not subject to regulation or approval by the California Public Utilities Commission or any other state or federal agency. Metropolitan imports water from two principal sources: northern California via the Edmund G. Brown California Aqueduct (the "California Aqueduct") of the State Water Project owned by the State of California (the "State" or "California") and the Colorado River via the Colorado River Aqueduct ("CRA") owned by Metropolitan.

### **Member Agencies**

Metropolitan is comprised of 26-member public agencies, including 14 cities, 11 municipal water districts, and one county water authority, which collectively serve the residents and businesses of more than 300 cities and numerous unincorporated communities. Member agencies request water from Metropolitan at

various delivery points within Metropolitan's system and pay for such water at uniform rates established by the Board for each class of water service. Metropolitan's water is a supplemental supply for its member agencies, most of whom have other sources of water. See "METROPOLITAN REVENUES-Principal Customers" in this Appendix A for a listing of the ten-member agencies representing the highest level of water transactions and revenues of Metropolitan during the fiscal year ended June 30, 2020. Metropolitan's member agencies may, from time to time, develop additional sources of water. See also "REGIONAL WATER RESOURCES." No member is required to purchase water from Metropolitan, but all member agencies are required to pay readiness-to-serve charges whether or not they purchase water from Metropolitan. See "METROPOLITAN REVENUES-Rate Structure," "-Member Agency Purchase Orders" and "-Other Charges" in this Appendix A.

The following table lists the 26-member agencies of Metropolitan.

Municipal Water Districts		Cities		County Water Authority
Calleguas	Las Virgenes	Anaheim	Los Angeles	San Diego <sup>(1)</sup>
Central Basin	Orange County	Beverly Hills	Pasadena	
Eastern	Three Valleys	Burbank	San Fernando	
Foothill	West Basin	Compton	San Marino	
Inland Empire Utilities Agency		Fullerton	Santa Ana	
Upper San Gabriel Valley		Glendale	Santa Monica	
Western of Riverside County		Long Beach	Torrance	

<sup>(1)</sup> The San Diego County Water Authority, currently Metropolitan's largest customer based on water transactions, is a plaintiff in litigation challenging the allocation of costs to certain rates adopted by the Board and asserting other claims. See "METROPOLITAN REVENUES-Litigation Challenging Rate Structure" in this Appendix A.

### Service Area

Metropolitan's service area comprises approximately 5,200 square miles and includes all or portions of the six counties of Los Angeles, Orange, Riverside, San Bernardino, San Diego and Ventura. When Metropolitan began delivering water in 1941, its service area consisted of approximately 625 square miles. Its service area has increased by 4,575 square miles since that time. The expansion was primarily the result of annexation of the service areas of additional member agencies.

Metropolitan estimates that approximately 19 million people lived in Metropolitan's service area in 2019, based on official estimates from the California Department of Finance and on population distribution estimates from the Southern California Association of Governments ("SCAG") and the San Diego Association of Governments ("SANDAG"). Population projections prepared by SCAG in 2012 and SANDAG in 2013, as part of their planning process to update regional transportation and land use plans, and used as base data for Metropolitan's 2015 Integrated Water Resources Plan update and subsequent water transactions forecasts, show expected population growth of about 18 percent in Metropolitan's service area between 2010 and 2035, with the estimated population in the service area in 2020 then projected at approximately 19.35 million. The economy of Metropolitan's service area is exceptionally diverse. In 2019, the economy of the six counties which contain Metropolitan's service area had a gross domestic product larger than all but twelve nations of the world. Metropolitan has historically provided between 40 and 60 percent of the water used annually within its service area. For additional economic and demographic information concerning the six-county area containing Metropolitan's service area, see Appendix E-"SELECTED DEMOGRAPHIC AND ECONOMIC INFORMATION FOR METROPOLITAN'S SERVICE AREA."

The climate in Metropolitan's service area ranges from moderate temperatures throughout the year in the coastal areas to hot and dry summers in the inland areas. Since 2000, annual rainfall has ranged from

approximately 4 to 27 inches along the coastal area, 6 to 38 inches in foothill areas, and 5 to 20 inches in inland areas.

### **COVID-19 Pandemic**

The spread of the novel strain of coronavirus and the disease it causes (now known as "COVID-19") is having significant adverse health and financial impacts throughout the world, including in Southern California. The World Health Organization declared the COVID-19 outbreak to be a pandemic, and states of emergency have been declared in the United States (the "U.S."), the State of California, and numerous counties throughout the State, including in the six counties all or portions of which comprise the service area of Metropolitan. On March 17, 2020, Metropolitan's General Manager declared a state of emergency at Metropolitan. The purposes behind these declarations were to initiate emergency response protocols, coordinate and formalize emergency actions across federal, state and local governmental agencies, and to proactively prepare for and react to the anticipated wider spread of the virus.

In response to the COVID-19 outbreak, State and local governments implemented "stay-at-home" (or "safer-at-home") orders for citizens to remain at home except for certain essential purposes, imposing restrictions on mass gatherings and resulting in the widespread temporary closure of businesses, universities and schools (including within the jurisdiction of Metropolitan and its member agencies). As a result, economic activity slowed considerably throughout the U.S. and the region. Employment data released since the imposition of the restrictions have shown a dramatic increase in unemployment rates. In addition, stock markets in the U.S. and globally experienced sharp declines in market value following the onset of the outbreak that were attributed to COVID-19 concerns, and although rebounds in the markets have since occurred, increased volatility in the financial markets continues.

The Governor of the State of California has taken a variety of actions and issued a number of executive orders addressing issues relating to the pandemic response. On May 4, 2020, the Governor issued an executive order informing local health jurisdictions and industry sectors that they could gradually re-open under modifications and guidance provided by the State. On August 28, 2020, the Governor announced a new, four-tiered color-coded statewide system (or "blueprint") with revised criteria for loosening and tightening restrictions on activities based upon the prevalence of COVID-19 in each county and the extent of community spread. A phased re-opening of various sectors has been underway in accordance with the Governor's four-tiered plan. Pursuant to the re-opening plan, some of the restrictions on activities have been eased; however, restrictions have been re-imposed in various jurisdictions (including in the six counties all or portions of which comprise the service area of Metropolitan) as local conditions warrant. Such restrictions may be modified, lifted, or reinstated, from time to time, as the COVID-19 pandemic continues. It is widely expected that global, national, and local economies will continue to be negatively affected by the pandemic, at least for some period of time.

Metropolitan has taken, and is taking, a number of steps to protect the health of its employees, maintain continuity of its critical and essential business functions and avoid widespread impacts to its workforce from the COVID-19 outbreak. Metropolitan's Pandemic Action Plan is in effect. The following actions have been undertaken and are underway. A COVID-19 Task Force is meeting regularly to review and update plans, prepare and implement action plans and coordinate Metropolitan's overall response activities. Metropolitan's Emergency Operations Center Duty Officer is monitoring the status of COVID-19 and its effects in Metropolitan's service area, and updating the Business Transition Team and COVID-19 Task Force regularly. The Duty Officer and Emergency Management staff are maintaining regular communications with State and county emergency operations centers and public health agencies to monitor the status of COVID-19. Metropolitan's water system is in a federally designated critical infrastructure sector with exemptions under Governor Newsom's Statewide "stay-at-home" order as needed to maintain continuity of operations. Personnel necessary to the operation and delivery of water supplies remain on-site, with staffing strategies being utilized to promote "social distancing." Enhanced facility cleaning and disinfection practices have also been put in place to promote a safe and healthful workplace for these

employees. Telecommuting arrangements or paid administrative leave is being implemented for employees performing other functions, and non-essential business travel has been limited.

COVID-19 is not believed to present a threat to the safety of Metropolitan's treated water supplies. Metropolitan has also taken steps to ensure it has the necessary backup equipment, supplies and treatment chemicals in the event of disruptions to the supply chain for these items. To date, Metropolitan's ability to treat and deliver water has not been impaired.

Metropolitan continues to assess the effects the ongoing COVID-19 pandemic has had, and will have, on Metropolitan and its business and operations, as well as in the region, including the adverse financial impacts likely to be experienced by its member agencies. Metropolitan has experienced an increase in certain costs, primarily expenses for personal protective equipment, enhancing cleaning, technology costs to accommodate teleworking and other related expenditures. However, such increased expenses have been modest and are generally offset by reductions in travel and other office expenses. The COVID-19 pandemic has caused disruptions in certain supply chains and some construction activities. While Metropolitan initially paused certain construction work on non-essential capital projects at the onset of the COVID-19 outbreak, such activity has resumed and Metropolitan continues to advance a variety of infrastructure and system reliability projects. See also "CAPITAL INVESTMENT PLAN." More broadly, press reports and analyses have suggested that water service providers serving residential, commercial and industrial end-use customers (referred to herein as "retail water service providers"), which includes some Metropolitan member agencies and agencies that purchase water from them, anticipate their customers are likely to be adversely impacted financially. As a measure to help mitigate such financial impacts and assure access to water service, on April 2, 2020, Governor Newsom issued an executive order which, among other things, orders the restoration of water service to residential customers in occupied residences whose service was discontinued for nonpayment during the state of emergency, and suspends the authority of retail water service providers to discontinue water service to residential and qualifying small business customers for non-payment. Voluntary measures may also be taken by retail water service providers in the State to assist their customers facing financial hardship as a result of the COVID-19 outbreak. The financial impacts to retail water customers and measures taken to assist them may result in more non-payment of utility bills than normal and forecasted, which is likely to further create financial stress on retail water service providers, including some Metropolitan member agencies.

In recognition of the changed circumstances and the uncertainties created by the ongoing COVID-19 outbreak, in the weeks following the declaration of a pandemic by the World Health Organization on March 11, 2020, Metropolitan reviewed its preliminary biennial budget initially presented to the Board in February 2020, and modified certain assumptions previously made in the proposed budget. The biennial budget for fiscal years 2020-21 and 2021-22, and water rates and charges for calendar years 2021 and 2022 adopted by the Board on April 14, 2020, reflected these adjustments, which included (i) a reduction in the overall rate increases for calendar years 2021 and 2022 from those previously proposed; (ii) a reduction in capital expenditures for fiscal year 2020-21 in recognition of likely delays in scheduling of construction work as a result of COVID-19; (iii) a reduction in the internal funding objective for the funding of capital program expenditures from current revenues for fiscal year 2020-21; and (iv) to review the adopted budget and rates no later than September 2020 to consider further impacts resulting from the COVID-19 crisis. See "METROPOLITAN'S REVENUES—Water Rates" and "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES."

As contemplated by the Board's April 14, 2020 action, Metropolitan reviewed the impacts of the COVID-19 pandemic on Metropolitan's biennial budget for fiscal years 2020-21 and 2021-22, and water rates and charges for calendar years 2021 and 2022 at its September 15, 2020 Board meeting. The Board determined to maintain the previously adopted rates and charges for calendar years 2021 and 2022 and approved certain cost containment measures, estimated to reduce Metropolitan expenditures by approximately \$10.7 million in fiscal year 2020-21, and by approximately \$1.0 million in fiscal year

2021-22. The Board also directed staff to develop a payment deferral program for member agencies that record and report significant customer payment delinquencies and likewise grant deferrals to their customers; evaluate potential new revenue-generating programs; and place a moratorium on non-emergency unbudgeted spending.

At its December 8, 2020 meeting, Metropolitan's Board adopted the COVID-19 Member Agency Payment Deferral Program. Under the approved program, Metropolitan will provide up to a six-month deferral of a portion of a requesting member agency's payment obligations due to Metropolitan for water transactions equal to the percentage of the member agency's own customers' delinquency rates, but not to exceed 10 percent of each monthly obligation. Additionally, under the program, late payments, penalties, and interest will be waived to the deferred amount over a period of up to 12 months. The program is available to all member agencies that meet Board-approved eligibility criteria and will apply to invoices for water transactions occurring only from January 1, 2021 to June 30, 2021. All amounts deferred under the program will be due and payable no later than December 29, 2021. To the extent that member agencies participate in the program, the COVID-19 Member Agency Payment Deferral Program is expected to result in a shift of some revenue collections from fiscal year 2020-21 to fiscal year 2021-22.

The COVID-19 outbreak is ongoing and developments will continue. The degree of impact to Metropolitan's finances and operations is difficult to predict due to the evolving nature of the COVID-19 pandemic, including uncertainties relating thereto. The extent of the fiscal impacts on Metropolitan will depend on, among other things, (i) the duration of the outbreak and the imposed restrictions on activities; (ii) the extent of the disruption to or decline in the local and global economies and financial markets; (iii) the degree to which business closures, increased unemployment, housing foreclosures and/or other economic consequences may reduce water demands in the region and Metropolitan's water transactions, or negatively affect future property values in Metropolitan's service area and/or Metropolitan's property tax levy receipts, and reduce Metropolitan's revenues; (iv) the extent to which a protracted disruption in the manufacturing or construction industry may affect supply chains or delay construction schedules for, or the implementation of, Metropolitan's capital improvement programs and projects, or the costs of such programs or projects or Metropolitan's water system operations; and (v) the ramifications of future actions that may be taken or required by governmental authorities to contain and respond to the outbreak. If the COVID-19 pandemic and/or the economic recovery is prolonged, the likelihood or magnitude of potential adverse impacts to Metropolitan's finances or operations from the factors discussed herein or from other factors, could be increased. As a result, Metropolitan's finances and operations may be adversely impacted by COVID-19. To date, Metropolitan does not believe the impacts of the COVID-19 pandemic will have a material adverse impact on its ability to pay debt service on its bonds or other debt obligations.

## **GOVERNANCE AND MANAGEMENT**

### **Board of Directors**

Metropolitan is governed by a 38-member Board of Directors, made up of representatives from all of Metropolitan's member agencies. Each member public agency is entitled to have at least one representative on the Board, plus an additional representative for each full five percent of the total assessed valuation of property in Metropolitan's service area that is within the member public agency. Changes in relative assessed valuation do not terminate any director's term. In 2019, California Assembly Bill 1220 (Garcia) amended the Act to provide that "A member public agency shall not have fewer than the number of representatives the member public agency had as of January 1, 2019." Accordingly, the Board may, from time to time, have more than 38 directors.

The Board includes business, professional and civic leaders. Directors are appointed by member agencies in accordance with those agencies' processes and the Act. They serve on the Board without compensation from Metropolitan. Voting is based on assessed valuation, with each member agency being entitled to cast one vote for each \$10 million or major fractional part of \$10 million of assessed valuation of

property within the member agency, as shown by the assessment records of the county in which the member agency is located. The Board administers its policies through the Metropolitan Water District Administrative Code (the "Administrative Code"), which was adopted by the Board in 1977. The Administrative Code is periodically amended to reflect new policies or changes to existing policies that occur from time to time.

## **Management**

Metropolitan's day-to-day management is under the direction of its General Manager, who serves at the pleasure of the Board, as do Metropolitan's General Counsel, General Auditor and Ethics Officer. Following is a biographical summary of Metropolitan's principal executive officers.

*Jeffrey Kightlinger, General Manager* – Mr. Kightlinger was appointed as General Manager in February 2006, leaving the position of General Counsel, which he had held since February 2002. Before becoming General Counsel, Mr. Kightlinger was a Deputy General Counsel and then Assistant General Counsel, representing Metropolitan primarily on Colorado River matters, environmental issues, water rights and a number of Metropolitan's water transfer and storage programs. Prior to joining Metropolitan in 1995, Mr. Kightlinger worked in private practice representing numerous public agencies including municipalities, redevelopment agencies and special districts. Mr. Kightlinger earned his bachelor's degree in history from the University of California, Berkeley, and his law degree from Santa Clara University. At the March 2020 Board meeting, Mr. Kightlinger announced his plans to step down as General Manager. Metropolitan's Board will conduct a recruitment process for a successor General Manager with the intention of making a selection (subject to such delays in schedule as may result from prolonged limitations due to COVID-19 response actions) prior to Mr. Kightlinger's departure. It is anticipated that Mr. Kightlinger will continue in his position while Metropolitan's recruitment process is ongoing until a successor is named.

*Marcia Scully, General Counsel* – Ms. Scully assumed the position of General Counsel in March 2012. She previously served as Metropolitan's Interim General Counsel from March 2011 to March 2012. Ms. Scully joined Metropolitan in 1995, after a decade of private law practice, providing legal representation to Metropolitan on construction, employment, Colorado River and significant litigation matters. From 1981 to 1985 she was assistant city attorney for the City of Inglewood. Ms. Scully served as president of University of Michigan's Alumnae Club of Los Angeles and is a recipient of the 1996 State Bar of California, District 7 President's Pro Bono Service Award and the Southern California Association of Non-Profit Housing Advocate of the Year Award. She is also a member of the League of Women Voters for Whittier and was appointed for two terms on the City of Whittier's Planning Commission, three years of which were served as chair. Ms. Scully earned a bachelor's degree in liberal arts from the University of Michigan, a master's degree in urban planning from Wayne State University and her law degree from Loyola Law School.

*Gerald C. Riss, General Auditor* – Mr. Riss was appointed as Metropolitan's General Auditor in July 2002. As General Auditor, he is responsible for the independent evaluation of the policies, procedures and systems of control throughout Metropolitan. Mr. Riss is a certified fraud examiner, certified financial services auditor and certified risk professional with more than 25 years of experience in accounting, audit and risk management. Prior to joining Metropolitan, Mr. Riss was Vice President and Assistant Division Head of Risk Management Administration at United California Bank/Bank of the West. He also served as Senior Vice President, Director of Risk Management and General Auditor of Tokai Bank of California from 1988 until its reorganization as United California Bank in 2001. He earned a bachelor's degree in accounting and a master's degree in business administration from Wayne State University.

*Abel Salinas, Ethics Officer* – Mr. Salinas was appointed as Metropolitan's Ethics Officer in July 2019. He is responsible for making recommendations regarding rules and policies related to lobbying, conflicts of interest, contracts, campaign contributions and internal disclosures, while providing education and advice about these rules. Prior to joining Metropolitan, Mr. Salinas worked as the Special Agent in Charge in the U.S. Department of Labor's Office of Inspector General. Before joining that agency, he served



for three years in the U.S. Office of Personnel Management. Mr. Salinas holds a bachelor's degree in criminal justice from University of Texas -- Pan American and a master's degree in policy management from Georgetown University.

*Katano Kasaine, Assistant General Manager/Chief Financial Officer* – Ms. Kasaine has been serving as the Assistant General Manager/Chief Financial Officer since August 2019. She is responsible for directing Metropolitan's financial activities, including accounting and financial reporting, debt issuance and management, financial planning and strategy, managing Metropolitan's investment portfolio, budget administration, financial analysis, financial systems, and developing rates and charges. In addition, she is responsible for risk management and business continuity activities. Prior to joining Metropolitan, Ms. Kasaine worked for the City of Oakland for nearly 25 years in various roles, including Finance Director/Treasurer. She holds a bachelor's degree in business administration from Dominican University in San Rafael, California and a master's degree in public health from Loma Linda University.

*Deven Upadhyay, Assistant General Manager/Chief Operating Officer* – Mr. Upadhyay was appointed to his current position in November 2017. In this capacity, he oversees the management of Metropolitan's Water System Operations, Engineering Services and Water Resource Management. In addition, following the retirement of Metropolitan's Assistant General Manager/Strategic Water Initiatives at the end of 2020, Mr. Upadhyay has assumed oversight responsibility for Metropolitan's Bay-Delta initiatives. Mr. Upadhyay has over 25 years of experience in the water industry. He joined Metropolitan in 1995, beginning as a Resource Specialist and then left Metropolitan in 2005 to work at the Municipal Water District of Orange County. In 2008, he returned to Metropolitan as a Budget and Financial Planning Section Manager and became a Water Resource Management Group Manager in 2010. Mr. Upadhyay has a Bachelor of Arts degree in economics from the California State University, Fullerton and a master's degree in public administration from the University of La Verne.

*Shane Chapman, Assistant General Manager/Chief Administrative Officer* – Mr. Chapman was appointed to his current position in January 2018 and is responsible for the strategic direction and management of Metropolitan's administrative functions. His primary responsibilities include managing human resources, information technology, real property, environmental planning, and administrative services. Mr. Chapman joined Metropolitan as a Resource Specialist in 1991, progressing to the level of Program Manager in 2001. He became the Revenue, Rates and Budget Manager in 2003 and Assistant Group Manager in Water System Operations in 2006. Mr. Chapman served as General Manager of the Upper San Gabriel Valley Municipal Water District for seven years. Mr. Chapman has a Bachelor of Arts degree in economics from Claremont McKenna College and a master's degree in public administration from the University of Southern California.

*Dee Zinke, Assistant General Manager/Chief External Affairs Officer* – Ms. Zinke was appointed to her current position in January 2016. She is responsible for Metropolitan's communications, business outreach, education and legislative matters. She joined Metropolitan in 2009 as Manager of the Legislative Services Section. Before coming to Metropolitan, Ms. Zinke was the Manager of Governmental and Legislative Affairs at the Calleguas Municipal Water District for nearly 10 years, where she received recognition for her significant contributions to the Association of California Water Agencies, the Ventura County Special Districts Association and the Association of Water Agencies of Ventura County. During her tenure at Calleguas, she was named Chair of the Ventura County Watersheds Coalition and appointed by then-Secretary of Resources Mike Chrisman to the State Watershed Advisory Committee. Prior to her public service, she worked in the private sector as the Executive Officer and Senior Legislative Advocate for the Building Industry Association of Greater Los Angeles and Ventura Counties and as Director of Communications for E-Systems, a defense contractor specializing in communication, surveillance and navigation systems in Washington, D.C. Ms. Zinke holds a Bachelor of Arts degree in communication and psychology from Virginia Polytechnic Institute and State University.

## **Employee Relations**

The total number of budgeted regular full-time Metropolitan employees on November 1, 2020 was 1,907 with 1,806 positions filled, and the remaining positions under recruitment or vacant. Of the filled positions, 1,249 were represented by AFSCME Local 1902, 94 by the Supervisors Association, 304 by the Management and Professional Employees Association and 127 by the Association of Confidential Employees. The remaining 32 employees are unrepresented. The four bargaining units represent 98 percent of Metropolitan's employees. The Memorandum of Understanding ("MOU") with each of AFSCME Local 1902, the Supervisors Association, the Management and Professional Employees Association and the Association of Confidential Employees were updated through negotiations and cover the period January 1, 2017 through December 31, 2021.

## **Risk Management**

Metropolitan is exposed to various risks of loss related to, among other things, the design and construction of facilities, and the treatment and delivery of water. With the assistance of third party claims administrators, Metropolitan is self-insured for property losses, liability, and workers' compensation. Metropolitan self-insures the first \$25 million per liability occurrence, with commercial general liability coverage of \$75 million in excess of the self-insured retention. The \$25 million self-insured retention is maintained as a separate restricted reserve. Metropolitan is also self-insured for loss or damage to its property, with the \$25 million self-insured retention also being accessible for emergency repairs and Metropolitan property losses. In addition, Metropolitan obtains other excess and specialty insurance coverages such as directors' and officers' liability, fiduciary liability and aircraft hull and liability coverage.

Metropolitan self-insures the first \$5 million for workers' compensation with statutory excess coverage. The self-insurance retentions and reserve levels currently maintained by Metropolitan may be modified by the Board at its sole discretion.

## **Cybersecurity**

Metropolitan has adopted and maintains an active Cybersecurity Program ("CSP") that includes policies reviewed by Metropolitan's Office of Enterprise Cybersecurity, Audit department and independent third-party auditors and consultants. Metropolitan has appointed an Information Security Officer who is responsible for overseeing the annual review of the CSP and its alignment with Metropolitan's Strategic Plan. Metropolitan's policies and procedures on information governance, risk management, and compliance are consistent with the U.S. Commerce Department's National Institute of Standards and Technology Cybersecurity Framework and are consistent with the requirements prescribed by the America's Water Infrastructure Act (AWIA) for risk assessment and emergency response. Metropolitan's Cybersecurity Team is responsible for identifying cybersecurity risks to Metropolitan, preventing, investigating, and responding to any cybersecurity incidents, and providing guidance and education on the implementation of new technologies at Metropolitan. All persons or entities authorized to use Metropolitan's computer resources are required to participate in Metropolitan's Cybersecurity Awareness Training.

## **METROPOLITAN'S WATER SUPPLY**

### **General**

Metropolitan's principal sources of water supplies are the State Water Project and the Colorado River. Metropolitan receives water delivered from the State Water Project under State Water Contract provisions, including contracted supplies, use of carryover storage in San Luis Reservoir, and surplus supplies. Metropolitan holds rights to a basic apportionment of Colorado River water and has priority rights to an additional amount depending on availability of surplus supplies. Water management programs supplement these Colorado River supplies. To secure additional supplies, Metropolitan also has groundwater banking partnerships and water transfer and storage arrangements within and outside its service area.

Metropolitan's principal water supply sources, and other supply arrangements and water management are more fully described herein.

Metropolitan faces a number of challenges in providing adequate, reliable and high-quality supplemental water supplies for Southern California. These include, among others: (1) population growth within the service area; (2) increased competition for low-cost water supplies; (3) variable weather conditions; (4) increased environmental regulations; and (5) climate change. Metropolitan's resources and strategies for meeting these long-term challenges are set forth in its Integrated Water Resources Plan, as updated from time to time. See "Integrated Water Resources Plan." In addition, Metropolitan manages water supplies in response to the prevailing hydrologic conditions by implementing its Water Surplus and Drought Management ("WSDM") Plan, and in times of prolonged or severe shortages, the Water Supply Allocation Plan (the "Water Supply Allocation Plan"). See "CONSERVATION AND WATER SHORTAGE MEASURES—Water Surplus and Drought Management Plan" and "Water Supply Allocation Plan" in this Appendix A.

Hydrologic conditions can have a significant impact on Metropolitan's imported water supply sources. For Metropolitan's State Water Project supplies, precipitation in California's northern Sierra Nevada during the fall and winter helps replenish storage levels in Lake Oroville, a key State Water Project facility. The subsequent runoff from the spring snowmelt helps satisfy regulatory requirements in the San Francisco Bay/Sacramento-San Joaquin River Delta ("Bay-Delta") bolstering water supply reliability in the same year. See "State Water Project – Bay-Delta Proceedings Affecting State Water Project." The source of Metropolitan's Colorado River supplies is primarily the watersheds of the Upper Colorado River Basin in the states of Colorado, Utah, and Wyoming. Although precipitation is primarily observed in the winter and spring, summer storms are common and can affect water supply conditions.

Uncertainties from potential future temperature and precipitation changes in a climate driven by increased concentrations of atmospheric carbon dioxide also present challenges. Areas of concern to California water planners identified by researchers include: reduction in Sierra Nevada and Colorado Basin snowpack; increased intensity and frequency of extreme weather events; and rising sea levels resulting in increased risk of damage from storms, high-tide events, and the erosion of levees and potential cutbacks of deliveries of imported water. While potential impacts from climate change remain subject to study and debate, climate change is among the uncertainties that Metropolitan seeks to address through its planning processes.

**Current Water Conditions**

As of January 11, 2021, the northern Sierra precipitation was 41 percent of the 50-year average for the time of year, and northern Sierra snowpack measured at 60 percent of average for such time of year. On December 1, 2020, the California Department of Water Resources ("DWR") notified State Water Contractors (defined below) that its initial calendar year 2021 allocation estimate of State Water Project water is 10 percent, or 191,150 acre-feet for Metropolitan. (An acre-foot is the amount of water that will cover one acre to a depth of one foot and equals approximately 325,851 gallons, which represents the needs of three average families in and around the home for one year within Metropolitan's service area.) Changes to the 2021 allocation may occur and are dependent on the developing hydrologic conditions. See "State Water Project."

As of January 11, 2021, the Upper Colorado River Basin snowpack accumulation measured 70 percent of the 30-year average as of this date and the total system storage in the Colorado River Basin was 46 percent of capacity, a decrease of six percent or 3.8 million acre-feet from the same time the prior year. Because of the current storage level, no shortage will be declared in Colorado River water supply availability conditions for calendar year 2021, resulting in projected available supply of Colorado River water in calendar year 2021 of 1,007,700 acre-feet for Metropolitan. See "Colorado River Aqueduct."

See also “–Storage Capacity and Water in Storage.”

### **Integrated Water Resources Plan**

**Overview.** The Integrated Water Resources Plan (hereafter, “IRP”) is Metropolitan’s principal water resources planning document. Metropolitan, its member agencies, subagencies and groundwater basin managers developed their first IRP as a long-term planning guideline for resources and capital investments. The purpose of the IRP was the development of a portfolio of preferred resources to meet the water supply reliability and water quality needs for the region in a cost-effective and environmentally sound manner. The first IRP was adopted by the Board in January 1996 and has been subsequently updated in 2004, 2010 and 2015. As noted below, the 2020 IRP Update is under development. See “–2020 IRP Update.”

The last completed IRP update in 2015 (the “2015 IRP Update”) was adopted by Metropolitan’s Board on January 12, 2016, as a strategy to set goals and a framework for water resources development. This strategy enables Metropolitan and its member agencies to manage future challenges and changes in California’s water conditions and to balance investments with water reliability benefits. The 2015 IRP Update provides an adaptive management approach to address future uncertainty, including uncertainty from climate change. It was formulated with input from member agencies, retail water agencies, and other stakeholders including water and wastewater managers, environmental and business interests and the community.

The 2015 IRP Update seeks to provide regional reliability through 2040 by stabilizing Metropolitan’s traditional imported water supplies and continuing to develop additional conservation programs and local resources, with an increased emphasis on regional collaboration. It also advances long-term planning for potential future contingency resources, such as storm water capture and seawater desalination. The 2015 IRP Update and associated materials are available on Metropolitan’s website at: <http://www.mwdh2o.com/AboutYourWater/Planning/Planning-Documents/Pages/default.aspx>. The materials and other information set forth on Metropolitan’s website is not incorporated by reference.

Specific projects developed by Metropolitan in connection with the implementation of its IRP are subject to Board consideration and approval, as well as environmental and regulatory documentation and compliance.

**An Adaptive Management Strategy.** Adaptive water management, as opposed to a rigid set of planned actions over the coming decades, is the most nimble and cost-effective manner for Metropolitan and local water districts throughout Southern California to effectively prepare for the future. An adaptive management approach began to evolve with Metropolitan’s first IRP in 1996, after drought-related shortages in 1991 prompted a rethinking of Southern California’s long-term water strategy. Reliance on imported supplies to meet future water needs has decreased steadily over time, replaced by plans for local actions to meet new demands. The 2015 IRP Update continues to build a robust portfolio approach to water management.

The following paragraphs describe the goals, approaches and targets for each of the resource areas that are needed to ensure reliability under planned conditions.

**State Water Project.** The State Water Project is one of Metropolitan’s two major sources of water. The goal for State Water Project supplies is to adaptively manage flow and export regulations in the near term and to achieve a long-term Bay-Delta solution that addresses ecosystem and water supply reliability challenges. In furtherance of this goal, Metropolitan continues to participate and seek successful outcomes for a potential Bay-Delta conveyance project and the California EcoRestore efforts. See “–State Water Project” and “REGIONAL WATER RESOURCES–Local Water Supplies” in this Appendix A. The stated goal of the IRP is to manage State Water Project supplies in compliance with regulatory restrictions in the near-term for an average of 980,000 acre-feet of annual supplies, and to pursue an outcome for a potential

Bay-Delta conveyance project and California EcoRestore efforts aimed towards achieving long-term average supplies of approximately 1.2 million acre-feet annually from this resource. See “–State Water Project –Bay-Delta Proceedings Affecting State Water Project.”

Colorado River Aqueduct. The CRA delivers water from the Colorado River, Metropolitan’s original source of supply. Metropolitan has helped to fund and implement agricultural conservation programs, improvements to river operation facilities, land management programs and water transfers and exchanges through agreements with agricultural water districts in Southern California, entities in Arizona and Nevada that use Colorado River water, and the Bureau of Reclamation. See “–Colorado River Aqueduct” and “–Water Transfer, Storage and Exchange Programs – Colorado River Aqueduct Agreements and Programs.” The stated goal of the IRP for the CRA supplies is to maintain current levels of water supplies from existing programs, while also developing flexibility through dry-year programs and storage to ensure that a minimum of 900,000 acre-feet of CRA deliveries are available when needed, with a target of 1.2 million acre-feet in dry years.

Water Transfers and Exchanges. Under voluntary water transfer or exchange agreements, agricultural communities using irrigation water may periodically sell or conserve some of their water allotments for use in urban areas. The water may be delivered through existing State Water Project or CRA facilities or may be exchanged for water that is delivered through such facilities. Metropolitan’s policy toward potential transfers states that the transfers will be designed to protect and, where feasible, enhance environmental resources and avoid the mining of local groundwater supplies. See “–Water Transfer, Storage and Exchange Programs.” The stated goal of the IRP is to pursue transfers and exchanges to hedge against shorter-term water demand and supply imbalances while long-term water supply solutions are developed and implemented.

Water Conservation. Conservation and other water use efficiencies are integral components of Metropolitan’s IRP. Metropolitan has invested in conservation programs since the 1980s. Historically, most of the investments have been in water efficient fixtures in the residential sector. With outdoor water use comprising at least 50 percent of residential water demand, in more recent years, Metropolitan has increased its conservation efforts to target outdoor water use reduction in its service area. See “CONSERVATION AND WATER SHORTAGE MEASURES” in this Appendix A. The stated goal of the IRP is to pursue further water conservation savings of 485,000 acre-feet annually by 2040 through continued increased emphasis on outdoor water-use efficiency using incentives, outreach/education and other programs. The conservation program is regularly reviewed and revised in order to meet the stated goal of the IRP.

Local Water Supplies. Local supplies are a significant and growing component of the region’s diverse water portfolio. While the extent to which each member agency’s water supply is provided by imported water purchased from Metropolitan varies, in the aggregate, local supplies can provide over half of the region’s water in a given year, and the maintenance of these supplies remain an integral part of the IRP. Similar to water conservation, local supplies serve the important function of reducing demands for imported water supplies and thereby making regional water system capacity and storage available and accessible to meet the needs of the region. Local water supply projects may include, among other things, recycled water, groundwater recovery, conjunctive use, stormwater, and seawater desalination. Metropolitan offers financial incentives to member agencies to help fund the development of a number of these types of local supply projects. The stated goal of the IRP is to seek to develop 227,000 acre-feet of additional local supplies produced by existing and future projects, with the region reaching a target of 2.4 million acre-feet of total dependable local supplies by 2040. Additionally, in 2018, an interim Local Resources Program target was adopted to spur development of additional local supplies in furtherance of the stated goal of the IRP. See “REGIONAL WATER RESOURCES–Local Water Supplies” in this Appendix A.

**2020 IRP Update.** Development of Metropolitan’s 2020 IRP is underway. The year 2020 marks the conclusion of the 25-year planning cycle envisioned by the inaugural 1996 IRP. The 2020 IRP is anticipated

to build upon Metropolitan's adaptive management strategy utilizing a scenario planning approach. This approach will evaluate a variety of potential scenarios and therefore prepare the region for a wider range of potential outcomes by identifying solutions and policies that are robust across a variety of possible future conditions.

Metropolitan initiated the 2020 IRP process in February 2020. Crucial to scenario development for the 2020 IRP is determining how to describe and measure impacts of scenario drivers of change (that is, specific factors whose future values and outcomes are uncertain, but significantly impact future water supply reliability) on water resources and demands. Metropolitan developed an extensive array of drivers affecting water supply and demand by incorporating feedback from the Board, member agencies, retail agencies, and other stakeholders through multiple workshops hosted by Metropolitan as well as an online survey. A draft assessment was assembled with in-house area experts to establish and evaluate more than 80 relevant supply and demand links that covered all identified drivers. As of November 2020, Metropolitan staff was developing parameters and preliminary analyses of draft scenarios for member agency and Board review. A draft of the 2020 IRP Update is expected to be available in 2021.

## **State Water Project**

### **Background**

One of Metropolitan's two major sources of water is the State Water Project, which is owned by the State, and managed and operated by DWR. The State Water Project is the largest state-built, multipurpose, user-financed water project in the country. It was designed and built primarily to deliver water, but also provides flood control, generates power for pumping, is used for recreation, and enhances habitat for fish and wildlife. The State Water Project provides irrigation water to 750,000 acres of farmland, mostly in the San Joaquin Valley, and provides municipal and industrial water to approximately 27 million of California's estimated 39.9 million residents, including the population within the service area of Metropolitan.

The State Water Project's watershed encompasses the mountains and waterways around the Feather River, the principal tributary of the Sacramento River, in the Sacramento Valley of Northern California. Through the State Water Project, Feather River water stored in and released from Oroville Dam (located about 70 miles north of Sacramento, east of the city of Oroville, California) and unregulated flows diverted directly from the Bay-Delta are transported south through the Central Valley of California, over the Tehachapi Mountains and into Southern California, via the California Aqueduct, to four delivery points near the northern and eastern boundaries of Metropolitan's service area. The total length of the California Aqueduct is approximately 444 miles. See "METROPOLITAN'S WATER DELIVERY SYSTEM—Primary Facilities and Method of Delivery—State Water Project" in this Appendix A.

### **State Water Contract**

*Terms of the Contract.* In 1960, Metropolitan signed a water supply contract (as amended, the "State Water Contract") with DWR to receive water from the State Water Project. Metropolitan is one of 29 agencies and districts that have long-term contracts for water service from DWR (known collectively as the "State Water Contractors" and sometimes referred to herein as "Contractors"). Metropolitan is the largest of the State Water Contractors in terms of the number of people it serves (approximately 19 million), the share of State Water Project water that it has contracted to receive (approximately 46 percent), and the percentage of total annual payments made to DWR by agencies with State water supply contracts (approximately 50 percent for fiscal year 2019-20). Metropolitan received its first delivery of State Water Project water in 1972.

Pursuant to the terms of the State water supply contracts, all water-supply related expenditures for capital and operations, maintenance, power, and replacement costs associated with the State Water Project facilities are paid for by the State Water Contractors as components of their annual payment obligations to DWR. In exchange, Contractors have the right to participate in the system, with an entitlement to water



service from the State Water Project and the right to use the portion of the State Water Project conveyance system necessary to deliver water to them. Each year DWR estimates the total State Water Project water available for delivery to the State Water Contractors and allocates the available project water among the State Water Contractors in accordance with the State water supply contracts. Late each year, DWR announces an initial allocation estimate for the upcoming year, but periodically provides subsequent estimates throughout the year if warranted by developing precipitation and water supply conditions. Based upon the updated rainfall and snowpack values, DWR's total water supply availability projections are refined during each calendar year and allocations to the State Water Contractors are adjusted accordingly.

Metropolitan's State Water Contract has been amended a number of times since its original execution and delivery. Several of the amendments, entered into by DWR and various subsets of State Water Contractors, relate to the financing and construction of a variety of State Water Project facilities and improvements and impose certain cost responsibility therefor on the affected Contractors, including Metropolitan. For a description of Metropolitan's financial obligations under its State Water Contract, including with respect to such amendments, see "METROPOLITAN EXPENSES--State Water Contract Obligations" in this Appendix A.

Amendments, approved by Metropolitan's Board in 1995, and since executed by DWR and 27 of the State Water Contractors (collectively known as the "Monterey Amendment"), among other things, made explicit that the Contractors' rights to use the portion of the State Water Project conveyance system necessary to deliver water to them also includes the right to convey non-State Water Project water at no additional cost as long as capacity exists. These amendments also expanded the ability of the State Water Contractors to carry over State Water Project water in State Water Project storage facilities, allowed participating Contractors to borrow water from terminal reservoirs, and allowed Contractors to store water in groundwater storage facilities outside a Contractor's service area for later use. These amendments provided the means for individual Contractors to increase supply reliability through water transfers and storage outside their service area. Metropolitan has subsequently developed and actively manages a portfolio of water supplies to convey through the California Aqueduct pursuant to these contractual rights. See "--Water Transfer, Storage and Exchange Programs." The Monterey Amendment is the subject of ongoing litigation. See "-- Related Litigation--Monterey Amendment" below.

Under its State Water Contract, Metropolitan has a contractual right to its proportionate share of the State Water Project water that DWR determines annually is available for allocation to the Contractors. This determination is made by DWR each year based on existing supplies in storage, forecasted hydrology, and other factors, including water quality and environmental flow obligations and other operational considerations. Available State Water Project water is then allocated to the Contractors in proportion to the amounts set forth in "Table A" of their respective State water supply contract (sometimes referred to herein as "Table A State Water Project water"). Pursuant to Table A of its State Water Contract, Metropolitan is entitled to approximately 46 percent of the total annual allocation made available to State Water Contractors each year. Metropolitan's State Water Contract, under a 100 percent allocation, provides Metropolitan 1,911,500 acre-feet of water. The 100 percent allocation is referred to as the contracted amount.

DWR operates the State Water Project in coordination with the federal Central Valley Project, which is operated by the Bureau of Reclamation. Since 1986, the coordinated operations have been undertaken pursuant to a Coordinated Operations Agreement for the Central Valley Project and State Water Project (the "COA"). The COA defines how the State and federal water projects share water quality and environmental flow obligations imposed by regulatory agencies. The agreement calls for periodic review to determine whether updates are needed in light of changed conditions. After completing a joint review process, DWR and the Bureau of Reclamation agreed to amend the COA to reflect water quality regulations, biological opinions and hydrology updated since the 1986 agreement was signed. On December 13, 2018, DWR and the Bureau of Reclamation executed an Addendum to the COA (the "COA Addendum"). Through the COA Addendum, DWR will adjust current State Water Project operations to modify pumping operations, as well

as project storage withdrawals to meet in-basin uses, pursuant to revised calculations based on water year types. The COA Addendum will shift responsibilities for meeting obligations between the Central Valley Project and the State Water Project, resulting in a shift of approximately 120,000 acre-feet in long-term average annual exports from the State Water Project to the Central Valley Project. In executing the COA Addendum, DWR found the agreement to be exempt from environmental review under the California Environmental Quality Act ("CEQA") as an ongoing project and that the adjustments in operations are within the original scope of the project. On January 16, 2019, commercial fishing groups and a tribe ("petitioners") filed a lawsuit against DWR alleging that entering into the COA Addendum violated CEQA, the Delta Reform Act, and the public trust doctrine. On April 11, 2019, Westlands Water District ("Westlands") filed a motion to intervene, which was not opposed by any parties. The court granted Westlands' motion on June 7, 2019. On October 7, 2019, the North Delta Water Agency filed a motion to intervene. On November 19, 2019, the court granted North Delta Water Agency's motion. The petitioners are still in the process of preparing the administrative record and no date for a hearing on the merits has been set. The effect of this lawsuit on the COA Addendum and State Water Project operations cannot be determined at this time.

From calendar years 2005 through 2019, the amount of water received by Metropolitan from the State Water Project, including water from water transfer, groundwater banking and exchange programs delivered through the California Aqueduct (described under "Water Transfer, Storage and Exchange Programs" below), varied from a low of 593,000 acre-feet in calendar year 2015 to a high of 1,695,000 acre-feet in 2006. In calendar year 2019, DWR's allocation to State Water Contractors was 75 percent of contracted amounts, or 1,433,625 acre-feet, for Metropolitan. In calendar year 2020, DWR's allocation to State Water Contractors was 20 percent of contracted amounts, or 382,300 acre-feet, for Metropolitan.

On December 1, 2020, DWR announced an initial calendar year 2021 allocation of 10 percent. Changes to the 2021 allocation may occur and are dependent on the developing hydrologic conditions.

The term of Metropolitan's State Water Contract currently extends to December 31, 2035 or until all DWR bonds issued to finance construction of project facilities are repaid, whichever is longer. Upon expiration of the State Water Contract term, Metropolitan has the option to continue service under substantially the same terms and conditions. Metropolitan and other State Water Contractors have undertaken negotiations with DWR to extend their State water supply contracts. In June 2014, DWR and the State Water Contractors reached an Agreement in Principle (the "Agreement in Principle") on an amendment to the State water supply contract to extend the contract and to make certain changes related to financial management of the State Water Project in the future. DWR and 25 of the State Water Contractors, including Metropolitan, have signed the Agreement in Principle. Under the Agreement in Principle, the term of the State water supply contract for each Contractor that signs an amendment would be extended until December 31, 2085. The Agreement in Principle served as the "proposed project" for purposes of environmental review under CEQA. In August 2016, DWR released for public comment a draft Environmental Impact Report ("EIR") for the proposed project. The public review period on the draft EIR ended in October 2016. State law requires DWR to make a presentation to the State Legislature at an informational hearing at least 60 days prior to final approval of a State water supply contract extension. That hearing occurred on September 11, 2018. DWR released the final EIR on November 16, 2018 and certified the final EIR and issued a Notice of Determination on December 11, 2018. Concurrently, Metropolitan considered the certified final EIR and approved the water supply contract extension amendment at its December 11, 2018 Board meeting. That same day, DWR filed a lawsuit seeking to validate the contract extension. In January 2019, North Coast Rivers Alliance and others separately filed two petitions for writ of mandate and a complaint for declaratory and injunctive relief challenging DWR's final EIR and approval of the State water supply contract extension amendment under CEQA, the Delta Reform Act, and public trust doctrine. Mandatory CEQA settlement conferences were held on February 22, 2019. On June 18, 2019, the validation and CEQA cases were deemed related, and on August 20, 2019, they were assigned to a single judge. On August 28, 2020, DWR certified the CEQA administrative record. On September 28, 2020, DWR filed answers in the two CEQA

cases. No date for a hearing on the merits has been set and no briefing has occurred in any of the three actions. Any adverse impact of this litigation and rulings on Metropolitan's State Water Project supplies cannot be determined at this time. DWR has yet to execute the contract extension amendment. To date, 22 of the 29 State Water Contractors have executed the amendment, exceeding the DWR established threshold needed for it to be fully executed. DWR is awaiting a decision at the trial court on the validation litigation described above before moving forward with implementation of the amendments with individual State Water Contractors. Unless the contract extension amendment is implemented, the amortization period for any future State Water Project bonds will end in 2035.

In a process separate from the State Water Contract extension amendment described above, Metropolitan and other State Water Contractors undertook negotiations with DWR to amend their State water supply contracts to clarify how costs would be allocated for the California WaterFix project approved by DWR in 2017, as well as to clarify the criteria applicable to certain water management tools including single and multi-year water transfers and exchanges. In 2018, DWR and the State Water Contractors reached an agreement in principle (the "2018 AIP") and DWR subsequently issued a draft EIR. On April 29, 2019, Governor Newsom issued an executive order directing State agencies to develop a comprehensive statewide strategy to build a climate-resilient water system that included consideration of a potential single-tunnel Bay-Delta conveyance facility ("Delta Conveyance Project") instead of the approved California WaterFix project. Following its rescission of all project approvals for the California WaterFix project, DWR removed the California WaterFix cost provisions from the 2018 AIP and, on February 28, 2020, recirculated the draft EIR for only the 2018 AIP's water management provisions. DWR certified a Final EIR for the revised 2018 AIP in August 2020, and finalized the form of the amendment to implement the 2018 AIP in October 2020. The water management provisions would allow for greater flexibility for transfers and exchanges among the State Water Contractors. Specifically, it would confirm existing practices for exchanges, allow more flexibility for non-permanent water transfers, and allow for the transfer and exchange of certain portions of Article 56 carry over water.

In light of the State's change in direction from California WaterFix to a potential single tunnel Delta Conveyance Project, Metropolitan and other State Water Contractors embarked on a third public process to further negotiate proposed amendments to their State water supply contracts related to cost allocation for the potential Delta Conveyance Project. In March of 2020, DWR and the State Water Contractors reached an Agreement in Principle (the "Delta Conveyance AIP") that would be the basis for amendment of the State water supply contracts to provide a mechanism that would allow for the costs related to any Delta Conveyance Project to be allocated for and collected by DWR. The Delta Conveyance AIP also provides for the allocation of benefits for any Delta Conveyance Project in proportion to each State Water Contractor's participation. Contract language for the proposed amendments is under development. Consideration of the amendments for approval by DWR and the State Water Contractors would not occur until after DWR's completion of the Delta Conveyance Project environmental review, which is not expected before 2024. See "Bay-Delta Planning Activities; Delta Conveyance" under "Bay Delta Proceedings Affecting State Water Project," below.

***Related Litigation—Monterey Amendment.*** On May 4, 2010, DWR completed an EIR and concluded a remedial CEQA review for the Monterey Amendment (described under " – Terms of the Contract" above), which reflects the settlement of certain disputes regarding the allocation of State Water Project water. Central Delta Water Agency, South Delta Water Agency, California Water Impact Network, California Sportfishing Protection Alliance, and the Center For Biological Diversity filed a lawsuit against DWR in Sacramento County Superior Court challenging the validity of the EIR under CEQA and the validity of underlying agreements under a reverse validation action (the "Central Delta I" case). In January 2013, the Court ruled that the validation cause of action in Central Delta I was time barred by the statute of limitations. The court also held that DWR must complete a limited scope remedial CEQA review addressing the potential impacts of the Kern Water Bank, a portion of the Monterey Amendment that does not directly affect Metropolitan. The court also ruled that the State Water Project may continue to be operated under the terms of the

Monterey Amendment while the remedial CEQA review is prepared and leaves in place the underlying project approvals while DWR prepares the remedial CEQA review. Plaintiffs appealed. Briefing by the parties was completed, but no date for oral argument has been set.

In September 2016, DWR certified the Final Revised Draft EIR for the Monterey Amendment, recorded a Notice of Determination, and filed papers in the trial demonstrating compliance with the court's order for remedial CEQA review. On October 21, 2016, the petitioner group from Central Delta I and a new lead petitioner, Center for Food Safety, filed litigation against DWR challenging this EIR and named Metropolitan and the other State Water Project contractors as respondent parties. On October 2, 2017, the court denied Center for Food Safety's petition. Plaintiffs appealed. Briefing in this appeal has been completed. No date for oral argument has been set. Any adverse impact of any of the litigation and rulings relating to the Monterey Amendment on Metropolitan's State Water Project supplies cannot be determined at this time.

### **2017 Oroville Dam Spillway Incident**

Oroville Dam, the earthfill embankment dam on the Feather River which impounds Lake Oroville, is operated by DWR as a facility of the State Water Project. On February 7, 2017, the main flood control spillway at Oroville Dam, a gated and concrete lined facility, experienced significant damage as DWR released water to manage higher inflows driven by continued precipitation in the Feather River basin. The damaged main spillway impaired DWR's ability to manage lake levels causing water to flow over the emergency spillway structure, an ungated, 1,730-foot-long concrete barrier located adjacent to and north of the main flood control spillway structure. Use of the emergency spillway structure resulted in erosion that threatened the stability of the emergency spillway structure. This concern prompted the Butte County Sheriff, on February 12, 2017, to issue an evacuation order for approximately 200,000 people living in Oroville and the surrounding communities.

On November 1, 2018, DWR completed reconstruction of the main spillway to its original design capacity of approximately 270,000 cubic feet per second ("cfs"), a capacity almost twice its highest historical outflow. Work on the emergency spillway was substantially completed in April 2019. Mitigation measures such as slope revegetation are expected to be completed in 2021. Although the full extent of the costs of the response and recovery efforts are unknown at this time, DWR has indicated that the total costs of the recovery and restoration project prior to any federal or other reimbursement are estimated to be approximately \$1.2 billion. Cost estimates are based on actual and projected work and may be adjusted further as work continues through completion of the project in 2021. Funding from the Federal Emergency Management Agency ("FEMA") is generally available under FEMA's Public Assistance Program to recover 75 percent of eligible costs to restore facilities damaged as a result of natural disasters to their pre-disaster condition. As of October 1, 2020, DWR estimates that repair costs will total \$1.2 billion and has submitted \$815 million to FEMA as eligible costs for reimbursement. FEMA has provided \$259 million in reimbursement funding through October 1, 2020 as its 75 percent share of eligible costs. FEMA has determined that costs associated with the upper portion of the main spillway are eligible for reimbursement, and has approved, or is expected to authorize approximately \$371 in additional reimbursements for such costs. FEMA denied claims for reimbursement of \$278 million of emergency spillway costs; however, DWR is seeking partial reimbursement of these costs through the FEMA's hazard mitigation grant funding program. FEMA's review of those costs is underway. Any unrecovered costs to be paid for by the State Water Contractors under the State water contracts are expected to be financed long-term with DWR bonds. Metropolitan's potential share of the cost for the unreimbursed work totals about \$243 million. About \$22 million of this amount has already been paid through the State Water Project annual statement of charges.

Various lawsuits have been filed against DWR asserting claims for property damage, economic losses, environmental impacts and civil penalties related to this incident. Neither Metropolitan nor any other State Water Contractor was named as a defendant in any of these lawsuits. These cases, which have been coordinated in Sacramento Superior Court (Case No. JCCP 4974), include a lawsuit filed by the Butte

County District Attorney (“DA”) that seeks up to \$51 billion in civil penalties. This lawsuit asserts a single claim under California Fish and Game Code section 5650, *et seq.*, which makes it unlawful to deposit or place certain substances into the waters of the State, including lime, slag and “any substance or material deleterious to fish, plant life, mammals, or bird life.” Among other things, the statute provides for the assessment of civil penalties of up to \$25,000 a day and \$10 per pound of material deposited in violation of its strictures.

The State water supply contracts provide that Metropolitan and the other State Water Contractors are not liable for any claim of damage of any nature arising out of or connected the control, carriage, handling, use, disposal or distribution of State Water Project water prior to the point where it reaches their turnouts. However, DWR recently has asserted that regardless of legal liability all costs of the State Water Project system must be borne by State Water Contractors. Thus, DWR has indicated that it intends to bill the State Water Contractors for any expenditures related to this litigation (cost of litigation, settlements, damages awards/verdicts).

In light of DWR’s position, Metropolitan, the State Water Contractors, Santa Clara Valley Water District, Mojave Water Agency, and Kern County Water Agency filed a motion to intervene in the Butte County DA case on September 3, 2020, in order to protect their contractual rights and interests in the State Water Project. A hearing on that motion had been scheduled for January 8, 2021.

DWR filed a motion for summary judgment in the Butte County DA case on September 3, 2020. On December 18, 2020, the Sacramento Superior Court issued a ruling granting DWR’s motion. In its ruling, the court determined that, as a matter of law, DWR is not a person subject to the penalty provisions of the California Fish and Game Code section at issue, and therefore the Butte County DA’s complaint failed to state a cause of action. As a result of the granting of the motion, the matter will be dismissed by the trial court. The Butte County DA has 60 days to file an appeal after the court enters the judgment. The judgment was entered on January 11, 2021. At this time, Metropolitan cannot predict the outcome of this litigation or the amount of civil penalties that might be assessed in the event the Butte County DA prevails on an appeal of the decision.

#### **Bay-Delta Proceedings Affecting State Water Project**

**General.** In addition to being a source of water for diversion into the State Water Project, the Bay-Delta is the source of water for local agricultural, municipal and industrial needs, and also supports significant resident and anadromous fish and wildlife resources and important recreational uses of water. Both the State Water Project’s upstream reservoir operations and its Bay-Delta diversions can at times affect these other uses of Bay-Delta water directly, or indirectly, through impacts on Bay-Delta water quality. A variety of proceedings and other activities are ongoing with the participation of various State and federal agencies, as well as California’s environmental, urban and agricultural communities, in an effort to develop long-term, collectively-negotiated solutions to the environmental and water management issues concerning the Bay-Delta, and Metropolitan actively participates in these proceedings. Metropolitan cannot predict the ultimate outcome of any of the litigation or regulatory processes described below but believes that a materially adverse impact on the operation of State Water Project pumps, Metropolitan’s State Water Project deliveries or Metropolitan’s water reserves could result.

**SWRCB Regulatory Activities and Decisions.** The State Water Resources Control Board (the “SWRCB”) is the agency responsible for setting water quality standards and administering water rights throughout California. The SWRCB exercises its regulatory authority over the Bay-Delta by means of public proceedings leading to regulations and decisions that can affect the availability of water to Metropolitan and other users of State Water Project water. These include the Water Quality Control Plan (“WQCP”) for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary, which establishes the water quality objectives and proposed flow regime of the estuary, and water rights decisions, which assign responsibility for

implementing the objectives of the WQCP to users throughout the system by adjusting their respective water rights permits.

Since 2000, SWRCB's Water Rights Decision 1641 ("D-1641") has governed the State Water Project's ability to export water from the Bay-Delta for delivery to Metropolitan and other agencies receiving water from the State Water Project. D-1641 allocated responsibility for meeting flow requirements and salinity and other water quality objectives established earlier by the WQCP.

The WQCP gets reviewed periodically and new standards and allocations of responsibility can be imposed on the State Water Project as a result. The last review was completed in 2006, and the current review has been ongoing since approximately 2010.

The SWRCB's current review and update of the WQCP is being undertaken in phased proceedings. In December 2018, the SWRCB completed Phase 1 of the WQCP proceedings, adopting the plan amendments and environmental documents to support new flow standards for San Joaquin River tributaries and revised southern Delta salinity objectives. Various stakeholders filed suit against the SWRCB challenging these amendments. As part of Phase 2 proceedings, a framework document for the second plan amendment process, focused on the Sacramento River and its tributaries, Delta eastside tributaries, Delta outflows, and interior Delta flows, was released in July 2018. The framework describes changes that will likely be proposed by the SWRCB through formal proposed amendments and supporting environmental documents. The proposed changes include certain unimpaired flow requirements for the Sacramento River and its salmon-bearing tributaries. The SWRCB has also encouraged all stakeholders to work together to reach one or more voluntary agreements for consideration by the SWRCB that could implement the proposed amendments to the WQCP through a variety of tools, while seeking to protect water supply reliability. Metropolitan is participating in the Phase 2 proceedings and voluntary agreement negotiations.

***Bay-Delta Planning Activities; Delta Conveyance.*** In 2000, several State and federal agencies released the CALFED Bay-Delta Programmatic Record of Decision and Environmental Impact Report/Environmental Impact Statement ("EIR/EIS") that outlined and disclosed the environmental impacts of a 30-year plan to improve the Bay-Delta's ecosystem, water supply reliability, water quality, and levee stability. The CALFED Record of Decision remains in effect and many of the State, federal, and local projects begun under CALFED continue.

Building on CALFED and other Bay-Delta planning activities, in 2006 multiple State and federal resource agencies, water agencies, and other stakeholder groups entered into a planning agreement for the Bay-Delta Conservation Plan ("BDCP"). The BDCP was originally conceived as a comprehensive conservation strategy for the Bay-Delta designed to restore and protect ecosystem health, water supply, and water quality within a stable regulatory framework to be implemented over a 50-year time frame with corresponding long-term permit authorizations from fish and wildlife regulatory agencies. The BDCP includes both alternatives for new water conveyance infrastructure and extensive habitat restoration in the Bay-Delta. The existing State Water Project Delta water conveyance system needs to be improved and modernized to address operational constraints on pumping in the south Delta as well as risks to water supplies and water quality from climate change, earthquakes, and flooding. Operational constraints are largely due to biological opinions and incidental take permits to which the State Water Project is subject that substantially limit the way DWR operates the State Water Project.

In 2015, the State and federal lead agencies proposed an alternative implementation strategy and new alternatives to the BDCP to provide for the protection of water supplies conveyed through the Bay-Delta and the restoration of the ecosystem of the Bay-Delta, termed "California WaterFix" and "California EcoRestore," respectively. In this alternative approach, DWR and the Bureau of Reclamation would implement planned water conveyance improvements (California WaterFix) as a stand-alone project with the required habitat restoration limited to that directly related to construction mitigation. The associated costs of



such mitigation would be underwritten by the public water agencies participating in the conveyance project. Ecosystem improvements and habitat restoration more generally (California EcoRestore) would be undertaken under a more phased approach than previously contemplated by the BDCP and would not be linked with the conveyance project or permits.

As part of California EcoRestore, which was initiated in 2015, the State is pursuing more than 30,000 acres of Delta habitat restoration. Work on a number of EcoRestore projects is ongoing. Among other things, EcoRestore was undertaken to implement restoration projects required by the biological opinions to which the State Water Project has been and is subject. EcoRestore is estimated to cost approximately \$500 million in the first five years (which is 2015-2020) for implementation and planning costs. This includes certain amounts being paid by the State Water Contractors, including Metropolitan, for the costs of habitat restoration required to mitigate State and federal water project impacts pursuant to the biological opinions. See also “–Endangered Species Act and Other Environmental Considerations – Endangered Species Act Considerations – State Water Project.”

In July 2017, DWR certified a final EIR and approved the California WaterFix as an improvement to the State Water Project. The California Water Fix, as then approved, would have included new north Bay-Delta water diversion facilities with a total maximum capacity of 9,000 cfs and two tunnels for the transportation of State Water Project and Central Valley Project water from the north Delta.

In July 2018, Metropolitan’s Board approved Metropolitan’s funding in the aggregate of up to 64.6 percent of the overall capital cost of the California WaterFix, including its share as a State Water Contractor and through various forms of additional financial support Metropolitan would contribute to the project.

On February 12, 2019, in his first State of the State address, then recently elected Governor Gavin Newsom announced a conceptual proposal supporting a single-tunnel configuration for new Bay-Delta conveyance instead of the two-tunnel California WaterFix. Subsequently, on April 29, 2019, Governor Newsom issued an executive order directing identified State agencies to develop a comprehensive statewide strategy to build a climate-resilient water system. Among other things, the Governor’s executive order directed the State agencies to inventory and assess the current planning for modernizing conveyance through the Bay-Delta with a new single tunnel project. Following the Governor’s executive order, in May 2019, DWR withdrew approval of the California WaterFix project and decertified the EIR. In August 2019, DWR rescinded the last permit application associated with the project. Between mid-2017 and mid-2019, California WaterFix was subject to several lawsuits primarily related to DWR’s powers to finance and construct the project and various environmental approvals and related matters. The lawsuits, administrative proceedings, and other matters were dismissed as a result of the cancellation of the California WaterFix project.

Consistent with the Governor’s direction, DWR is pursuing a new environmental review and planning process for a proposed single tunnel project to modernize the State Water Project’s Bay-Delta conveyance, commonly referred to as the Delta Conveyance Project. The formal environmental review process for a proposed single tunnel Delta Conveyance Project commenced with the issuance by DWR of a Notice of Preparation under CEQA on January 15, 2020. The new conveyance facilities being reviewed would include intake structures on the Sacramento River, with a total capacity of 6,000 cfs, and a single tunnel to convey water to the existing pumping plants in the south Delta. Planning, environmental review and conceptual design work by DWR is expected to be completed in the 2023-2024 timeframe.

On August 20, 2020, the U.S. Army Corps of Engineers, the lead agency for the Delta Conveyance Project under NEPA, issued a notice of intent of the development of the environmental impact statement for the Delta Conveyance Project. The draft environmental impact statement is currently anticipated to be available for public review and comment in mid-2021.

Metropolitan's Board has previously authorized Metropolitan's participation in two joint powers agencies relating to a Bay-Delta conveyance project (originally formed in connection with California WaterFix): the Delta Conveyance Design and Construction Authority (the "DCA"), formed by the participating water agencies to actively participate with DWR in the design and construction of the conveyance project in coordination with DWR and under the control and supervision of DWR; and the Delta Conveyance Finance Authority (the "Financing JPA"), formed by the participating water agencies to facilitate financing for the conveyance project. The DCA is providing engineering and design activities to support the DWR's planning and environmental analysis for the potential new Delta Conveyance Project.

In August 2020, the DCA released preliminary cost information for the proposed Delta Conveyance Project based on an early cost assessment prepared by the DCA. The DCA's early assessment is based on preliminary engineering, not a full conceptual engineering report, and includes project costs for construction, management, oversight, mitigation, planning, soft costs, and contingencies. Based on these assumptions, the DCA's early assessment estimated a project cost of approximately \$15.9 billion in 2020 non-discounted dollars, which includes a 44 percent overall contingency applied to the preliminary construction costs. The DCA noted that such estimate has been developed at an early stage in the proposed project and will be revised over time.

The preliminary cost assessment information was prepared to inform various public water agencies' decisions on whether to participate in funding the environmental review, planning, preliminary design and engineering, and other pre-construction activities, for the proposed Delta Conveyance Project, and if so, at what level. Approximately \$340.7 million of investment is estimated to be needed over four years (2021 through 2024) to fund these costs. At its December 8, 2020 Board meeting, Metropolitan's Board authorized the General Manager to execute a funding agreement with DWR and commit funding for a Metropolitan participation level of 47.2 percent of such costs of preliminary design, environmental planning and other pre-construction activities to assist in the environmental process for the proposed Delta Conveyance Project. Metropolitan's 47.2 percent share amounts to an estimated funding commitment of \$160.8 million over the next four years. Eighteen other State Water Contractors also have approved funding a share of the planning and pre-construction costs. The funding agreement includes funding environmental and pre-construction activities for DWR and work that is authorized by DWR under the DCA joint exercise of powers agreement. Similar to prior agreements for BDCP and California WaterFix, the funding agreement provides that funds would be reimbursed to Metropolitan if the project is approved and when the first bonds, if any, for the project are issued. In connection with approving the funding agreement, at its December 2020 Board meeting, the Board also authorized the General Manager to execute an amendment to the DCA joint exercise of powers agreement. The amendment was developed to address changes in the anticipated participation structure for the proposed Delta Conveyance Project from that contemplated for California WaterFix. The amendment revises the board composition and voting procedures to align with public water agencies' participation in the environmental review, planning, design and engineering of the proposed Delta Conveyance Project as described above.

Metropolitan's December 8, 2020 action to approve fund planning and pre-construction costs does not commit Metropolitan to participate in the Delta Conveyance Project. Any final decision to commit to the project and incur final design and construction costs would require Board approval following completion of the environmental review for the proposed Delta Conveyance Project, which is not expected to occur until 2024 or later.

On August 6, 2020, DWR adopted certain resolutions to authorize the issuance of bonds to finance costs of Delta Conveyance Project environmental review, planning, design and, if and when such a project is approved, the costs of acquisition and construction thereof. The same day, it filed a complaint in Sacramento County Superior Court seeking to validate its authority to issue the bonds. Fourteen answers have been filed in the validation action, and one related case was filed in the same court alleging that DWR violated CEQA by adopting the bond resolutions before completing environmental review of the Delta Conveyance Project.

Additional lawsuits could be filed in the future with respect to any new Bay-Delta conveyance project and may impact the anticipated timing and costs of any proposed new single tunnel Delta Conveyance Project.

## **Colorado River Aqueduct**

### **Background**

The Colorado River was Metropolitan's original source of water after Metropolitan's establishment in 1928. Metropolitan has a legal entitlement to receive water from the Colorado River under a permanent service contract with the Secretary of the Interior. Water from the Colorado River and its tributaries is also available to other users in California, as well as users in the states of Arizona, Colorado, Nevada, New Mexico, Utah, and Wyoming (collectively, the "Colorado River Basin States"), resulting in both competition and the need for cooperation among these holders of Colorado River entitlements. In addition, under a 1944 treaty, Mexico has right to delivery of 1.5 million acre-feet of Colorado River water annually except as provided under shortage conditions described in Treaty Minute 323. The United States and Mexico agreed to conditions for reduced deliveries of Colorado River water to Mexico in Treaty Minute 323, adopted in 2017. That Minute established the rules under which Mexico agreed to take shortages and create reservoir storage in Lake Mead. Those conditions are in parity with the requirements placed on the Lower Basin States (defined below) in the Lower Basin Drought Contingency Plan (described under "– Colorado River Operations: Surplus and Storage Guidelines – Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead" in this Appendix A). Mexico can also schedule delivery of an additional 200,000 acre-feet of Colorado River water per year if water is available in excess of the requirements in the United States and the 1.5 million acre-feet allotted to Mexico.

Construction of the CRA, which is owned and operated by Metropolitan, was undertaken by Metropolitan to provide for the transportation of its Colorado River water entitlement to its service area. The CRA originates at Lake Havasu on the Colorado River and extends approximately 242 miles through a series of pump stations and reservoirs to its terminus at Lake Mathews in Riverside County. Up to 1.25 million acre-feet of water per year may be conveyed through the CRA to Metropolitan's member agencies, subject to availability of Colorado River water for delivery to Metropolitan as described below. Metropolitan first delivered CRA water to its member agencies in 1941.

### **Colorado River Water Apportionment and Seven-Party Agreement**

Pursuant to the federal Boulder Canyon Project Act of 1928, California is apportioned the use of 4.4 million acre-feet of water from the Colorado River each year plus one-half of any surplus that may be available for use collectively in Arizona, California and Nevada (the "Lower Basin States"). Under an agreement entered into in 1931 among the California entities that expected to receive a portion of California's apportionment of Colorado River water (the "Seven-Party Agreement") and which has formed the basis for the distribution of Colorado River water made available to California, Metropolitan holds the fourth priority right to 550,000 acre-feet per year. This is the last priority within California's basic apportionment. In addition, Metropolitan holds the fifth priority right to 662,000 acre-feet of water, which is in excess of California's basic apportionment. Until 2003, Metropolitan had been able to take full advantage of its fifth priority right as a result of the availability of surplus water and water apportioned to Arizona and Nevada that was not needed by those states. However, during the 1990s Arizona and Nevada increased their use of water from the Colorado River, and by 2002 no unused apportionment was available for California. As a result, California has limited its annual use to 4.4 million acre-feet since 2003, not including supplies made available under water supply programs such as intentionally-created surplus and certain conservation and storage agreements. In addition, a severe drought in the Colorado River Basin from 2000-2004 reduced storage in system reservoirs, ending the availability of surplus deliveries to Metropolitan. Prior to 2003, Metropolitan could divert over 1.25 million acre-feet in any year. Since 2003, Metropolitan's net diversions of Colorado River water have ranged from a low of 537,607 acre-feet in 2019 to a high of approximately 1,179,000 acre-feet in 2015. Average annual net diversions for 2010 through 2019 were nearly 900,291 acre-feet, with annual volumes dependent primarily on programs to augment supplies, including transfers of

conserved water from agriculture. See “– Quantification Settlement Agreement” and “– Colorado River Operations: Surplus and Shortage Guidelines.” See also “–Water Transfer, Storage and Exchange Programs – Colorado River Aqueduct Agreements and Programs.” In 2019, total available Colorado River supply was just over one million acre-feet. A portion of the available supply that was not diverted was stored in Lake Mead for future usage. See also “–Storage Capacity and Water in Storage.”

The following table sets forth the existing priorities of the California users of Colorado River water established under the 1931 Seven-Party Agreement.

**PRIORITIES UNDER THE 1931 CALIFORNIA SEVEN-PARTY AGREEMENT<sup>(1)</sup>**

<b>Priority</b>	<b>Description</b>	<b>Acre-Feet Annually</b>
1	Palo Verde Irrigation District gross area of 104,500 acres of land in the Palo Verde Valley	3,850,000
2	Yuma Project in California not exceeding a gross area of 25,000 acres in California	
3(a)	Imperial Irrigation District and other lands in Imperial and Coachella Valleys <sup>(2)</sup> to be served by All-American Canal	
3(b)	Palo Verde Irrigation District - 16,000 acres of land on the Lower Palo Verde Mesa	
4	Metropolitan Water District of Southern California for use on the coastal plain	550,000
	<b>SUBTOTAL</b>	<b>4,400,000</b>
5(a)	Metropolitan Water District of Southern California for use on the coastal plain	550,000
5(b)	Metropolitan Water District of Southern California for use on the coastal plain <sup>(3)</sup>	112,000
6(a)	Imperial Irrigation District and other lands in Imperial and Coachella Valleys to be served by the All-American Canal	300,000
6(b)	Palo Verde Irrigation District - 16,000 acres of land on the Lower Palo Verde Mesa	
	<b>TOTAL</b>	<b>5,362,000</b>
7	Agricultural use in the Colorado River Basin in California	Remaining surplus

Source: Metropolitan.

- (1) Agreement dated August 18, 1931, among Palo Verde Irrigation District, Imperial Irrigation District, Coachella Valley County Water District, Metropolitan, the City of Los Angeles, the City of San Diego and the County of San Diego. These priorities were memorialized in the agencies’ respective water delivery contracts with the Secretary of the Interior.
- (2) The Coachella Valley Water District serves Coachella Valley.
- (3) In 1946, the City of San Diego, the San Diego County Water Authority, Metropolitan and the Secretary of the Interior entered into a contract that merged and added the City and County of San Diego’s rights to storage and delivery of Colorado River water to the rights of Metropolitan.

### **Quantification Settlement Agreement**

The Quantification Settlement Agreement (“QSA”), executed by the Coachella Valley Water District (“CVWD”), Imperial Irrigation District (“IID”), Metropolitan, and others in October 2003, establishes Colorado River water use limits for IID and CVWD, and provides for specific acquisitions of conserved water and water supply arrangements. The QSA and related agreements provide a framework for Metropolitan to enter into other cooperative Colorado River supply programs and set aside several disputes among California’s Colorado River water agencies.

Specific programs under the QSA and related agreements include lining portions of the All-American and Coachella Canals, which were completed in 2009 and conserve over 98,000 acre-feet annually. Metropolitan receives this water and delivers over 77,000 acre-feet of exchange water annually to San Diego County Water Authority (“SDCWA”), and provides 16,000 acre-feet of water annually by exchange to the United States for use by the La Jolla, Pala, Pauma, Rincon and San Pasqual Bands of Mission Indians, the San Luis Rey River Indian Water Authority, the City of Escondido and the Vista Irrigation District. Water became available for exchange with the United States following a May 17, 2017 notice from the Federal Energy Regulatory Commission (“FERC”) satisfying the last requirement of Section 104 of the San Luis Rey Indian Water Rights Settlement Act (Title I of Public Law 100-675, as amended). The QSA and related agreements also authorized the transfer of conserved water annually by IID to SDCWA (up to a maximum expected amount in 2021 of 205,000 acre-feet, then stabilizing to 200,000 acre-feet per year). Metropolitan also receives this water and delivers an equal amount of exchange water annually to SDCWA. See description under “– Metropolitan and San Diego County Water Authority Exchange Agreement” below; see also “METROPOLITAN REVENUES–Principal Customers” in this Appendix A. Also included under the QSA related agreements is a delivery and exchange agreement between Metropolitan and CVWD that provides for Metropolitan, when requested, to deliver annually up to 35,000 acre-feet of Metropolitan’s State Water Project contractual water to CVWD by exchange with Metropolitan’s available Colorado River supplies.

### **Metropolitan and San Diego County Water Authority Exchange Agreement**

No facilities exist to deliver conserved water acquired by SDCWA from IID and water allocated to SDCWA that has been conserved as a result of the lining of the All-American and Coachella Canals. See “– Quantification Settlement Agreement.” Accordingly, in 2003, Metropolitan and SDCWA entered into an exchange agreement (the “Exchange Agreement”), pursuant to which SDCWA makes available to Metropolitan at its intake at Lake Havasu on the Colorado River the conserved Colorado River water SDCWA receives under the QSA related agreements. Metropolitan delivers an equal volume of water from its own sources of supply through its delivery system to SDCWA. The Exchange Agreement limits the amount of water that Metropolitan delivers to 277,700 acre-feet per year, except that an additional 5,000 acre-feet and an additional 2,500 acre-feet will be exchanged in years 2021 and 2022, respectively. In consideration for the conserved water made available to Metropolitan by SDCWA, SDCWA pays the agreement price for the exchange water delivered by Metropolitan. The price payable by SDCWA is calculated using the charges set by Metropolitan’s Board from time to time to be paid by its member agencies for the conveyance of water through Metropolitan’s facilities. See “METROPOLITAN REVENUES–Litigation Challenging Rate Structure” in this Appendix A for a description of Metropolitan’s charges for the conveyance of water through Metropolitan’s facilities and litigation in which SDCWA is challenging such charges. The term of the Exchange Agreement, as it relates to conserved water transferred by IID to SDCWA, extends through 2047, and as it relates to water allocated to SDCWA that has been conserved as a result of the lining of the All-American and Coachella Canals, extends through 2112; subject, in each case, to the right of SDCWA, upon a minimum of five years’ advance written notice to Metropolitan, to permanently reduce the aggregate quantity of conserved water made available to Metropolitan under the Exchange Agreement to the extent SDCWA decides continually and regularly to transport such conserved water to SDCWA through alternative facilities (which do not presently exist). In 2019, approximately 237,711 acre-feet were delivered to Metropolitan by SDCWA for exchange, consisting of 160,000 acre-feet

of IID conservation plus 77,711 acre-feet of conserved water from the Coachella Canal and All-American Canal lining projects.

### **Colorado River Operations: Surplus and Shortage Guidelines**

**General.** The Secretary of the Interior is vested with the responsibility of managing the mainstream waters of the lower Colorado River pursuant to federal law. Each year, the Secretary of the Interior is required to declare the Colorado River water supply availability conditions for the Lower Basin States in terms of “normal,” “surplus” or “shortage” and has adopted operations criteria in the form of guidelines to determine the availability of surplus or potential shortage allocations among the Lower Basin States and reservoir operations for such conditions.

**Interim Surplus Guidelines.** In January 2001, the Secretary of the Interior adopted guidelines (the “Interim Surplus Guidelines”), initially for use through 2016, in determining the availability and quantity of surplus Colorado River water available for use in California, Arizona and Nevada. The Interim Surplus Guidelines were amended in 2007 and now extend through 2026. The purpose of the Interim Surplus Guidelines was to provide mainstream users of Colorado River water, particularly those in California and Nevada who had been utilizing surplus flows, a greater degree of predictability with respect to the availability and quantity of surplus water. Under the Interim Surplus Guidelines, Metropolitan initially expected to divert up to 1.25 million acre-feet of Colorado River water annually under foreseeable runoff and reservoir storage scenarios from 2004 through 2016. However, an extended drought in the Colorado River Basin reduced these initial expectations, and Metropolitan has not received any surplus water since 2002.

**Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead.** In May 2005, the Secretary of the Interior directed the Bureau of Reclamation to develop additional strategies for improving coordinated management of the reservoirs of the Colorado River system. In November 2007, the Bureau of Reclamation issued a Final EIS regarding new federal guidelines concerning the operation of the Colorado River system reservoirs, particularly during drought and low reservoir conditions. These guidelines provide water release criteria from Lake Powell and water storage and water release criteria from Lake Mead during shortage and surplus conditions in the Lower Basin, provide a mechanism for the storage and delivery of conserved system and non-system water in Lake Mead and extend the Interim Surplus Guidelines through 2026 (as noted above). The Secretary of the Interior issued the final guidelines through a Record of Decision signed in December 2007. The Record of Decision and accompanying agreement among the Colorado River Basin States protect reservoir levels by reducing deliveries during low inflow periods, encourage agencies to develop conservation programs and allow the Colorado River Basin States to develop and store new water supplies. The Colorado River Basin Project Act of 1968 insulates California from shortages in all but the most extreme hydrologic conditions. Consistent with these legal protections, under the guidelines, Arizona and Nevada are first subject to the initial annual shortages identified by the Secretary up to 500,000 acre-feet.

The guidelines also created the Intentionally Created Surplus (“ICS”) program, which allows water contractors in the Lower Basin States to store conserved water in Lake Mead. Under this program, ICS water (water that has been conserved through an extraordinary conservation measure, such as land fallowing) is eligible for storage in Lake Mead by Metropolitan. ICS can be created through 2026 and delivered through 2036. See the table entitled “Metropolitan’s Water Storage Capacity and Water in Storage” under “–Storage Capacity and Water in Storage.” Under the guidelines and the Colorado River Drought Contingency Plan Authorization Act, California is able to create and deliver up to 400,000 acre-feet of extraordinary conservation ICS (“EC ICS”) annually and accumulate up to 1.7 million acre-feet of EC ICS in Lake Mead. In December 2007, California contractors for Colorado River water executed the California Agreement for the Creation and Delivery of Extraordinary Conservation Intentionally Created Surplus (the “California ICS Agreement”), which established terms and conditions for the creation, accumulation, and delivery of EC ICS by California contractors receiving Colorado River water. Under the California ICS Agreement, the State’s EC ICS creation, accumulation, and delivery limits provided to California under the 2007 Interim Surplus



Guidelines are apportioned between IID and Metropolitan. No other California contractors were permitted to create or accumulate ICS. Under the terms of the agreement, IID is allowed to store up to 25,000 acre-feet per year of EC ICS in Lake Mead with a cumulative limit of 50,000 acre-feet. Metropolitan is permitted to use the remaining available EC ICS creation, delivery, and accumulation limits provided to California.

The Secretary of the Interior delivers the stored ICS water to Metropolitan in accordance with the terms of December 13, 2007, January 6, 2010, and November 20, 2012 Delivery Agreements between the United States and Metropolitan. As of January 1, 2021, Metropolitan had an estimated 1,308,000 acre-feet in its ICS accounts. These ICS accounts include water conserved by fallowing in the Palo Verde Valley, projects implemented with IID in its service area, groundwater desalination, the Warren H. Brock Reservoir Project, and international agreements that converted water conserved by Mexico to the United States.

Since the 2007 Lower Basin shortage guidelines were issued for the coordinated operations of Lake Powell and Lake Mead, the Colorado River has continued to experience drought conditions. The seven Colorado River Basin States, the U.S. Department of Interior through the Bureau of Reclamation, and water users in the Colorado River basin, including Metropolitan, began developing Drought Contingency Plans (“DCPs”) to reduce the risk of Lake Powell and Lake Mead declining below critical elevations through 2026.

In April 2019, the President signed legislation directing the Secretary of the Interior to sign and implement four DCP agreements related to the Upper and Lower Basin DCPs without delay. The agreements were executed and the Upper and Lower Basin DCPs became effective on May 20, 2019. The Lower Basin Drought Contingency Plan Agreement requires California, Arizona and Nevada to store defined volumes of water in Lake Mead at specified lake levels. California would begin making contributions if Lake Mead’s elevation is projected to be 1,045 feet above sea level or below on January 1. Lake Mead elevation in January 2020 was 1,090 feet. Depending on the lake’s elevation, California’s contributions would range from 200,000 to 350,000 acre-feet a year (“DCP Contributions”). Pursuant to intrastate implementation agreements, Metropolitan will be responsible for 93 percent of California’s DCP Contributions under the Lower Basin DCP. CVWD will be responsible for 7 percent of California’s required DCP Contributions.

Implementation of the Lower Basin DCP enhances Metropolitan’s ability to store water in Lake Mead and ensures that water in storage can be delivered at a later date. The Lower Basin DCP increases the total volume of water that California may store in Lake Mead by 200,000 acre-feet, which Metropolitan will have the right to use. Water stored as ICS will be available for delivery as long as Lake Mead’s elevation remains above 1,025 feet. Previously, that water would likely have become inaccessible below a Lake Mead elevation of 1,075 feet. DCP Contributions may be made through conversion of existing ICS. These types of DCP Contributions become DCP ICS. DCP Contributions may also be made by leaving water in Lake Mead that there was a legal right to have delivered. This type of DCP Contribution becomes system water and may not be recovered. Rules are set for delivery of DCP ICS through 2026 and between 2027-2057.

The Lower Basin DCP will be effective through 2026. Before the DCP and 2007 Lower Basin shortage guidelines terminate in 2026, the U.S. Department of Interior through the Bureau of Reclamation, the seven Colorado River Basin States, and water users in the Colorado River basin, including Metropolitan, will begin work on the development of new shortage guidelines for the management and operation of the Colorado River.

On April 22, 2019, Metropolitan was served notice of a CEQA lawsuit filed by IID against Metropolitan. In this lawsuit, IID is seeking to vacate Metropolitan’s Board actions taken on December 11, 2018 and March 12, 2019 authorizing Metropolitan’s entering into the agreements implementing the Lower Basin DCP under CEQA and to block Metropolitan from implementing the Lower Basin DCP and any related agreements. The trial for this matter occurred on January 4, 2021. On January 5, 2021, the court issued its final order denying IID’s writ petition. In its ruling, the court held that IID’s petition was barred because IID did not exhaust its administrative remedies. The court further found that Metropolitan provided

adequate public notice of the grounds of its CEQA exemption determination and that substantial evidence supported such determination. IID has 60 days to file an appeal after the court enters the judgment. Metropolitan is unable to assess at this time the likelihood of success of this litigation in the event IID appeals the ruling, or of any future claims, or their potential effect on future implementation of the Lower Basin DCP.

***Related Litigation—Navajo Nation Suit.*** The Navajo Nation filed litigation against the Department of the Interior, specifically the Bureau of Reclamation and the Bureau of Indian Affairs, in 2003, alleging that the Bureau of Reclamation has failed to determine the extent and quantity of the water rights of the Navajo Nation in the Colorado River and that the Bureau of Indian Affairs has failed to otherwise protect the interests of the Navajo Nation. The complaint challenges the adequacy of the environmental review for the Interim Surplus Guidelines (described under “–Colorado River Operations: Surplus and Shortage Guidelines – Interim Surplus Guidelines”) and seeks to prohibit the Department of the Interior from allocating any “surplus” water until such time as a determination of the rights of the Navajo Nation is completed. Metropolitan and other California water agencies filed motions to intervene in this action. In October 2004 the court granted the motions to intervene and stayed the litigation to allow negotiations among the Navajo Nation, federal defendants, Central Arizona Water Conservation District (“CAWCD”), State of Arizona and Arizona Department of Water Resources. After years of negotiations, a tentative settlement was proposed in 2012 that would provide the Navajo Nation with specified rights to water from the Little Colorado River and groundwater basins under the reservation, along with federal funding for development of water supply systems on the tribe’s reservation. The proposed agreement was rejected by tribal councils for both the Navajo and the Hopi, who were seeking to intervene. On May 16, 2013, the stay of proceedings was lifted. On June 3, 2013, the Navajo Nation moved for leave to file a first amended complaint, which the court granted on June 27, 2013. The amended complaint added a legal challenge to the Lower Basin Shortage Guidelines adopted by the Secretary of the Interior in 2007 that allow Metropolitan and other Colorado River water users to store water in Lake Mead (described under “– Colorado River Operations: Surplus and Shortage Guidelines – Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead”). Metropolitan has used these new guidelines to store over 1,000,000 acre-feet of water in Lake Mead, a portion of which has been delivered, and the remainder of which may be delivered at Metropolitan’s request in future years. On July 22, 2014, the district court dismissed the lawsuit in its entirety, ruling that the Navajo Nation lacked standing and that the claim was barred against the federal defendants. The district court denied a motion by the Navajo Nation for leave to amend the complaint further after the dismissal. On September 19, 2014, the Navajo Nation appealed the dismissal of its claims related to the Interim Surplus Guidelines, the Lower Basin Shortage Guidelines, and breach of the federal trust obligation to the tribe. On December 4, 2017, the Ninth Circuit Court of Appeals held that the Navajo Nation lacked standing for its National Environmental Policy Act claims, but that the breach of trust claim was not barred against the federal defendants.

The matter was remanded to the district court in January 2018 to consider the Navajo Nation’s breach of trust claim on its merits. The Navajo Nation sought leave to file an amended complaint on its breach of trust claim twice. On August 23, 2019, the district court issued its order denying the motion to amend, entered judgment against the Navajo Nation, and dismissed the action. On October 18, 2019, the Navajo Nation filed its notice of appeal in the Ninth Circuit. The Navajo Nation filed its opening brief on February 26, 2020. Defendants and Intervenors answering briefs were due April 27, 2020. Metropolitan filed a joint answering brief with several other Defendant-Intervenors, including, among others, the State of Arizona, the State of Nevada, CVWD, and IID. The case was fully briefed as of July 1, 2020. Oral argument was held on October 16, 2020 before the Ninth Circuit. No ruling has yet been issued. Metropolitan is unable to assess at this time the likelihood of success of this litigation or any future claims, or their potential effect on Colorado River water supplies.

## **Endangered Species Act and Other Environmental Considerations**

### **Endangered Species Act Considerations - State Water Project**

*General.* DWR has altered the operations of the State Water Project to accommodate species of fish listed as threatened or endangered under the federal Endangered Species Act (“ESA”) and/or California ESA. Currently, three species (the winter-run and spring-run Chinook salmon and the Delta smelt) are listed under both ESAs. The Central Valley steelhead, the North American green sturgeon and the killer whale are listed under the federal ESA, and the Longfin smelt is listed as a threatened species under the California ESA.

The federal ESA requires that before any federal agency authorizes, funds, or carries out an action that may affect a listed species or designated critical habitat, it must consult with the appropriate federal fishery agency (either the National Marine Fisheries Service (“NMFS”) or the U.S. Fish and Wildlife Service (“USFWS”) depending on the species) to determine whether the action would jeopardize the continued existence of any threatened or endangered species, or adversely modify habitat critical to the species’ needs. The result of the consultation is known as a “biological opinion.” In a biological opinion, a federal fishery agency determines whether the action would cause jeopardy to a threatened or endangered species or adverse modification to critical habitat; and if jeopardy or adverse modification is found, recommends reasonable and prudent alternatives that would allow the action to proceed without causing jeopardy or adverse modification. If no jeopardy or adverse modification is found, the fish agency issues a “no jeopardy opinion.” The biological opinion also includes an “incidental take statement.” The incidental take statement allows the action to go forward even though it will result in some level of “take,” including harming or killing some members of the species, incidental to the agency action, provided that the agency action does not jeopardize the continued existence of any threatened or endangered species and complies with reasonable mitigation and minimization measures recommended by the federal fishery agency or as incorporated into the project description.

The California ESA generally requires an incidental take permit or consistency determination for any action that may cause take of a State-listed species of fish or wildlife. To issue an incidental take permit or consistency determination, the California Department of Fish and Wildlife (“CDFW”) must determine that the impacts of the authorized take will be minimized and fully mitigated and will not cause jeopardy.

On August 2, 2016, DWR and the Bureau of Reclamation requested that USFWS and NMFS reinstate federal ESA consultation on the coordinated operations of the State Water Project and the federal Central Valley Project to update them with the latest best available science and lessons learned operating under the prior 2008 and 2009 biological opinions. In January 2019, the Bureau of Reclamation submitted the initial biological assessment to USFWS and NMFS. The biological assessment contains a description of the Bureau of Reclamation’s and DWR’s proposed long-term coordinated operations plan (the “2019 Long-Term Operations Plan”). On October 22, 2019, USFWS and NMFS issued new federal biological opinions (the “2019 biological opinions”) that provide incidental take coverage for the 2019 Long-Term Operations Plan. On February 18, 2020, the Bureau of Reclamation signed a Record of Decision, pursuant to the National Environmental Policy Act, completing its environmental review and adopting the 2019 Long-Term Operations Plan.

The 2019 Long-Term Operations Plan incorporates and updates many of the requirements contained in the previous 2008 and 2009 biological opinions. It also includes over \$1 billion over a ten-year period in conservation, monitoring and new science, some of which is in the form of commitments carried forward from the previous biological opinions. Those costs are shared by the State Water Project and the federal Central Valley Project. The prior 2008 and 2009 biological opinions resulted in an estimated reduction in State Water Project deliveries of 0.3 million acre-feet during critically dry years to 1.3 million acre-feet in above normal water years as compared to the previous baseline. The 2019 Long-Term Operations Plan and 2019 biological opinions are expected to increase State Water Project deliveries by an annual average of 200,000 acre-feet as compared to the previous biological opinions.

On December 2, 2019, a group of non-governmental organizations, including commercial fishing groups and the Natural Resources Defense Council (the “NGOs”), sued USFWS and NMFS, alleging the 2019 biological opinions were arbitrary and capricious, later amending the lawsuit to include claims under the federal ESA and the National Environmental Policy Act related to decisions made by the Bureau of Reclamation. On February 20, 2020, the California Natural Resources Agency (“Natural Resources”), the California Environmental Protection Agency, and the Attorney General (collectively, the “State Petitioners”) sued the federal agencies, making similar allegations. The State Water Contractors intervened in both cases to defend the 2019 biological opinions. The NGOs filed for a temporary restraining order on April 2, 2020, which the Court overruled. The NGOs and the State Petitioners filed a preliminary injunction seeking a court order imposing interim operations consistent with the prior 2008 and 2009 biological opinions pending rulings on the merits of plaintiffs’ challenges to the two 2019 biological opinions. On May 11, 2020, the court granted, in part, the motions for preliminary injunction, thereby requiring the Central Valley Project to operate to one of the reasonable and prudent alternatives (referred to as the “inflow-to-export ratio”) in the 2009 biological opinion through May 31, 2020. DWR is not a party in this litigation, and other legal requirements governed the operation of the State Water Project during the relevant time period in May, and therefore the State Water Project was not impacted by this order. USFWS and NMFS have produced their respective administrative records. Once the administrative records are finalized, the parties anticipate stipulating to a briefing schedule to resolve the merits of the cases. Metropolitan is unable to predict the outcome of any litigation relating to the federal 2019 biological opinions or any potential effect on Metropolitan’s State Water Project water supplies.

On January 20, 2021, President Joseph R. Biden Jr. issued an Executive Order on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis directing all executive departments and agencies to immediately review, and, as appropriate and consistent with applicable law, take action to address the promulgation of Federal regulations and other actions during the last four years for consistency with the new administration’s policies. Among numerous actions identified for review, the United States Department of Commerce and United States Department of Interior heads were directed to review the 2019 biological opinions. At this point it is unclear if the review will result in any changes to the 2019 biological opinions.

As described above, operations of the State Water Project require both federal ESA and California ESA authorizations. DWR described and analyzed its proposed State Water Project long-term operations plan for purposes of obtaining a new California ESA permit in its November 2019 Draft EIR under CEQA. Its 2019 Draft EIR proposed essentially the same operations plan as for the federal 2019 biological opinions, with the addition of operations for the State-only listed species, Longfin smelt. In December 2019, DWR submitted its application for an incidental take permit under the California ESA to CDFW, with a modified State operations plan that added new outflow and environmental commitments. On March 27, 2020, DWR released its final EIR and Notice of Determination, describing and adopting a State operations plan with additional operational restrictions and additional conservation commitments. On March 31, 2020, CDFW issued an incidental take permit for the State Water Project that included further operational restrictions and outflow. As issued, the incidental take permit reduces State Water Project deliveries by more than 200,000 acre-feet on average annually, and adds another \$218 million over a ten-year period in environmental commitments for the State Water Project.

On April 28, 2020, Metropolitan and Mojave Water Agency (“Mojave”) jointly sued CDFW and DWR, and Natural Resources, alleging that the new California ESA permit and Final EIR violate CEQA and the California ESA. Metropolitan and Mojave also allege that DWR breached the State Water Contract and the implied covenant of good faith and fair dealing by, among other things, accepting an incidental take permit containing mitigation requirements in excess of that required by law. Subsequently, CVWD, San Geronio Pass Water Agency (both State Water Contractors), and Municipal Water District of Orange County (a Metropolitan member agency) joined with Metropolitan and Mojave in a first amended complaint. The State Water Contractors and the Kern County Water Agency also filed CEQA and CESA actions, in

which the Antelope Valley-East Kern Water Agency, Central Coast Water Authority, Dudley Ridge Water District, County of Kings, Oak Flat Water District, Palmdale Water District, Santa Clarita Valley Water Agency, San Gabriel Valley Municipal Water District, and Tulare Lake Basin Water Storage District subsequently joined in a first amended complaint in which the individual water contractors allege causes of action for breach of contract and the implied covenant of good faith and fair dealing. In addition, another State Water Contractor, the San Bernardino Valley Municipal Water District, filed a complaint alleging violations of CEQA and CESA, as well as breach of contract and the implied covenant of good faith and fair dealing, unconstitutional takings, and anticipatory repudiation of contract. Several federal CVP water contractors also filed a CEQA challenge. Four other lawsuits have been filed by certain commercial fishing groups and a tribe, several environmental groups, and two in-Delta water agencies challenging the Final EIR as inadequate under CEQA and alleging violations of the Delta Reform Act, public trust doctrine and, in one of the cases, certain water right statutes. All eight cases have been coordinated in Sacramento County Superior Court, and a stay on discovery was issued until a coordination trial judge is assigned and addresses the stay. The presiding judge in Sacramento has not yet assigned a coordination trial judge. Metropolitan is unable to assess at this time the likelihood of success of any litigation relating to the California ESA permit, including any future litigation or any future claims that may be filed, or any potential effect on Metropolitan's State Water Project water supplies.

#### **Endangered Species Act Considerations - Colorado River**

Federal and state environmental laws protecting fish species and other wildlife species have the potential to affect Colorado River operations. A number of species that are on either "endangered" or "threatened" lists under the ESAs are present in the area of the Lower Colorado River, including among others, the bonytail chub, razorback sucker, southwestern willow flycatcher and Yuma clapper rail. To address this issue, a broad-based state/federal/tribal/private regional partnership that includes water, hydroelectric power and wildlife management agencies in Arizona, California and Nevada have developed a multi-species conservation program for the main stem of the Lower Colorado River (the Lower Colorado River Multi-Species Conservation Program or "MSCP"). The MSCP allows Metropolitan to obtain federal and state permits for any incidental take of protected species resulting from current and future water and power operations of its Colorado River facilities and to minimize any uncertainty from additional listings of endangered species. The MSCP also covers operations of federal dams and power plants on the river that deliver water and hydroelectric power for use by Metropolitan and other agencies. The MSCP covers 27 species and habitat in the Lower Colorado River from Lake Mead to the Mexican border for a term of 50 years (commencing in 2005). Over the 50-year term of the program, the total cost to Metropolitan will be about \$88.5 million (in 2003 dollars), and annual costs will range between \$0.8 million and \$4.7 million (in 2003 dollars).

#### **Invasive Species - Mussel Control Programs**

Zebra and quagga mussels are established in many regions of the United States. Mussels can reproduce quickly and, if left unmanaged, can reduce flows by clogging intakes and raw water conveyance systems, alter or destroy fish habitats, and affect lakes and beaches. Mussel management activities may require changes in water delivery protocols to reduce risks of spreading mussel populations and increase operation and maintenance costs.

In January 2007, quagga mussels were discovered in Lake Mead. All pipelines and facilities that transport raw Colorado River water are considered to be infested with quagga mussels. Metropolitan has a quagga mussel control plan, approved by the CDFW to address the presence of mussels in the CRA system and limit further spread of mussels. Year-round routine monitoring for mussel larvae has been conducted at Lake Havasu, selected locations in the CRA system, and non-infested areas of Metropolitan's system and some southern locations in the State Water Project. Shutdown inspections have demonstrated that control activities effectively limit mussel infestation in the CRA and prevent the further spread of mussels to other

bodies of water and water systems. Metropolitan's costs for controlling quagga mussels in the CRA system over the past 12 years has been approximately \$5 million per year.

Established mussel populations are located within ten miles of the State Water Project. A limited number of mussels have also been detected in State Water Project supplies but there is currently no evidence of established mussel populations, nor have they impacted Metropolitan's State Water Project deliveries. To prevent the introduction and further spread of mussels into the State Water Project, the Bay-Delta, and other uninfested bodies of water and water systems, DWR has also developed quagga mussel control plans and has partnered with other State and federal agencies on a number of related activities. Metropolitan coordinates mussel monitoring and control activities with these agencies.

## **Water Transfer, Storage and Exchange Programs**

### **General**

To supplement its State Water Project and Colorado River water supplies, Metropolitan has developed and actively manages a portfolio of water supply programs, including water transfer, storage and exchange agreements, the supplies created by which are conveyed through the California Aqueduct of the State Water Project, utilizing Metropolitan's rights under its State Water Contract to use the portion of the State Water Project conveyance system necessary to deliver water to it, or through available CRA capacity. Consistent with its IRP, Metropolitan will continue to pursue voluntary water transfer and exchange programs with State, federal, public and private water districts and individuals to help mitigate supply/demand imbalances and provide additional dry-year supply sources. A summary description of certain of Metropolitan's supply programs are set forth below. In addition to the arrangements described below, Metropolitan is entitled to storage and access to stored water in connection with various other storage programs and facilities. See "--Colorado River Aqueduct" above, as well as the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "--Storage Capacity and Water in Storage" below.

### **State Water Project Agreements and Programs**

In addition to the basic State Water Project contract provisions, Metropolitan has other contract rights that accrue to the overall value of the State Water Project. Because each Contractor is paying for physical facilities, they also have the right to use the facilities to move water supplies associated with agreements, water transfers and water exchanges. Metropolitan has entered into agreements and exchanges that provide additional water supplies.

Existing and potential water transfers and exchanges are an important element for improving the water supply reliability within Metropolitan's service area and accomplishing the reliability goal set by Metropolitan's Board. California's agricultural activities consume approximately 34 million acre-feet of water annually, which is approximately 80 percent of the total water used in the State for agricultural and urban uses and 40 percent of the water used for all consumptive uses, including environmental demands. Voluntary water transfers and exchanges with agricultural users can make a portion of this agricultural water supply available to support the State's urban areas. The portfolio of supplemental supplies that Metropolitan has developed to be conveyed through the California Aqueduct extend from north of the Bay-Delta to Southern California. Certain of these arrangements are also described below.

***Castaic Lake and Lake Perris.*** Metropolitan has contractual rights to withdraw up to 65,000 acre-feet of water in Lake Perris (East Branch terminal reservoir) and 153,940 acre-feet of water in Castaic Lake (West Branch terminal reservoir). This storage provides Metropolitan with additional options for managing State Water Project deliveries to maximize yield from the project. Any water used must be returned to the State Water Project within five years or it is deducted from allocated amounts in the sixth year.



**Metropolitan Article 56 Carryover.** Metropolitan has the right to store its allocated contract amount for delivery in subsequent years. Metropolitan can store between 100,000 and 200,000 acre-feet, depending on the final water supply allocation percentage.

**Yuba River Accord.** Metropolitan entered into an agreement with DWR in December 2007 to purchase a portion of the water released by the Yuba County Water Agency ("YCWA"). YCWA was involved in a SWRCB proceeding in which it was required to increase Yuba River fishery flows. Within the framework of agreements known as the Yuba River Accord, DWR entered into an agreement for the long-term purchase of water from YCWA. The agreement permits YCWA to transfer additional supplies at its discretion. Metropolitan, other State Water Contractors, and the San Luis & Delta-Mendota Water Authority entered into separate agreements with DWR for the purchase of portions of the water made available. Metropolitan's agreement allows Metropolitan to purchase, in dry years through 2025, available water supplies which have ranged from approximately 6,555 acre-feet to 67,068 acre-feet per year.

In addition to water made available under the Yuba River Accord, Metropolitan has developed groundwater storage agreements that allow Metropolitan to store available supplies in the Central Valley for return later. See "METROPOLITAN'S WATER DELIVERY SYSTEM--Water Quality and Treatment" in this Appendix A for information regarding recent water quality regulations and developments that impact or may impact certain of Metropolitan's groundwater storage programs.

Metropolitan has also developed other groundwater storage and exchange programs, certain of which are described below.

**Arvin-Edison/Metropolitan Water Management Program.** In December 1997, Metropolitan entered into an agreement with the Arvin-Edison Water Storage District ("Arvin-Edison"), an irrigation agency located southeast of Bakersfield, California. Under the program, Arvin-Edison stores water on behalf of Metropolitan. In January 2008, Metropolitan and Arvin-Edison amended the agreement to enhance the program's capabilities and to increase the delivery of water to the California Aqueduct. To facilitate the program, new wells, spreading basins and a return conveyance facility connecting Arvin-Edison's existing facilities to the California Aqueduct have been constructed. The agreement also provides Metropolitan priority use of Arvin-Edison's facilities to convey high-quality water available on the east side of the San Joaquin Valley to the California Aqueduct. Up to 350,000 acre-feet of Metropolitan's water may be stored and Arvin-Edison is obligated to return up to 75,000 acre-feet of stored water in any year to Metropolitan, upon request. The agreement will terminate in 2035 unless extended. Metropolitan's estimated storage account balance under the Arvin-Edison/Metropolitan Water Management Program as of January 1, 2021 is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "--Storage Capacity and Water in Storage" below. As a result of detecting 1,2,3-trichloropropane ("TCP") in Arvin-Edison wells, Metropolitan has temporarily suspended operation of the program until the water quality concerns can be further evaluated and managed.

**Semitropic/Metropolitan Groundwater Storage and Exchange Program.** In 1994, Metropolitan entered into an agreement with the Semitropic Water Storage District ("Semitropic"), located adjacent to the California Aqueduct north of Bakersfield, to store water in the groundwater basin underlying land within Semitropic. The minimum annual yield available to Metropolitan from the program is 39,700 acre-feet of water and the maximum annual yield is 231,200 acre-feet of water depending on the available unused capacity and the State Water Project allocation. Metropolitan's estimated storage account balance under the Semitropic program as of January 1, 2021 is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "--Storage Capacity and Water in Storage" below.

**Kern Delta Storage Program.** Metropolitan entered into an agreement with Kern Delta Water District ("Kern Delta") in May 2003, for a groundwater banking and exchange transfer program to allow Metropolitan to store up to 250,000 acre-feet of State Water Contract water in wet years and to permit

Metropolitan, at Metropolitan's option, a return of up to 50,000 acre-feet of water annually during hydrologic and regulatory droughts. Metropolitan's estimated storage account balance under this program as of January 1, 2021 is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "–Storage Capacity and Water in Storage" below.

***Mojave Storage Program.*** Metropolitan entered into a groundwater banking and exchange transfer agreement with Mojave Water Agency ("Mojave") in October 2003. The agreement allows for Metropolitan to store water in an exchange account for later return. The agreement allows Metropolitan to annually withdraw Mojave State Water Project contractual amounts, after accounting for local needs. Under a 100 percent allocation, the State Water Contract provides Mojave 82,800 acre-feet of water. This agreement was amended in 2011 to allow for the cumulative storage of up to 390,000 acre-feet. Metropolitan's estimated storage account balance under this program as of January 1, 2021 is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "–Storage Capacity and Water in Storage" below.

***Antelope Valley-East Kern Storage and Exchange Program.*** In 2016, Metropolitan entered into an agreement with the Antelope Valley-East Kern Water Agency ("AVEK"), the third largest State Water Contractor, to both exchange supplies and store water in the Antelope Valley groundwater basin. Under the exchange, AVEK would provide at least 30,000 acre-feet over ten years of its unused Table A State Water Project water to Metropolitan. For every two acre-feet provided to Metropolitan as part of the exchange, AVEK would receive back one acre-foot in the future. For the one acre-foot that is retained by Metropolitan, Metropolitan would pay AVEK under a set price schedule based on the State Water Project allocation at the time. Under this agreement, AVEK also provides Metropolitan up to 30,000 acre-feet of storage. Metropolitan's estimated storage account balance under this program as of January 1, 2021 is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "–Storage Capacity and Water in Storage" below.

***Antelope Valley-East Kern High Desert Water Bank Program.*** In April 2019, Metropolitan's Board authorized the General Manager to enter into an agreement with AVEK for a groundwater banking program referred to as the High Desert Water Bank Program. The estimated costs of construction of the facilities to implement the program is \$131 million. Following completion of construction, which is expected to take approximately five years, Metropolitan would have the right to store up to 70,000 acre-feet per year of its unused Table A State Water Project water or other supplies in the Antelope Valley groundwater basin for later return. The maximum storage capacity for Metropolitan supplies would be 280,000 acre-feet. At Metropolitan's direction, up to 70,000 acre-feet of stored water annually would be available for return by direct pump back into the East Branch of the California Aqueduct. Upon completion, this program would provide additional flexibility to store and recover water for emergency or water supply needs through 2057.

***San Gabriel Valley Municipal Water District and Other Exchange Programs.*** In 2013, Metropolitan entered into an agreement with the San Gabriel Valley Municipal Water District ("SGVMWD"). Under this agreement, Metropolitan delivers treated water to a SGVMWD subagency in exchange for twice as much untreated water in the groundwater basin. Metropolitan's member agencies can then use the groundwater supplies to meet their needs. Metropolitan can exchange and purchase at least 5,000 acre-feet per year. This program has the potential to increase Metropolitan's reliability by providing 115,000 acre-feet through 2035.

Metropolitan has been negotiating, and will continue to pursue, water purchase, storage and exchange programs with other agencies in the Sacramento and San Joaquin Valleys. These programs involve the storage of both State Water Project supplies and water purchased from other sources to enhance Metropolitan's dry-year supplies and the exchange of normal year supplies to enhance Metropolitan's water reliability and water quality, in view of dry conditions and potential impacts from the ESA considerations

discussed above under the heading “–Endangered Species Act and Other Environmental Considerations – Endangered Species Act Considerations - State Water Project.”

The Sites Reservoir is a proposed reservoir project of approximately 1.3 to 1.5 million acre-feet, being analyzed by the Sites Reservoir Authority, to be located in Colusa County. The water stored in the proposed project would be diverted from the Sacramento River. As currently proposed, the Sites Reservoir project would have dedicated water storage and yield that would be used for fishery enhancement, water quality, and other environmental purposes. The proposed project could also provide additional water supply that could be used for dry-year benefits. Metropolitan is a member of the Sites Reservoir Committee, a group of 30 agencies that are participating in certain planning activities in connection with the proposed development of the project, including the development of environmental planning documents, a federal feasibility report and project permitting. In October 2020, Metropolitan’s Board approved \$5.0 million in funding for Metropolitan’s continued participation in such planning activities through then end of 2021. Metropolitan’s agreement to participate in funding of this phase of project development activities does not commit Metropolitan to participate in any actual reservoir project that may be undertaken in the future.

### **Colorado River Aqueduct Agreements and Programs**

Metropolitan has taken steps to augment its share of Colorado River water through agreements with other agencies that have rights to use such water, including through cooperative programs with other water agencies to conserve and develop supplies and through programs to exchange water with other agencies. These supplies are conveyed through the CRA. Metropolitan determines the delivery schedule of these supplies throughout the year based on changes in the availability of State Water Project and Colorado River water. Under certain of these programs, water may be delivered to Metropolitan’s service area in the year made available or in a subsequent year as ICS water from Lake Mead storage. See “–Colorado River Aqueduct –Colorado River Operations: Surplus and Shortage Guidelines – Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead.”

***IID/Metropolitan Conservation Agreement.*** Under a 1988 water conservation agreement, as amended in 2003 and 2007 (the “1988 Conservation Agreement”) between Metropolitan and IID, Metropolitan provided funding for IID to construct and operate a number of conservation projects that have conserved up to 109,460 acre-feet of water per year that has been provided to Metropolitan. As amended, the agreement’s initial term has been extended to at least 2041 or 270 days after the termination of the QSA. In 2019, 105,000 acre-feet of conserved water was made available by IID to Metropolitan. Under the QSA and related agreements, Metropolitan, at the request of CVWD, forgoes up to 20,000 acre-feet of this water each year for diversion by CVWD from the Coachella Canal. In each of 2018 and 2019, CVWD’s requests were for 0 acre-feet, leaving 105,000 acre-feet in 2018 and 2019 for Metropolitan. In December 2019, Metropolitan signed a revised agreement with CVWD in which CVWD will limit its annual request of water from this program to 15,000 acre-feet through 2026. See “–Colorado River Aqueduct –Quantification Settlement Agreement.”

***Palo Verde Land Management, Crop Rotation and Water Supply Program.*** In August 2004, Metropolitan and PVID signed the program agreement for a Land Management, Crop Rotation and Water Supply Program. Under this program, participating landowners in the PVID service area are compensated for reducing water use by not irrigating a portion of their land. This program provides up to 133,000 acre-feet of water to be available to Metropolitan in certain years. The term of the program is 35 years. Following began on January 1, 2005. The following table shows annual volumes of water saved and made available to Metropolitan during the last 10 calendar years under the Land Management, Crop Rotation and Water Supply Program with PVID:

**WATER AVAILABLE FROM PVID LAND MANAGEMENT,  
CROP ROTATION AND WATER SUPPLY PROGRAM**

Calendar Year	Volume (acre-feet)
2010 <sup>(1)</sup>	148,600
2011	122,200
2012	73,700
2013	32,800
2014	43,000
2015	94,500
2016	125,400
2017	111,800
2018	95,800
2019	44,500

*Source: Metropolitan.*

<sup>(1)</sup> Includes water from a supplemental fallowing program entered into with PVID in March 2009 that provided for fallowing of additional acreage in 2009 and 2010 and resulted in an additional 32,300 acre-feet of water in 2010 made available under the program.

***Bard Water District Seasonal Fallowing Program.*** In January 2020, Metropolitan and Bard Water District signed a seven-year agreement for a seasonal fallowing program. Under this program, each year farmers in Bard Water District have the opportunity to be compensated for reducing water use by not irrigating a portion of their land between April 1 and August 1 each year. During this period, farmers typically plant low-value, high water use crops, and this program incentivizes them to fallow the land instead. This program provides up to 6,000 acre-feet of water per year to be available to Metropolitan. The term of the program is through 2026, and during that time the water can either be delivered to Metropolitan or stored in Lake Mead as described below.

***Lake Mead Storage Program.*** As described under “Colorado River Aqueduct – Colorado River Operations: Surplus and Shortage Guidelines – Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead,” Metropolitan has entered into agreements to set forth the guidelines under which ICS water is developed and stored in and delivered from Lake Mead. The amount of water stored in Lake Mead must be created through extraordinary conservation, system efficiency, tributary, imported, or binational conservation methods. Metropolitan has participated in projects to create ICS as described below:

**Drop 2 (Warren H. Brock) Reservoir.** In May 2008, Metropolitan provided \$28.7 million to join the CAWCD and the Southern Nevada Water Authority (“SNWA”) in funding the Bureau of Reclamation’s construction of an 8,000 acre-foot off-stream regulating reservoir near Drop 2 of the All-American Canal in Imperial County (officially named the Warren H. Brock Reservoir). Construction was completed in October 2010 and the Bureau of Reclamation refunded approximately \$3.71 million in unused contingency funds to Metropolitan. The Warren H. Brock Reservoir conserves about 70,000 acre-feet of water per year by capturing and storing water that would otherwise be lost from the system. In return for its funding, Metropolitan received 100,000 acre-feet of water that was stored in Lake Mead for its future use and has the ability to receive up to 25,000 acre-feet of water in any single year. Besides the additional water supply, the addition of the Warren H. Brock reservoir adds to the flexibility of Colorado River operations by storing underutilized Colorado River water orders caused by unexpected canal outages, changes in weather conditions, and high tributary runoff into the Colorado River. As of January 1, 2021, Metropolitan had taken delivery of 35,000 acre-feet of this water and had 65,000 acre-feet remaining in storage.

International Water Treaty Minutes 319 and 323. In November 2012, as part of the implementation of Minute 319, Metropolitan executed agreements in support of a program to augment Metropolitan's Colorado River supply between 2013 through 2017 through an international pilot project in Mexico. Metropolitan's total share of costs was \$5 million for 47,500 acre-feet of project supplies. In December 2013, Metropolitan and IID executed an agreement under which IID has paid half of Metropolitan's program costs, or \$2.5 million, in return for half of the project supplies, or 23,750 acre-feet. As such, 23,750 acre-feet of Intentionally Created Mexican Allocation was converted to Binational ICS and credited to Metropolitan's binational ICS water account in 2017. See "–Colorado River Aqueduct –Colorado River Operations: Surplus and Shortage Guidelines – Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead." In September 2017, as part of the implementation of Minute 323, Metropolitan agreed to fund additional water conservation projects in Mexico that will yield approximately 24,000 acre-feet of additional supply for Metropolitan by 2026 at a cost of approximately \$3.3 million.

***Storage and Interstate Release Agreement with Nevada.*** In May 2002, SNWA and Metropolitan entered into an Agreement Relating to Implementation of Interim Colorado River Surplus Guidelines, in which SNWA and Metropolitan agreed to the allocation of unused apportionment as provided in the Interim Surplus Guidelines and on the priority of SNWA for interstate banking of water in Arizona. SNWA and Metropolitan entered into a storage and interstate release agreement on October 21, 2004. Under this agreement, SNWA can request that Metropolitan store unused Nevada apportionment in California. The amount of water stored through 2014 under this agreement was approximately 205,000 acre-feet. In October 2015, SNWA and Metropolitan executed an additional amendment to the agreement under which Metropolitan paid SNWA approximately \$44.4 million and SNWA stored an additional 150,000 acre-feet with Metropolitan during 2015. Of that amount, 125,000 acre-feet has been added to SNWA's storage account with Metropolitan, increasing the total amount of water stored to approximately 330,000 acre-feet. In subsequent years, SNWA may request recovery of the stored water. When SNWA requests the return of any of the stored 125,000 acre-feet, SNWA will reimburse Metropolitan for an equivalent proportion of the \$44.4 million plus inflation based on the amount of water returned. It is expected that SNWA will not request return of any of the water stored with Metropolitan before 2022.

***California ICS Agreement Intrastate Storage Provisions.*** As described under "–Colorado River Aqueduct –Colorado River Operations: Surplus and Shortage Guidelines – Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead," in 2007, IID, Metropolitan and other Colorado River contractors in California executed the California ICS Agreement, which divided California's ICS storage space in Lake Mead between Metropolitan and IID. It also allowed IID to store up to 50,000 acre-feet of conserved water in Metropolitan's system. In 2015, the California ICS Agreement was amended to allow IID to store additional amounts of water in Metropolitan's system during 2015-2017. Under the 2015 amendment, IID was permitted to store up to 100,000 acre-feet per year of conserved water within Metropolitan's system with a cumulative limit of 200,000 acre-feet, for the three-year term. When requested by IID, Metropolitan has agreed to return to IID the lesser of either 50,000 acre-feet per year, or in a year in which Metropolitan's member agencies are under a shortage allocation, 50 percent of the cumulative amount of water IID has stored with Metropolitan under the 2015 amendment. IID currently has 162,000 acre-feet of water stored with Metropolitan pursuant to the terms of the California ICS Agreement.

In 2018, IID had reached the limit on the amount of water it was able to store in Metropolitan's system under the California ICS Agreement, and entered into discussions with Metropolitan to further amend the Agreement, but no such agreement was reached. On December 4, 2020, IID filed a complaint against Metropolitan alleging that Metropolitan breached the California ICS Agreement, breached the implied covenant of good faith and fair dealing, and that Metropolitan converted IID's intentionally created surplus for its own use. IID's complaint seeks the imposition of a constructive trust over 87,594 acre-feet of water in Lake Mead or Metropolitan's system and a judgment against Metropolitan for \$20,896,640. Metropolitan is unable to assess at this time the likelihood of success of this litigation or any future claims.

## **State Water Project and Colorado River Aqueduct Arrangements**

### ***Metropolitan/CVWD/Desert Water Agency Exchange and Advance Delivery Agreement.***

Metropolitan has agreements with CVWD and the Desert Water Agency (“DWA”) in which Metropolitan exchanges its Colorado River water for those agencies’ State Water Project contractual water and other State Water Project water acquisitions on an annual basis. Because CVWD and DWA do not have a physical connection to the State Water Project, Metropolitan takes delivery of CVWD’s and DWA’s State Water Project supplies and delivers a like amount of Colorado River water to the agencies. In accordance with an advance delivery agreement executed by Metropolitan, CVWD and DWA, Metropolitan may deliver Colorado River water in advance of receiving State Water Project supplies to these agencies for storage in the Upper Coachella Valley groundwater basin. In years when it is necessary to augment available supplies to meet local demands, Metropolitan may meet the exchange delivery obligation through drawdowns of the advance delivery account, rather than deliver Colorado River water in that year. Metropolitan’s estimated storage account under the CVWD/DWA program as of January 1, 2021 is shown in the table entitled “Metropolitan’s Water Storage Capacity and Water in Storage” under “–Storage Capacity and Water in Storage” below. In addition to the storage benefits of the program, Metropolitan receives water quality benefits with increased deliveries of lower salinity water from the State Water Project in lieu of delivering higher saline Colorado River water. In December 2019, the exchange agreements were amended to provide more flexibility and operational certainty for the parties involved. Additionally, under the amended agreements, CVWD and DWA pay a portion of Metropolitan’s water storage management costs in wet years, up to a combined total of \$4 million per year.

### **Storage Capacity and Water in Storage**

Metropolitan’s storage capacity, which includes reservoirs, conjunctive use and other groundwater storage programs within Metropolitan’s service area and groundwater and surface storage accounts delivered through the State Water Project or CRA, is approximately 6.0 million acre-feet. In 2020, approximately 750,000 acre-feet of total stored water in Metropolitan’s reservoirs and other storage resources was emergency storage that was reserved for use in the event of supply interruptions from earthquakes or similar emergencies (see “METROPOLITAN’S WATER DELIVERY SYSTEM–Seismic Considerations and Emergency Response Measures” in this Appendix A), as well as extended drought. Metropolitan’s emergency storage requirement is established periodically to provide a six-month water supply at 75 percent of member agencies’ retail demand under normal hydrologic conditions. Metropolitan’s ability to replenish water storage, both in the local groundwater basins and in surface storage and banking programs, has been limited by Bay-Delta pumping restrictions under the biological opinions issued for listed species. See “–Endangered Species Act and Other Environmental Considerations –Endangered Species Act Considerations – State Water Project – Delta Smelt and Salmon Federal ESAs Biological Opinions and California ESA Consistency Determinations and Incidental Take Permit.” Metropolitan replenishes its storage accounts when available imported supplies exceed demands. Effective storage management is dependent on having sufficient years of excess supplies to store water so that it can be used during times of shortage. See “CONSERVATION AND WATER SHORTAGE MEASURES–Water Supply Allocation Plan” in this Appendix A. Metropolitan’s storage as of January 1, 2021 is estimated to be 3.95 million acre-feet. As a result of a collaborative process with its member agencies, Metropolitan completed an evaluation of its Emergency Storage Objective in 2019 that resulted in the increase the emergency storage from 626,000 acre-feet to 750,000 acre-feet by January 1, 2020. As a result, the portion of the emergency storage in Metropolitan’s reservoirs was increased from 298,000 acre-feet to 369,000 acre-feet. The following table shows three years of Metropolitan’s water in storage as of January 1, including emergency storage.



**METROPOLITAN'S WATER STORAGE CAPACITY AND WATER IN STORAGE<sup>(1)</sup>**  
(in Acre-Feet)

Water Storage Resource	Storage Capacity	Water in Storage January 1, 2021 <sup>(2)</sup>	Water in Storage January 1, 2020	Water in Storage January 1, 2019
<b><u>Colorado River Aqueduct</u></b>				
DWA / CVWD Advance Delivery Account	800,000	330,000	296,000	235,000
Lake Mead ICS	<u>1,739,000</u>	<u>1,308,000</u>	<u>980,000</u>	<u>625,000</u>
<b>Subtotal</b>	<b>2,539,000</b>	<b>1,638,000</b>	<b>1,276,000</b>	<b>860,000</b>
<b><u>State Water Project</u></b>				
Arvin-Edison Storage Program <sup>(3)</sup>	350,000	143,000	143,000	154,000
Semitropic Storage Program	350,000	260,000	265,000	187,000
Kern Delta Storage Program	250,000	177,000	189,000	138,000
Mojave Storage Program	330,000 <sup>(6)</sup>	19,000 <sup>(6)</sup>	19,000 <sup>(6)</sup>	19,000 <sup>(6)</sup>
AVEK Storage Program	30,000	27,000	27,000	9,000
Castaic Lake and Lake Perris <sup>(4)</sup>	219,000	219,000	219,000	219,000
State Water Project Carryover <sup>(5)</sup>	350,000 <sup>(7)</sup>	221,000	331,000	93,000
Emergency Storage	<u>381,000</u>	<u>381,000</u>	<u>381,000</u>	<u>328,000</u>
<b>Subtotal</b>	<b>2,260,000</b>	<b>1,447,000</b>	<b>1,574,000</b>	<b>1,147,000</b>
<b><u>Within Metropolitan's Service Area</u></b>				
Diamond Valley Lake	810,000	703,000	796,000	702,000
Lake Mathews	182,000	82,000	152,000	141,000
Lake Skinner	<u>44,000</u>	<u>37,000</u>	<u>38,000</u>	<u>37,000</u>
<b>Subtotal<sup>(8)</sup></b>	<b>1,036,000</b>	<b>822,000</b>	<b>986,000</b>	<b>880,000</b>
<b><u>Member Agency Storage Programs</u></b>				
Conjunctive Use <sup>(9)</sup>	<u>210,000</u>	<u>40,000</u>	<u>59,000</u>	<u>47,000</u>
<b>Total</b>	<b><u>6,045,000</u></b>	<b><u>3,947,000</u></b>	<b><u>3,895,000</u></b>	<b><u>2,934,000</u></b>

Source: Metropolitan

- (1) Water storage capacity and water in storage are measured based on engineering estimates and are subject to change.
- (2) Preliminary estimated January 1, 2021 storage; subject to change.
- (3) Metropolitan has temporarily suspended operation of the Arvin-Edison storage program. See "METROPOLITAN'S WATER SUPPLY-Water Transfer, Storage and Exchange Programs - Arvin-Edison/Metropolitan Water Management Program" and "METROPOLITAN'S WATER DELIVERY SYSTEM-Water Quality and Treatment" in this Appendix A.
- (4) Flexible storage allocated to Metropolitan under its State Water Contract. Withdrawals must be returned within five years.
- (5) Includes Article 56 Carryover of Metropolitan, Coachella Valley Water District, and Desert Water Agency, prior-year carryover, non-project carryover, and carryover of curtailed deliveries pursuant to Article 14(b) and Article 12(e) of Metropolitan's State Water Contract.
- (6) The Mojave Storage agreement was amended in 2011 to allow for cumulative storage of up to 390,000 acre-feet. Since January 1, 2011, Metropolitan has stored 60,000 acre-feet, resulting in a remaining balance of storage capacity of 330,000 acre-feet. 41,000 acre-feet of the 60,000 acre-feet stored has been returned, leaving a remaining balance in storage of 19,000 acre-feet.
- (7) A capacity of 350,000 acre-feet is estimated to be the practical operational limit for carryover storage considering Metropolitan's capacity to take delivery of carryover supplies before San Luis Reservoir fills.
- (8) Includes 298,000 acre-feet of emergency storage in Metropolitan's reservoirs in 2019, and 369,000 acre-feet of emergency storage in Metropolitan's reservoirs in 2020 and 2021.
- (9) Cyclic Storage water removed from this line item and is now categorized a pre-delivery.

## CONSERVATION AND WATER SHORTAGE MEASURES

### General

The central objective of Metropolitan's water conservation program is to help ensure adequate, reliable and affordable water supplies for Southern California by actively promoting efficient water use. The importance of conservation to the region has increased in recent years because of drought conditions in the State Water Project watershed and court-ordered restrictions on Bay-Delta pumping, as described under "METROPOLITAN'S WATER SUPPLY-State Water Project -Bay-Delta Proceedings Affecting State Water Project" and "-Endangered Species Act and Other Environmental Considerations -Endangered Species Act Considerations-State Water Project - Delta Smelt and Salmon Federal ESAs Biological Opinions and California ESA Consistency Determinations and Incidental Take Permit" in this Appendix A. Conservation reduces the need to import water to deliver to member agencies through Metropolitan's system. Water conservation is an integral component of Metropolitan's IRP, WSDM Plan and Water Supply Allocation Plan.

Metropolitan's conservation program has largely been developed to assist its member agencies in meeting the conservation goals of the 2015 IRP Update. See "METROPOLITAN'S WATER SUPPLY-Integrated Water Resources Plan" in this Appendix A. All users of Metropolitan's system benefit from the reduced infrastructure costs and system capacity made available by investments in demand management programs like the Conservation Credits Program. Under the terms of Metropolitan's Conservation Credits Program, Metropolitan administers regional conservation programs and also co-funds member agency conservation programs designed to achieve greater water use efficiency in residential, commercial, industrial, institutional and landscape uses. Direct spending by Metropolitan on active conservation incentives, including rebates for water-saving plumbing fixtures, appliances and equipment totaled about \$18.9 million in fiscal year 2019-20. The 2015 IRP Update estimates that Metropolitan's conservation efforts will result in 1,197,000 acre-feet of water being conserved annually in Southern California by 2025. See also "METROPOLITAN'S WATER SUPPLY-Integrated Water Resources Plan" in this Appendix A and "-Increased Drought Resiliency" below.

Historically, revenues collected by Metropolitan's Water Stewardship Rate and available grant funds have funded conservation incentives, local resource development incentives, and other water demand management programs. The Water Stewardship Rate was charged on every acre-foot of water conveyed by Metropolitan, except on water delivered to SDCWA pursuant to the Exchange Agreement (see "METROPOLITAN REVENUES-Water Rates" and "-Litigation Challenging Rate Structure" in this Appendix A) in calendar years 2018, 2019, and 2020. The Water Stewardship Rate has not been incorporated into Metropolitan's rates and charges for 2021 and 2022. See "METROPOLITAN REVENUES-Rate Structure -Water Stewardship Rate" in this Appendix A.

In addition to ongoing conservation, Metropolitan has developed a WSDM Plan, which splits resource actions into two major categories: Surplus Actions and Shortage Actions. See "-Water Surplus and Drought Management Plan." Conservation and water efficiency programs are part of Metropolitan's resource management strategy which makes up these Surplus and Shortage actions.

Metropolitan's Water Supply Allocation Plan allocates Metropolitan's water supplies among its member agencies, based on the principles contained in the WSDM Plan, to reduce water use and drawdowns from water storage reserves. See "-Water Supply Allocation Plan." Metropolitan's member agencies and retail water suppliers in Metropolitan's service area also have the ability to implement water conservation and allocation programs, and some of the retail suppliers in Metropolitan's service area have initiated conservation measures. The success of conservation measures in conjunction with the implementation of the Water Supply Allocation Plan in fiscal years 2009-10, 2010-11, 2011-12 and 2015-16 is evidenced as a contributing factor in the lower than budgeted water transactions during such drought periods.

Legislation approved in November 2009 set a statewide conservation target for urban per capita potable water use of 20 percent reductions (from a baseline per capita use determined utilizing one of four State-approved methodologies) by 2020 (with credits for existing conservation) at the retail level, providing an additional catalyst for conservation by member agencies and retail suppliers. Metropolitan's water transactions projections incorporate an estimate of conservation savings that will reduce retail demands. Current projections include an estimate of additional water use efficiency savings that would result from Metropolitan's IRP goals that included the reduction of overall regional per capita water use by 20 percent by 2020 from a baseline of average per capita water use from 1996-2005 in Metropolitan's service area. As of calendar year 2019, per capita water use in Metropolitan's service area had reached the 20 percent reduction by 2020 target.

### **Water Surplus and Drought Management Plan**

In addition to the long-term planning guidelines and strategy provided by its IRP, Metropolitan has developed its WSDM Plan for the on-going management of its resources and water supplies in response to hydrologic conditions. The WSDM Plan, which was adopted by Metropolitan's Board in April 1999, evolved from Metropolitan's experiences during the droughts of 1976-77 and 1987-92. The WSDM Plan is a planning document that Metropolitan uses to guide inter-year and intra-year storage operations, and splits resource actions into two major categories: surplus actions and shortage actions. The surplus actions emphasize storage of surplus water inside the region, followed by storage of surplus water outside the region. The shortage actions emphasize critical storage programs and facilities and conservation programs that make up part of Metropolitan's response to shortages. Implementation of the plan is directed by a WSDM team, made up of Metropolitan staff, that meets regularly throughout the year and more frequently between November and April as hydrologic conditions develop. The WSDM team develops and recommends storage actions to senior management on a regular basis and provides updates to the Board on hydrological conditions, storage levels and planned storage actions through detailed reports.

### **Water Supply Allocation Plan**

In times of prolonged or severe water shortages, Metropolitan manages its water supplies through the implementation of its Water Supply Allocation Plan. The Water Supply Allocation Plan was originally approved by Metropolitan's Board in February 2008, and has been implemented three times since its adoption, including most recently in April 2015. The drought of 2012-2016 was one of the driest periods in the hydrological record since 1931-1934. The Board declared a Water Supply Condition 3 on April 14, 2015, and the implementation of the Water Supply Allocation Plan at a Level 3 Regional Shortage Level, effective July 1, 2015 through June 30, 2016. On May 10, 2016, the Board rescinded the implementation of the Water Supply Allocation Plan due to improved hydrological conditions. The Water Supply Allocation Plan provides a formula for equitable distribution of available water supplies in case of extreme water shortages within Metropolitan's service area and if needed is typically approved in the month of April with implementation beginning in the month of July. In December 2014, the Board approved certain adjustments to the formula for calculating member agency supply allocations during subsequent periods of implementation of the Water Supply Allocation Plan. Although the Act gives each of Metropolitan's member agencies a preferential entitlement to purchase a portion of the water served by Metropolitan (see "METROPOLITAN REVENUES—Preferential Rights" in this Appendix A), historically, these rights have not been used in allocating Metropolitan's water. Metropolitan's member agencies and retail water suppliers in Metropolitan's service area also may implement water conservation and allocation programs within their respective service territories in times of shortage. See also "—Increased Drought Resiliency." Based upon current hydrologic conditions and current DWR State Water Project allocation estimates, implementation of the Water Supply Allocation Plan for fiscal year 2020-21 is not expected.

### **Increased Drought Resiliency**

Metropolitan has worked proactively with its member agencies to conserve water supplies in its service area, and significantly expanded its water conservation and outreach programs and increased funding

for conservation incentive programs. In May 2017, the Alliance for Water Efficiency presented a peer review report of Metropolitan's conservation programs. Program modifications were adopted in April 2018 to reflect the peer review recommendations as well as feedback from member agencies. See "CONSERVATION AND WATER SHORTAGE MEASURES-General." Metropolitan has also taken other actions to improve drought resiliency that include increasing water recycling by providing incentives for on-site recycled water hook-ups, improving return capability of storage programs, and modifying Metropolitan's distribution system to enhance Colorado River water delivery to mitigate limitations in State Water Project supply.

## REGIONAL WATER RESOURCES

The water supply for Metropolitan's service area is provided in part by Metropolitan and in part by non-Metropolitan sources available to members. Non-Metropolitan sources include water imported by the City of Los Angeles (the "City") from the Owens Valley/Mono Basin east of the Sierra Nevada through the City's Los Angeles Aqueduct to serve customers of the City. See "- Los Angeles Aqueduct." The balance of water within the region is produced locally, from sources that include groundwater and surface water production, recycled water and recovery of contaminated or degraded groundwater, and seawater desalination. Programs to develop these local resources include projects funded by Metropolitan's Local Resources Program, as well as local agency funded programs. See "-Local Water Supplies.

Based on a ten-year average from 2010 through 2019, non-Metropolitan sources met about 52 percent of the region's water needs. These non-Metropolitan sources of supply fluctuate in response to variations in rainfall. During prolonged periods of below normal rainfall, local water supplies decrease. Conversely, prolonged periods of above-normal rainfall increase local supplies. Sources of groundwater basin replenishment include local precipitation, runoff from the coastal ranges, and artificial recharge with imported water supplies. In addition to runoff, recycled water provides an increasingly important source of replenishment water for the region.

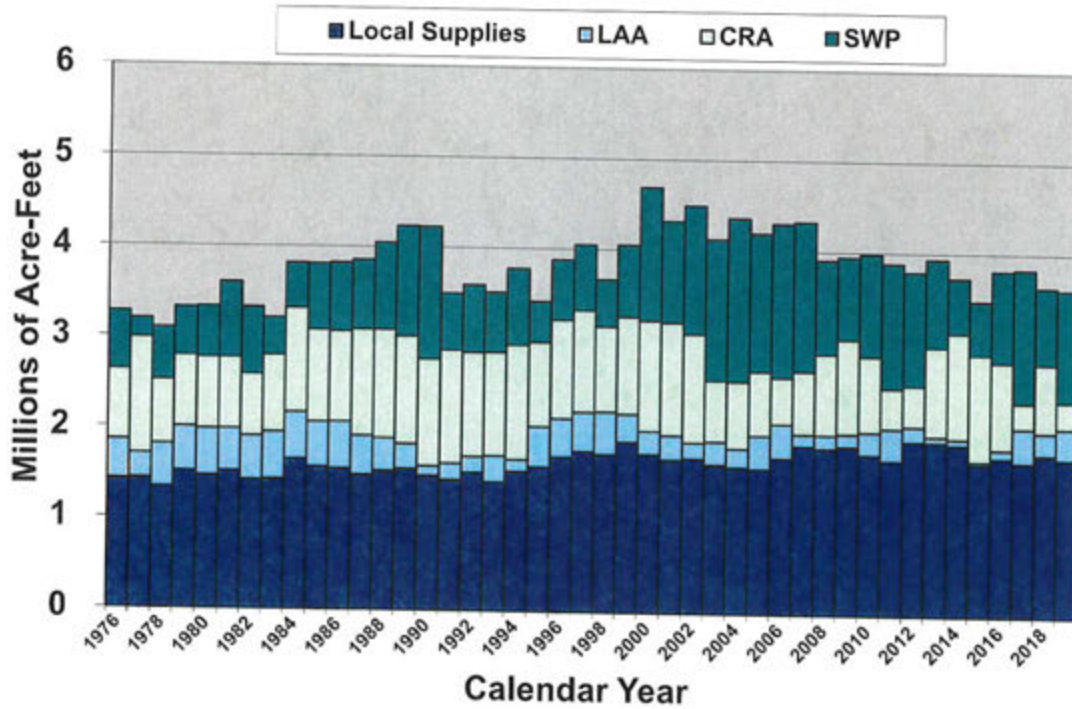
Metropolitan's member agencies are not required to purchase or use any of the water available from Metropolitan. Some agencies depend on Metropolitan to supply nearly all of their water needs, regardless of the weather. Other agencies, with local surface reservoirs or aqueducts that capture rain or snowfall, rely on Metropolitan more in dry years than in years with heavy rainfall, while others, with ample groundwater supplies, purchase Metropolitan water only to supplement local supplies and to recharge groundwater basins. Consumer demand and locally supplied water vary from year to year, resulting in variability in the volume of Metropolitan's water transactions.

In recent years, supplies and demands have been affected by drought, water use restrictions, economic conditions, weather conditions and environmental laws, regulations and judicial decisions, as described in this Appendix A under "METROPOLITAN'S WATER SUPPLY." The demand for supplemental supplies provided by Metropolitan is dependent on water use at the retail consumer level and the amount of locally supplied and conserved water. See "CONSERVATION AND WATER SHORTAGE MEASURES" in this Appendix A and "-Local Water Supplies" below.

Future reliance on Metropolitan supplies will depend on, among other things, current and future local projects that may be developed and the amount of water that may be derived from sources other than Metropolitan. For information on Metropolitan's water revenues, see "METROPOLITAN REVENUES" and "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A.

The following graph shows a summary of the regional sources of water supply for the years 1976 to 2019.

## Sources of Water Supply in the Metropolitan Service Area (1976-2019)



Source: Metropolitan.

The major sources of water available to some or all of Metropolitan’s member agencies in addition to supplies provided by Metropolitan are described below.

### Los Angeles Aqueduct

The City of Los Angeles, through its Department of Water and Power (“LADWP”), operates its Los Angeles Aqueduct system to import water from the Owens Valley and the Mono Basin on the eastern slopes of the Sierra Nevada in eastern California. Water imported by the City on the Los Angeles Aqueduct system comes primarily from surface water rights of the City in eastern Sierra Nevada watersheds along various streams, creeks and rivers in the Mono Basin, Long Valley and Owens Valley, and groundwater resources in the Owens Valley from the City’s ownership of approximately 330,000 acres of land and associated water rights. This water supply of the City, which serves LADWP’s customers, currently meets about 5.25 percent of the region’s water needs based on a ten-year average from 2010 through 2019.

Surface runoff (snowmelt) is subject to substantial annual variability, which influences the amount of water delivered by the Los Angeles Aqueduct. In addition, the City is subject to several environmental commitments in the Mono Basin and Owens Valley which impact the availability of water to the City for import on the Los Angeles Aqueduct. These include: the SWRCB’s Mono Lake Basin Water Rights Decision 1631, which limits on the City’s water exports from the Mono Basin based on Mono Lake’s surface

elevation; and (ii) the City's legal obligations under a long-term groundwater management plan relating to the City's groundwater resources in the Owens Valley.

Since 1989, Los Angeles Aqueduct water deliveries to the City have varied from as little as 57,716 acre-feet in fiscal year 2014-15 to as much as 467,000 acre-feet of water in fiscal year 1995-96. Average water deliveries to the City from the Los Angeles Aqueduct were approximately 238,960 acre-feet per fiscal year between fiscal years 2015-16 and 2019-20 (approximately 48.0% of the City's annual water supply). However, during fiscal year 2015-16 (one of the worst years of the recent drought), water deliveries to the City from the Los Angeles Aqueduct were only 57,853 acre-feet (approximately 11.8% of the City's water supply for fiscal year 2015-16). Consequently, the amount of water purchased by the City from Metropolitan varies (sometimes substantially) from one year to the next. During the past five fiscal years 2015-16 through 2019-20, the City's water purchases from Metropolitan (billed water transactions) ranged from a low of 141,866 in fiscal year 2018-19 to a high of 332,528 in fiscal year 2015-16.

### **Local Water Supplies**

Local water supplies are made up of groundwater, groundwater recovery, surface runoff, recycled water, and seawater desalination. Metropolitan supports local resources development through its Local Resources Program, which provides financial incentives up to \$340 per acre-foot of water production from local water recycling, groundwater recovery and seawater desalination projects. Metropolitan utilizes conjunctive use of groundwater to encourage storage in groundwater basins. Member agencies and other local agencies have also independently funded and developed additional local supplies, including groundwater clean-up, recycled water and desalination of brackish or high salt content water. See also "METROPOLITAN'S WATER DELIVERY SYSTEM—Water Quality and Treatment" in this Appendix A for information regarding recent water quality regulations and developments that impact or may impact certain local groundwater supplies.

Metropolitan's water transaction projections are based in part on projections of locally-supplied water. Projections of future local supplies are based on estimated yields from sources and projects that are currently producing water or are under construction at the time a water transaction projection is made. Additional reductions in Metropolitan's water transaction projections are made to account for future local supply augmentation projects, based on the IRP Update goals. See "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES—Water Transactions Projections" and "METROPOLITAN'S WATER SUPPLY—Integrated Water Resources Plan" in this Appendix A.

**Groundwater.** Demands for about 1.1 million acre-feet per year, about one-third of the annual water demands for approximately 19 million residents of Metropolitan's service area, are met from groundwater production. Local groundwater supplies are supported by recycled water, which is blended with imported water and recharged into groundwater basins, and also used for creating seawater barriers that protect coastal aquifers from seawater intrusion.

**Member Agency Storage Programs.** Metropolitan has developed a number of local programs to work with its member agencies to increase storage in groundwater basins. Metropolitan has encouraged storage through its cyclic and conjunctive use storage programs. These programs allow Metropolitan to deliver water into a groundwater basin in advance of agency demands. Metropolitan has drawn on dry-year supply from nine contractual conjunctive use storage programs to address shortages from the State Water Project and the CRA.

Cyclic storage agreements allow pre-delivery of imported water for recharge into groundwater basins in excess of an agency's planned and budgeted deliveries making best use of available capacity in conveyance pipelines, use of storm channels for delivery to spreading basins, and use of spreading basins. This water is then purchased at a later time when the agency has a need for groundwater replenishment deliveries.



Conjunctive use agreements provide for storage of imported water that can be called for use by Metropolitan during dry, drought, or emergency conditions. During a dry period, Metropolitan has the option to call water stored in the groundwater basins pursuant to its contractual conjunctive use agreements. At the time of the call, the member agency pays Metropolitan the prevailing rate for that water. Nine conjunctive use projects provide about 210,000 acre-feet of groundwater storage and have a combined extraction capacity of about 70,000 acre-feet per year. See the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "METROPOLITAN'S WATER SUPPLY—Storage Capacity and Water in Storage" in this Appendix A.

**Recovered Groundwater.** Contamination of groundwater supplies is a growing threat to local groundwater production. Metropolitan has been supporting increased groundwater production and improved regional supply reliability by offering financial incentives to agencies for production and treatment of degraded groundwater since 1991. Metropolitan has executed agreements with local agencies to provide financial incentives to 27 projects that recover contaminated groundwater with total contract yields of about 124,000 acre-feet per year. During fiscal year 2019-20, Metropolitan provided incentives for approximately 50,000 acre-feet of recovered water under these agreements. Additionally, 62,000 acre-feet of recovered groundwater was produced by local agencies through other independently funded and developed sources. Total groundwater recovery use under executed agreements with Metropolitan is expected to grow to 58,000 acre-feet in 2021.

**Surface Runoff.** Local surface water resources consist of runoff captured in storage reservoirs and diversions from streams. Since 1980, agencies have used an average of 110,000 acre-feet per calendar year of local surface water. Local surface water supplies are heavily influenced by year to year local weather conditions, varying from a high of 188,000 acre-feet in calendar year 1998 to a low of 37,000 acre-feet in calendar year 2016.

**Recycled Water-Local Agency Projects.** Metropolitan has supported recycled water use to offset water demands and improve regional supply reliability by offering financial incentives to agencies for production and sales of recycled water since 1982. Metropolitan has executed agreements with local agencies to provide financial incentives to 83 recycled water projects with total expected contract yields of about 315,000 acre-feet per year. During fiscal year 2019-20, Metropolitan provided incentives for approximately 71,000 acre-feet of recycled water under these agreements. Additionally, 370,000 acre-feet of recycled water (including wastewater discharged to the Santa Ana River that percolates into downstream groundwater basins) was produced by local agencies through other independently funded and developed sources. Total recycled water use under executed agreements with Metropolitan currently in place is expected to be approximately 56,000 acre-feet annually by 2021. On December 10, 2019, Metropolitan's Board authorized the General Manager to enter into a Local Resources Program agreement with SDCWA and the City of San Diego to provide financial incentives in connection with the first phase of a proposed recycling project (the San Diego Pure Water North City Project Phase 1) being developed by the City of San Diego. Phase 1 of the project, if completed, would provide up to 33,600 acre-feet annually of recycled water for surface water augmentation, and Local Resource Program financial incentives of up to \$285.6 million could be provided by Metropolitan for the project over a 25-year period. As noted above, Local Resources Program agreements provide incentives of up to \$340 per acre-foot of water production (based on actual project unit costs that exceed Metropolitan's water rates) from local water supply projects developed by local and member agencies. Agreement terms are for 25 years and terminate automatically if construction does not commence within two full fiscal years of agreement execution or if recycled water deliveries are not realized within four full fiscal years of agreement execution.

**Recycled Water-Metropolitan Regional Recycled Water Program.** Since 2010, Metropolitan has been evaluating the potential and feasibility of implementing a regional recycled water program (the "RRWP"). Chronic drought conditions have resulted in significant reductions in local surface supplies and groundwater production and have increased the need for recharge supplies to groundwater and surface water

reservoirs to improve their sustainable yields and operating integrity. In 2015, Metropolitan executed an agreement with the Sanitation Districts of Los Angeles County (“LACSD”) to implement a demonstration project and to establish a framework of terms and conditions of the RRWP. The objectives of the RRWP are to enable the potential reuse of up to 150 million gallons per day (“mgd”) of treated effluent from LACSD’s Joint Water Pollution Control Plant (“JWPCP”). Purified water from a new advanced treatment facility could be delivered through pipelines to the region’s groundwater basins, industrial facilities, and two of Metropolitan’s treatment plants. Construction of a 0.5-mgd advanced water treatment demonstration plant was approved in 2017 and was completed in September 2019. Testing and operation of the plant began in October 2019 to confirm treatment costs and provide the basis for regulatory approval of the proposed treatment process. The initial phase of testing is scheduled for completion in 2021 with future testing phases planned that will form the basis for the design, operation, and optimization of, and will inform Metropolitan’s Board decision whether to move forward with, a full-scale advanced water treatment facility. Finally, the RRWP will have the flexibility to be expanded in the future to implement Direct Potable Reuse (“DPR”) through raw water augmentation at two of Metropolitan’s treatment plants. The SWRCB Division of Drinking Water (“DDW”) is in the process of developing regulations for DPR in California, with the current anticipated date for promulgation by the end of 2023. The fiscal year 2020-21 and 2021-22 biennial budget includes \$30 million for the preparation of a programmatic environment impact report for the RRWP. Metropolitan’s financial projections for the fiscal years ending June 30, 2020 through 2024 do not include any future capital costs associated with a potential full-scale RRWP. On November 10, 2020, Metropolitan’s Board voted to begin environmental planning work on the RRWP. In December 2020, Metropolitan and SNWA executed a funding agreement under which SNWA will contribute up to \$6 million for the environmental planning costs for the RRWP. In the event either SNWA or Metropolitan decides not to proceed or participate in the RRWP in the future, SNWA’s financial contribution to the RRWP’s environmental planning would be returned by Metropolitan.

***Seawater Desalination.*** Metropolitan’s IRP embraces seawater desalination as a part of the region’s supply portfolio that could help increase supply reliability in Southern California.

In 2015, Poseidon Resources LLC (“Poseidon”) began operating the 56,000 acre-foot capacity Carlsbad Desalination Project (“Carlsbad Project”) and associated pipeline. The San Diego County Water Authority has a purchase agreement with Poseidon for a minimum of 48,000 acre-feet per year with an option to purchase an additional 8,000 acre-feet per year.

In October 2014, seawater desalination projects became eligible for funding under Metropolitan’s Local Resources Program (LRP). There are three local seawater desalination projects in the permitting stages which could receive LRP incentives. These include South Coast Water District’s proposed 5,000 to 15,000 acre-feet per year Doheny Ocean Desalination project in south Orange County; Orange County Water District’s proposed 56,000 acre-feet per year Huntington Beach Seawater Desalination project in north Orange County; and West Basin Municipal Water District’s proposed 20,000 to 60,000 acre-feet per year project in Los Angeles County. LRP applications for the potential projects could be considered by Metropolitan’s Board after they are permitted, free of litigation, and authorized to proceed by their developing agencies.

Metropolitan had previously maintained Seawater Desalination Program (SDP) agreements with three member agencies for their projects. The agreements were signed in 2006 and included off-ramps triggered by project development milestones. On June 30, 2020, the SDP agreements reached a termination milestone and expired automatically. As a result, the three member agency SDP agreements are no longer in effect.

In 2007, the Board approved Metropolitan’s role as a regional facilitator for seawater desalination. This includes supporting local projects during permitting and providing technical assistance when requested. Metropolitan’s regional facilitation includes active participation in organizations advocating for desalination

and salinity management, including CalDesal within California and the Multi-State Salinity Coalition nationally. Metropolitan also participates in the National Alliance for Water Innovation ("NAWI"). NAWI is a DOE-led, five-year, \$100 million research effort focused on accelerating the commercialization of early-stage desalination technologies. New technologies developed by NAWI could reduce cost and environmental barriers to seawater desalination in California.

## **METROPOLITAN'S WATER DELIVERY SYSTEM**

### **Primary Facilities and Method of Delivery**

Metropolitan's water delivery system is made up of three basic components: the CRA, the California Aqueduct of the State Water Project and Metropolitan's water distribution system. Metropolitan's delivery system is integrated and designed to meet the differing needs of its member agencies. Metropolitan seeks redundancy in its delivery system to assure reliability in the event of an outage. Improvements are designed to increase the flexibility of the system. Since local sources of water are generally used to their maximum each year, growth in the demand for water is partially met by Metropolitan. The operation of Metropolitan's water system is being made more reliable through the rehabilitation of key facilities as needed, improved preventive maintenance programs and the upgrading of Metropolitan's operational control systems. See "CAPITAL INVESTMENT PLAN" in this Appendix A.

*Colorado River Aqueduct.* Work on the CRA commenced in 1933 and water deliveries started in 1941. Additional facilities were completed by 1961 to meet additional requirements of Metropolitan's member agencies. The CRA is 242 miles long, starting at the Lake Havasu intake and ending at the Lake Mathews terminal reservoir. Metropolitan owns all of the components of the CRA, which include five pumping plants, 64 miles of canal, 92 miles of tunnels, 55 miles of concrete conduits, four reservoirs, and 144 underground siphons totaling 29 miles in length. The pumping plants lift the water approximately 1,617 feet over several mountain ranges to Metropolitan's service area. See "METROPOLITAN'S WATER SUPPLY-Colorado River Aqueduct" in this Appendix A.

*State Water Project.* The initial portions of the State Water Project serving Metropolitan were completed in 1973. The State Water Project, managed and operated by DWR, is one of the largest water supply projects undertaken in the history of water development. The State Water Project facilities dedicated to water delivery consist of a complex system of dams, reservoirs, power plants, pumping plants, canals and aqueducts to deliver water. Water from rainfall and snowmelt runoff is captured and stored in State Water Project conservation facilities and then delivered through State Water Project transportation facilities to water agencies and districts located throughout the Upper Feather River, Bay Area, Central Valley, Central Coast, and Southern California. Metropolitan receives water from the State Water Project through the main stem of the aqueduct system, the California Aqueduct, which is 444 miles long and includes 381 miles of canals and siphons, 49 miles of pipelines or tunnels and 13 miles of channels and reservoirs.

As described herein, Metropolitan is the largest (in terms of number of people it serves, share of State Water Project water it has contracted to receive, and percentage of total annual payments made to DWR therefor) of twenty-nine agencies and districts that have entered into contracts with DWR to receive water from the State Water Project. Contractors pay all costs of the facilities in exchange for participation rights in the system. Thus, Contractors also have the right to use the portion of the State Water Project conveyance system necessary to deliver water to them at no additional cost as long as capacity exists. See "METROPOLITAN'S WATER SUPPLY-State Water Project" in this Appendix A.

*Distribution System.* Metropolitan's distribution system is a complex network of facilities which routes water from the CRA and State Water Project to Metropolitan's member agencies. The water distribution system includes components that were built beginning in the 1930s and through the present. Metropolitan owns all of these components, including 16 reservoirs, five regional treatment plants, over 800

miles of transmission pipelines, feeders and canals, and 16 hydroelectric plants with an aggregate capacity of 130 megawatts.

***Diamond Valley Lake.*** Diamond Valley Lake, a man-made reservoir, built, owned and operated by Metropolitan, is located southwest of the city of Hemet, California. It covers approximately 4,410 acres and has capacity to hold approximately 810,000 acre-feet or 265 billion gallons of water. Diamond Valley Lake was constructed to serve approximately 90 percent of Metropolitan's service area by gravity flow. Imported water is delivered to Diamond Valley Lake during surplus periods. The reservoir provides more reliable delivery of imported water from the State Water Project during summer months, droughts and emergencies. In addition, Diamond Valley Lake is capable of providing more than one-third of Southern California's water needs from storage for approximately six months after a major emergency (assuming that there has been no impairment of Metropolitan's internal distribution network). See the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "METROPOLITAN'S WATER SUPPLY-Storage Capacity and Water in Storage" in this Appendix A for the amount of water in storage at Diamond Valley Lake. Excavation at the project site began in May 1995. Diamond Valley Lake was completed in March 2000, at a total cost of \$2 billion, and was in full operation in December 2001.

***Inland Feeder.*** Metropolitan's Inland Feeder is a 44-mile-long conveyance system that connects the State Water Project to Diamond Valley Lake and the CRA. The Inland Feeder provides greater flexibility in managing Metropolitan's major water supplies and allows greater amounts of State Water Project water to be accepted during wet seasons for storage in Diamond Valley Lake. In addition, the Inland Feeder increases the conveyance capacity from the East Branch of the State Water Project by 1,000 cfs, allowing the East Branch to operate up to its full capacity. Construction of the Inland Feeder was completed in September 2009 at a total cost of \$1.14 billion.

***Operations Control Center.*** Metropolitan's water conveyance and distribution system operations are coordinated from the Operations Control Center ("OCC") centrally located in Los Angeles County. The OCC plans, balances and schedules daily water and power operations to meet member agencies' demands, taking into consideration the operational limits of the entire system.

### **Water Quality and Treatment**

Metropolitan filters and disinfects water at five water treatment plants: the F.E. Weymouth Treatment Plant, the Joseph Jensen Treatment Plant, the Henry J. Mills Treatment Plant, the Robert B. Diemer Treatment Plant, and the Robert A. Skinner Treatment Plant. In recent years, the plants typically treat between 0.8 billion and 1.0 billion gallons of water per day and have a maximum capacity of approximately 2.4 billion gallons per day. Approximately 50 percent of Metropolitan's water deliveries are treated water.

Federal and state regulatory agencies continually identify potential contaminants and establish new water quality standards. New water quality standards could affect availability of water and impose significant compliance costs on Metropolitan. The federal Safe Drinking Water Act ("SDWA") establishes drinking water quality standards, monitoring, and public notification and enforcement requirements for public water systems. To achieve these objectives, the U.S. Environmental Protection Agency (the "USEPA"), as the lead regulatory authority, promulgates national drinking water regulations and develops the mechanism for individual states to assume primary enforcement responsibilities. The SWRCB DDW, formerly the Drinking Water Program under the California Department of Public Health, has primary responsibility for the regulation of public water systems in the State. Drinking water delivered to customers must comply with statutory and regulatory water quality standards designed to protect public health and safety. Metropolitan operates its five water treatment plants under a domestic water supply permit issued by DDW, which is amended, as necessary, such as when significant facility modifications occur. Metropolitan operates and maintains water storage, treatment and conveyance facilities, implements watershed management and protection activities, performs inspections, monitors drinking water quality, and submits monthly and annual compliance reports. In addition, public water system discharges to state and federal waters are regulated

under general National Pollutant Discharge Elimination System (“NPDES”) permits. These NPDES permits, which the SWRCB issued to Metropolitan, contain numerical effluent limitations, monitoring, reporting, and notification requirements for water discharges from the facilities and pipelines of Metropolitan’s water supply and distribution system.

As described herein, Metropolitan has established five groundwater storage programs with other water agencies that allow Metropolitan to store available supplies in the Central Valley for return later. These programs help manage supplies by putting into storage surplus water in years when it is available and converting that to dry year supplies to be returned when needed. These programs can also provide emergency supplies. See “METROPOLITAN’S WATER SUPPLY–Water Transfer, Storage and Exchange Programs – State Water Project Agreements and Programs” and “–Storage Capacity and Water in Storage” in this Appendix A. Generally, water returned to Metropolitan under these groundwater storage programs (“return water”) may be made available in one of two ways: by direct pump back from a groundwater well to the California Aqueduct or, when available, by an exchange with a supply already in the aqueduct. Water quality issues can arise in water returned by direct pumping as a result of the presence of a water quality contaminant in the groundwater storage basin and due to the imposition of stricter water quality standards by federal or State regulation.

In 2017, the SWRCB adopted a regulation setting a Maximum Contaminant Level (“MCL”) for TCP of five parts per trillion or 5 ppt based upon a running annual average. TCP is a manufactured chemical used as a cleaning and degreasing solvent and has been found at industrial and hazardous waste sites. It is also associated with pesticide products used in agricultural practices. In January 2018, the new regulation went into effect. Under the new regulation, drinking water agencies are required to perform quarterly monitoring of TCP. There have been no detections of this chemical in Metropolitan’s system. However, TCP has been detected above the new MCL in groundwater wells of three of Metropolitan’s groundwater storage program partners through monitoring performed by these agencies. Levels detected in groundwater wells of the Arvin-Edison Water Storage District are the highest and will impact the ability of Metropolitan to take return water under that program. As noted under “METROPOLITAN’S WATER SUPPLY–Water Transfer, Storage and Exchange Programs” in this Appendix A, Metropolitan has temporarily suspended operation of this program until the water quality concerns can be further evaluated and managed. The levels of TCP detected at Metropolitan’s other groundwater storage programs are much lower and impact fewer groundwater wells. Metropolitan is evaluating the effects of TCP on the return capability of those programs.

Possible remediation measures include, for example, return water with other surface water supplies, removal of wells from service, return water by exchange, or treatment. Additional capital and/or operation and maintenance costs could be incurred by Metropolitan in connection with remediation options, but the magnitude of such costs is not known at this time. To the extent return water under one or more groundwater storage programs could not be utilized due to groundwater quality, the available supply of stored water during extended drought or emergency periods would be reduced.

Metropolitan continually monitors new water quality laws and regulations and frequently comments on new legislative proposals and regulatory rules. For example, on June 26, 2019, the USEPA proposed setting the MCL for perchlorate at 56 micrograms per liter ( $\mu\text{g/L}$ ). Perchlorate is both a naturally occurring and man-made chemical used in the production of rocket fuel, missiles, fireworks, flares and explosives. It is also sometimes present in bleach and in some fertilizers. Groundwater in the Henderson, Nevada area has been contaminated with perchlorate as a result of two former chemical manufacturing facilities, and there are ongoing remediation programs to mitigate its release into the Las Vegas Wash and the downstream Colorado River. In addition to its proposed setting of a perchlorate MCL of 56  $\mu\text{g/L}$ , the USEPA sought comment on three alternative regulatory options: (1) setting an MCL for perchlorate at 18  $\mu\text{g/L}$ ; (2) setting an MCL for perchlorate at 90  $\mu\text{g/L}$ ; or (3) withdrawing EPA’s 2011 determination to regulate perchlorate in drinking water. On August 23, 2019, Metropolitan submitted a comment letter on the USEPA’s proposed regulation, recommending that the USEPA consider the health effects data used by several states for setting MCLs and

Advisory Levels for perchlorate, as well as the monitoring and compliance guidance provided by California and Massachusetts in developing their perchlorate MCLs. Also, Metropolitan expressed its concern that the USEPA does not have an up-to-date accounting of perchlorate contamination and that the USEPA excluded perchlorate data from California and Massachusetts. As it has in the past, Metropolitan continued to urge the USEPA to establish a drinking water regulation for perchlorate that is protective of human health and prevents any adverse impact to the Colorado River and the millions of users that rely upon it as a source of drinking water supply. Lastly, Metropolitan asked the USEPA not to withdraw its 2011 determination to regulate perchlorate in drinking water; otherwise, drinking water utilities in Nevada and Arizona which rely on Colorado River water could then have higher levels of perchlorate in their source water, and California drinking water utilities, including some of Metropolitan's member agencies, would be challenged to comply with California's MCL for perchlorate of 6 µg/L if remediation efforts in the Henderson area were slowed down in the absence of a federal regulation. On June 18, 2020, the USEPA withdrew its 2011 determination to regulate perchlorate under the SDWA and issued a new determination that perchlorate does not meet the statutory criteria for regulation. Whether the USEPA should issue a national drinking water standard for perchlorate is the subject of ongoing litigation by the Natural Resources Defense Council, Inc. California is also reviewing its MCL for perchlorate in light of a revised Public Health Goal ("PHG") of 1 µg/L adopted in February 2015. PHGs are established by the California Office of Environmental Health Hazard Assessment ("OEHHA") and used as the basis for the development of a State regulation setting an MCL. The SWRCB is required to set an MCL for a chemical as close to the PHG as is technologically and economically feasible, placing primary emphasis on the protection of public health. As part of this process, on March 6, 2020, the SWRCB proposed lowering the detection limit for purposes of reporting ("DLR") for perchlorate from 4 µg/L to 2 µg/L. Data collected from monitoring using the lower DLR will allow the SWRCB to evaluate the technological and economic feasibility of water treatment to reduce perchlorate levels to concentrations less than the current DLR. On April 30, 2020, Metropolitan submitted a comment letter to the SWRCB supporting the lower perchlorate DLR which is consistent with laboratory capabilities and will allow for a more accurate and complete assessment of perchlorate occurrence across the State. In July 2020, due to improved analytical methods, and in order to evaluate a lower MCL, DDW modified its proposal to lowering the DLR for perchlorate initially to 2 µg/L, and subsequently to the PHG of 1 µg/L in a second phase effective January 1, 2024. On October 6, 2020, the SWRCB approved the modified proposal. Metropolitan will continue to participate in federal and state rulemaking proceedings.

Metropolitan is monitoring and commenting on the development of legislation, laws, and regulations regarding per- and poly-fluoroalkyl substances ("PFAS"). PFAS are substances widely used in consumer and industrial products such as fabrics, carpets, firefighting foams, food packaging and nonstick cookware and are known for their nonstick, waterproof, and heat and stain resistant properties. Perfluorooctane sulfonate ("PFOS") and perfluorooctanoic acid ("PFOA") are the two most common synthetic organic chemicals in the group of compounds referred to as PFAS. In August 2019, DDW lowered the notification levels for PFOS from 13 ppt to 6.5 ppt and for PFOA from 14 ppt to 5.1 ppt. Notification levels are non-regulatory, precautionary health-based measures for concentrations of chemicals in drinking water that warrant notification and further monitoring and assessment. If a chemical concentration is greater than its notification level in drinking water that is provided to consumers, DDW recommends that the utility inform its customers and consumers about the presence of the chemical, and about health concerns associated with exposure to it. In February 2020, DDW lowered response levels for PFOA and PFOS from 70 ppt for individual or combined concentrations to 10 ppt for PFOA and 40 ppt for PFOS. A response level is set higher than a notification level and represents a chemical concentration level at which DDW recommends a water system consider taking a water source out of service or providing treatment if that option is available to them. Legislation which took effect on January 1, 2020 (California Assembly Bill 756), requires that water systems that receive a monitoring order from the SWRCB and detect levels of PFAS that exceed their respective response level must either take a drinking water source out of use or provide specified public notification if they continue to supply water above the response level. PFOA and PFOS have not been detected in Metropolitan's imported or treated water supplies. In 2019, Metropolitan detected in its supplies low levels of perfluorohexanoic acid (PFHxA), which is not acutely toxic or carcinogenic and is not currently regulated



in California or at the federal level. No other PFAS have been detected in Metropolitan imported or treated supplies. However, PFOA and PFOS have been detected in groundwater wells in the region, including those of certain member agencies. Metropolitan may experience increased demands for its imported water to help offset the potential loss of any affected local supplies. On January 19, 2021, the USEPA announced its final determination to regulate PFOA and PFOS in drinking water, as well as that it is considering whether to designate PFOA and PFOS as hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and/or hazardous waste under the Resource Conservation and Recovery Act. The same day, the USEPA announced its proposed revisions to the Unregulated Contaminant Monitoring Rule (UCMR 5) for public water systems which includes monitoring for 29 PFAS in drinking water. The proposal would require pre-sampling preparations in 2022, sample collection from 2023-2025, and reporting of final results through 2026. Comments on the USEPA's proposal will be due within 60 days after it is published in the Federal Register. The USEPA also released its final toxicity assessment for perfluorobutane sulfonic acid ("PFBS"), a replacement for PFOS. The toxicity assessment will be a part of the USEPA's risk assessment decision-making process. OEHHA recently recommended a notification level for PFBS at 0.5 ppb (or 500 ppt). In addition, the SWRCB has initiated a process to establish regulatory standards for PFOA and PFOS by requesting the OEHHA to establish PHGs for these two chemicals. Metropolitan will continue to monitor and participate in federal and state rulemaking proceedings.

Metropolitan is currently operating in compliance with all state and federal drinking water regulations and permit requirements.

#### **Seismic Considerations and Emergency Response Measures**

*General.* Although the magnitude of damages resulting from a significant seismic event are impossible to predict, Metropolitan's water conveyance and distribution facilities are designed either to withstand a maximum probable seismic event or to minimize the potential repair time in the event of damage. The five pumping plants on the CRA have been buttressed to better withstand seismic events. Other components of the CRA are monitored for any necessary rehabilitation and repair. Metropolitan personnel and independent consultants periodically reevaluate the internal water distribution system's vulnerability to earthquakes. As facilities are evaluated and identified for seismic retrofitting, they are prioritized, with those facilities necessary for delivering or treating water scheduled for upgrade before non-critical facilities. However, major portions of the California Aqueduct and the CRA are located near major earthquake faults, including the San Andreas Fault. A significant earthquake could damage structures and interrupt the supply of water, adversely affecting Metropolitan's revenues and its ability to pay its obligations. Therefore, emergency supplies are stored for use throughout Metropolitan's service area, and a six-month reserve supply of water normally held in local storage (including emergency storage in Diamond Valley Lake) provides reasonable assurance of continuing water supplies during and after such events (assuming there has been no impairment of Metropolitan's internal distribution network).

Metropolitan has an ongoing surveillance program that monitors the safety and structural performance of its 20 dams and reservoirs permitted by DWR's Division of Safety of Dams. Operating personnel perform regular inspections that include monitoring and analyzing seepage flows and pressures. Engineers responsible for dam safety review the inspection data and monitor the horizontal and vertical movements for each dam. Major on-site inspections are performed at least twice each year. Instruments that transmit seismic acceleration time histories for analysis any time a dam is subjected to strong motion during an earthquake are located at a number of selected sites.

Metropolitan has developed an emergency plan that calls for specific levels of response appropriate to an earthquake's magnitude and location. Included in this plan are various communication tools, as well as a structured plan of management that varies with the severity of the event. Pre-designated personnel follow detailed steps for field facility inspection and distribution system patrol. Approximately 40 employees are designated to respond immediately under certain identifiable seismic events. An emergency operations center is maintained at the OCC. The OCC, which is specifically designed to be earthquake resistant, contains

communication equipment, including a radio transmitter, microwave capability and a response line linking Metropolitan with its member agencies, DWR, other utilities and the State's Office of Emergency Services.

Metropolitan, in conjunction with DWR and LADWP, has formed the Seismic Resilience Water Supply Task Force for the purpose of collaborating on studies and mitigation measures aimed at improving the reliability of imported water supplies to Southern California. Specific task force goals included revisiting historical assumptions regarding potential aqueduct outages after a seismic event; establishing a common understanding about individual agency aqueduct vulnerability assessments, projected damage scenarios, and planning assumptions; and discussing ideas for improving the resiliency of Southern California's imported water supplies through multi-agency cooperation. The task force has established multi-year goals and will continue to meet on these issues and develop firm plans for mitigating seismic vulnerabilities.

Metropolitan's resiliency efforts include manufacturing, pipe fabrication and coating capabilities in La Verne, California. Over \$47 million has been invested to enhance and expand Metropolitan's capacity to provide fabrication, manufacturing, and coating services for rehabilitation work, maintenance activities, and capital projects. Upon request, Metropolitan is also able to provide manufacturing, coating and fabrication services through reimbursable agreements to member agencies, and DWR. These agreements have enhanced timely and cost-effective emergency response capabilities. Materials to fabricate pipe and other appurtenant fittings are kept on site. In the event of earthquake damage, Metropolitan has taken measures to provide the design and fabrication capacity to fabricate pipe and manufacture fittings. Metropolitan is also staffed to perform emergency repairs and has pre-qualified contractors for emergency repair needs at various locations throughout Metropolitan's service area.

*State Water Project Facilities-California Aqueduct.* The California Aqueduct crosses all major faults either by canal at ground level or by pipeline at very shallow depths to ease repair in case of damage from movement along a fault. State Water Project facilities are designed to withstand major earthquakes along a local fault or the San Andreas Fault without major damage. Dams, for example, are designed to accommodate movement along their foundations and to resist earthquake forces on their embankments. Earthquake loads have been taken into consideration in the design of project structures such as pumping and power plants. The location of check structures on the canal allows for hydraulic isolation of the fault-crossing repair. While the dams, canals, pump stations and other constructed State Water Project facilities have been designed to withstand earthquake forces, the critical supply of water from Northern California must traverse the Bay-Delta through hundreds of miles of varying levels of engineered levees that are susceptible to major failures due to flood and seismic risk. In the event of a failure of the Bay-Delta levees, the quality of the Bay-Delta's water could be severely compromised as saltwater comes in from the San Francisco Bay. Metropolitan's supply of State Water Project water would be adversely impacted if pumps that move Bay-Delta water southward to the Central Valley and Southern California are shut down to contain the saltwater intrusion. Metropolitan estimates that stored water supplies, CRA supplies and local water resources that would be available in case of a levee breach or other interruption in State Water Project supplies would meet demands in Metropolitan's service area for approximately twelve months. See "METROPOLITAN'S WATER SUPPLY--Storage Capacity and Water in Storage" in this Appendix A.

Metropolitan, in cooperation with the other State Water Contractors, developed recommendations to DWR for emergency preparedness measures to maintain continuity in export water supplies and water quality during seismic and other emergency events. These measures include improvements to emergency construction materials stockpiles in the Bay-Delta, improved emergency contracting capabilities, strategic levee improvements and other structural measures of importance to Bay-Delta water export interests, including development of an emergency freshwater pathway to export facilities in a severe earthquake. DWR utilized \$12 million in fiscal year 2007-08 for initial stockpiling of rock for emergency levee repairs and development of Bay-Delta land and marine loading facilities and has identified future funding for expanded stockpiles.

**State Water Project-Perris Dam.** DWR's Perris Dam forms Lake Perris, the southernmost terminal reservoir for the State Water Project in Riverside County, with maximum capacity of approximately 130,000 acre-feet of water. Metropolitan uses water from Lake Perris for delivery to customers in Riverside and San Diego counties. Deliveries from the lake are used as a redundant source for the Mills Water Treatment Plant, drought supply from a flexible storage account, and for consumptive use by Metropolitan's customers. After seismic studies concluded in 2005 that DWR's Perris Dam facility could experience damage from moderate earthquakes along the San Jacinto or San Andreas faults due to potential weaknesses in the dam's foundation, DWR lowered the water level in the reservoir by about 25 feet and reduced the amount of water stored in the reservoir to about 75,000 acre-feet as DWR evaluated alternatives for repair of the dam. Following completion of environmental review and design work in 2011, DWR undertook a major retrofit to Perris Dam to improve its seismic stability and designed to restore the reservoir to its historical level. Repair work was completed in April 2018. Upgrades included strengthening the foundation and adding 1.4 million cubic yards of embankment at the 130-foot tall, earthen dam. DWR's current estimate for repair costs, inclusive of environmental and right-of-way work is \$139.5 million. Following completion of the work, DWR began to refill Lake Perris in March 2018 to allow the dam to be tested and certified to again store 130,000 acre-feet of water. Under the original allocation of joint costs for this facility, the State would have paid approximately six percent of the repair costs. However, because of the recreational benefit this facility provides to the public, the Legislature has approved a recommendation from DWR that the State assume 32.2 percent of these repair costs. The remaining 67.8 percent of repairs costs are being paid for by the three agencies that use the water stored in Lake Perris: Metropolitan (42.9 percent), DWA (3.0 percent) and CVWD (21.9 percent). DWR recovers the cost of repairs through its annual statement of charges sent to each agency. See "METROPOLITAN EXPENSES--State Water Contract Obligations" in this Appendix A.

The dam remediation is one of three major projects to improve seismic stability and enhance public safety in the Perris Dam Remediation Program. The other two projects include the Outlet Tower Improvements project and the Emergency Release Facility ("ERF") project. Construction on the Outlet Tower Improvements project began October 2, 2019. Work on the outlet tower bridge, with modifications to bridge support, bridge seat, end diaphragm, and installation of stiffener plates, is planned for completion in early 2022. The final EIR for the ERF project was certified and approved by DWR in May 2018. Since then, modifications to the ERF project have been identified and the Addendum No. 1 to the EIR was published in September 2020. The ERF project includes improvements downstream of the reservoir that would direct the flow of water in an emergency requiring the dewatering of the reservoir. Flows would be directed through a series of berms and lined and unlined channels that would ultimately terminate at the Riverside County Flood Control and Water Conservation District's Perris Valley Channel. The ERF project is planned to be completed in 2023. The Outlet Tower Improvements and ERF projects enhance the safety of the dam for other risks in addition to that posed by earthquakes. It is anticipated that costs will be shared in the same manner as for the Lake Perris dam remediation project. DWR's current estimate for repair costs (including the share of costs to be assumed by the State) is \$27.1 million for the Outlet Tower Improvements project and \$62.3 million for the ERF project (of which Metropolitan's anticipated share would be 42.9 percent).

### **Security Measures**

Metropolitan conducts ground and air patrols of the CRA and monitoring and testing at all treatment plants and along the CRA. Similarly, DWR has in place security measures reasonably designed to protect critical facilities of the State Water Project, including both ground and air patrols of the State Water Project.

Although Metropolitan has constructed redundant systems and other safeguards to ensure its ability to continually deliver water to its customers, and DWR has made similar efforts, a terrorist attack or other security breach against water facilities could materially impair Metropolitan's ability to deliver water to its customers, its operations, and revenues and its ability to pay its obligations.

## CAPITAL INVESTMENT PLAN

### General Description

Metropolitan’s current Capital Investment Plan (the “Capital Investment Plan” or “CIP”) involves infrastructure and system reliability projects, either as upgrades to existing capital assets or replacements and refurbishments of existing facilities, to ensure reliability as well as enhance operational efficiency and flexibility, and comply with water quality regulations. Metropolitan’s CIP is regularly reviewed and updated. Metropolitan’s biennial budget process includes a review of the projected long-term capital needs and the development of a capital expenditure forecast for the ten-year financial forecast, as well as the identification of the capital priorities of Metropolitan over the biennial budget term. While the award of major contracts and professional services agreements are subject to approval by Metropolitan’s Board, in October 2018 the Board amended the Administrative Code to update the process for appropriating funds and authorizing work to proceed for capital projects. Under the revised process, following the adoption of the biennial budget, a Board action is presented to (1) appropriate the total amount of approved biennial CIP expenditures and (2) authorize the General Manager to initiate and proceed with all work on projects that have been included in the CIP for such biennial period. The new appropriation process has resulted in faster implementation of capital projects. The amount and timing of borrowings to fund capital expenditures will depend upon, among other factors, status of construction activity and water demands within Metropolitan’s service area. From time to time, projects that have been undertaken are delayed, redesigned or deferred by Metropolitan for various reasons, and no assurance can be given that a project in the CIP will be completed in accordance with its original schedule or that any project will be completed as currently planned. In addition, from time to time, when circumstances warrant, Metropolitan’s Board may approve capital expenditures other than or in addition to those contemplated by the CIP at the time of the then current biennial budget.

### Projection of Capital Investment Plan Expenditures

The table below sets forth the projected CIP expenditures by project type for the fiscal years ending June 30, 2021 through 2025, as currently projected for fiscal years 2020-21 and 2021-22, and as reflected in the biennial budget for fiscal years 2020-21 and 2021-22 for fiscal years 2022-2023 through 2024-25. The projection for the current biennium, which covers fiscal years 2020-21 and 2021-22, is updated every month to reflect the most current changes to planned expenditures. The biennial budget is updated every two years as a result of the periodic review and adoption of the capital budget by Metropolitan’s Board. See “HISTORICAL AND PROJECTED REVENUES AND EXPENSES” in this Appendix A.

**CAPITAL INVESTMENT PLAN  
PROJECTION OF EXPENDITURES<sup>(1)</sup>  
(Fiscal Years Ended June 30 - Dollars in Thousands)**

	2021	2022	2023	2024	2025	Total
Infrastructure R&R	\$135,500	\$ 94,000	\$124,500	\$147,700	\$147,900	\$ 649,600
Infrastructure Upgrade	138,400	76,200	127,300	127,200	135,700	604,800
Regulatory Compliance	1,200	500	1,000	500	400	3,600
Stewardship	4,900	3,600	7,600	10,000	8,000	34,100
Supply Reliability	300	0	200	100	3,400	4,000
System Flexibility	16,300	18,900	34,700	0	0	69,900
Water Quality	8,000	2,200	4,700	14,500	4,600	34,000
<b>Total</b>	<b>\$304,600<sup>(2)</sup></b>	<b>\$195,400<sup>(2)</sup></b>	<b>\$300,000</b>	<b>\$300,000</b>	<b>\$300,000</b>	<b>\$1,400,000</b>

Source: Metropolitan.

<sup>(1)</sup> Fiscal years 2020-21 and 2021-22 are based on current projections. Fiscal years 2022-23 through 2024-25 are based on the ten-year financial forecast provided in the biennial budget for fiscal years 2020-21 and 2021-22.

<sup>(2)</sup> Planned capital expenditures of \$250 million per year were appropriated for fiscal years 2020-21 and 2021-22. Projected capital expenditures for fiscal years 2020-21 and 2021-22 in the table above reflect current projections as to the timing of expenditure of the \$500 million of appropriated funds.

In developing the CIP, projects are reviewed, scored and prioritized towards the objectives of ensuring the sustainable delivery of reliable, high-quality water, while meeting all regulatory requirements and maintaining affordability. Additional capital costs may arise in the future as a result of, among other things, federal and State water quality regulations, project changes and mitigation measures necessary to satisfy environmental and regulatory requirements, and additional facilities' needs. See "METROPOLITAN'S WATER DELIVERY SYSTEM—Water Quality and Treatment" in this Appendix A.

Construction projects included in the CIP are subject to ordinary construction risks and delays, including but not limited to: inclement weather or natural hazards affecting work and timeliness of completion; contractor claims or nonperformance; work stoppages or slowdowns; unanticipated project site conditions encountered during construction; errors or omissions in contract documents requiring change orders; and/or higher than anticipated construction bids or costs, any of which could affect the costs and availability of, or delivery schedule for, equipment, components, materials, labor or subcontractors, and result in increased CIP costs. The construction schedules for certain Metropolitan projects were initially delayed as a result of the COVID-19 outbreak and additional delays in the future are possible. See "INTRODUCTION—COVID-19 Pandemic."

### **Capital Investment Plan Financing**

The CIP requires funding from debt financing (see "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A) as well as from pay-as-you-go funding. In connection with the biennial budget process and the development of the ten-year financial forecast provided therein, an internal funding objective is established for the funding of capital program expenditures from current revenues. An internal funding objective to fund 55 to 60 percent of capital program expenditures from current revenues was established in connection with the adoption of the biennial budget for fiscal years 2020-21 and 2021-22. This objective is updated every two years as a result of the periodic review and adoption of the capital budget by Metropolitan's Board. The remainder of capital program expenditures are expected to be funded through the issuance from time to time of water revenue bonds, which are payable from Net Operating Revenues. However, as in prior years, pay-as-you-go or debt funding may be reduced or increased by the Board during the fiscal year.

Projections for fiscal years 2020-21 through 2024-25 assume the issuance of approximately \$585 million (including Metropolitan's 2021 Series A Bonds) in additional water revenue bonds over such period to finance the CIP. These revenue bonds may be issued either as Senior Revenue Bonds under the Senior Debt Resolutions or as Subordinate Revenue Bonds under the Subordinate Debt Resolutions (each as defined under "METROPOLITAN EXPENSES—Limitations on Additional Revenue Bonds" in this Appendix A). The cost of these projected bond issues is reflected in the financial projections under "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A.

### **Major Projects of Metropolitan's Capital Investment Plan**

*Colorado River Aqueduct Facilities.* As previously noted, deliveries through the CRA began in 1941. Through annual inspections and maintenance activities, the performance and reliability of the various components of the CRA are regularly evaluated. Projects under the CRA facilities program are designed to replace or refurbish facilities and components on the CRA system in order to reliably convey water from the Colorado River to Southern California. A variety of projects have been completed over the past 10 years, including, among other things, replacement of the uninterruptible power supply system at each of the five pumping plants, replacement of high voltage circuit breakers and transformers at the five pumping plant switchyards, refurbishment of operators and power centers on the head gates downstream of the pumping plants, replacement of several miles of deteriorated concrete canal liner, new wastewater systems at the Hinds and Eagle Mountain Pumping Plants, replacement of the sand trap facilities upstream of the Hinds, Eagle Mountain, and Iron Mountain pumping plants, and replacement of the outlet gates and appurtenant electrical, mechanical, and control systems at the Copper Basin Reservoir. Projects currently underway

include radial gates replacement along the CRA, rehabilitation of the Gene Wash Reservoir discharge structure, and projects to refurbish or replace electrical and mechanical system components at each of the five pumping plants, including power cables, overhead cranes, and sump systems. Additionally, many of the mechanical and electrical components, including the nine main pumps and motors at each of the five pumping plants will be evaluated and replaced or refurbished over the next several years. The current projected cost estimate for all prior and planned refurbishment or replacement projects under the CRA facilities program is \$762.8 million. Costs through October 2020 were \$349.4 million. Budgeted aggregate capital expenditures for improvements on the CRA for fiscal years 2020-21 and 2021-22 are \$107.4 million.

***Distribution System – Prestressed Concrete Cylinder Pipe.*** Metropolitan's distribution system is comprised of approximately 830 miles of pipelines ranging in diameter from 30 inches to over 200 inches. (See "METROPOLITAN'S WATER DELIVERY SYSTEM" in this Appendix A.) 163 miles of the distribution system is made up of prestressed concrete cylinder pipe ("PCCP"). In response to PCCP failures experienced by several water agencies, Metropolitan initiated the PCCP Assessment Program in December 1996 to evaluate the condition of Metropolitan's PCCP lines and investigate inspection and refurbishment methods. As a result, Metropolitan has identified and made improvements to several sections of PCCP. The costs for these improvements through February 2020 were \$99.2 million. Rather than continue to make spot repairs to pipe segments, Metropolitan has initiated a long-term capital program to rehabilitate approximately 100 miles of PCCP in five pipelines by relining with a welded steel liner. The first two major contracts to reline approximately 6.4 miles of PCCP on the Second Lower Feeder have been completed. The third major contract to reline an additional approximately 4.5 miles of PCCP on the Second Lower Feeder was awarded in May 2019 and is estimated to be completed by the end of 2020. As a change order to the same contract, an additional approximately 2,900 feet of re-lining of PCCP on the Second Lower Feeder was completed in late 2020. Subsequent contracts are planned to be awarded annually depending on shutdown scheduling. In order to meet the critical timing of the relining projects, the steel pipe lining sections for the next contract are being purchased in advance. Costs through October 2020 for all PCCP work (including the \$99.3 million of repairs costs noted above) were \$280.1 million. The estimated cost to reline all 100 miles of PCCP is approximately \$2.2 billion and is expected to be undertaken over a period of approximately 20 years. Budgeted aggregate capital expenditures for PCCP rehabilitation for fiscal years 2020-21 and 2021-22 are \$53.9 million.

***Distribution System – Refurbishments and Improvements.*** In addition to the long-term program to rehabilitate Metropolitan's PCCP lines, several other components of the distribution system including dams and reservoirs are being refurbished and/or improved. Major projects completed to date include the \$70 million replacement of the outlet facilities at Lake Mathews, the first two phases of the Orange County Feeder and Etiwanda Pipeline relining projects for a total of \$34 million, and various other facility refurbishment and replacement projects ranging in cost from approximately \$500,000 to over \$10 million. Ongoing projects to ensure the reliability of the distribution system, primarily due to age, include multiple replacements or refurbishments of isolation and control valves and gates, lining replacement of remaining portions of the Etiwanda Pipeline and Orange County Feeder, refurbishment to pressure control and hydroelectric power facilities, system improvements to provide drought relief, replacement of finished water reservoir covers and liners, upgrading dam monitoring systems, and various other upgrades totaling approximately \$450.1 million through October 2020. The current projected cost estimate for the prior and planned refurbishment or replacement projects, other than the PCCP relining, is \$1.4 billion. For fiscal years 2020-21 and 2021-22, budgeted aggregate capital expenditures for refurbishing and improvements on the distribution system, other than PCCP rehabilitation, are \$123.7 million.

***System Reliability.*** System Reliability projects are implemented at facilities throughout Metropolitan's system to utilize new processes or technologies, to improve safety, or to increase overall reliability. Significant projects in this category include seismic strengthening of Metropolitan's headquarters building, construction or improvement of operations support facilities such as the La Verne machine and fabrication shops, security system enhancements, and information technology infrastructure projects. The total estimated cost for all prior and projected system reliability improvements under this program is



approximately \$544.8 million, with \$237.8 million spent through October 2020. Budgeted aggregate capital expenditures for improvements on system reliability projects for fiscal years 2020-21 and 2021-22 are \$97.4 million.

***F.E. Weymouth Treatment Plant Improvements.*** The Weymouth Treatment Plant, built in 1938, is Metropolitan's oldest water treatment facility. It has been subsequently expanded several times since its original construction. Metropolitan has completed several upgrades and refurbishment/replacement projects to maintain the plant's reliability and improve its efficiency. These include power systems upgrades, residual solids dewatering facility, refurbishment/replacement of the mechanical equipment in two of the eight flocculation and settling basins, a new plant maintenance facility, new chemical feed systems and storage tanks, replacement of the plant domestic/fire water system, seismic upgrades to the plant inlet structure and filter buildings, upgrades to the plants filters, and a new chlorine handling and containment facility. Significant projects over the next several years include refurbishment of four of the plant's settling basins and strengthening inlet channels to the basins, seismic retrofits to the administration building, and replacement of the valves used to control filter operation. The cost estimate for all prior and projected improvements at the Weymouth plant, not including the ozone facilities, is approximately \$453.8 million, with \$300.8 million spent through October 2020. Budgeted aggregate capital expenditures for improvements at the Weymouth plant for fiscal years 2020-21 and 2021-22 are \$18.7 million.

***Robert B. Diemer Treatment Plant Improvements.*** The Diemer Treatment Plant, built in 1963 and subsequently expanded in 1968, is Metropolitan's second oldest water treatment facility. Several upgrades and refurbishment/replacement projects have been completed at the Diemer plant, including power system upgrades, a new residual solids dewatering facility, new vehicle and plant maintenance facilities, new chemical feed systems and storage tanks, a new chlorine handling and containment facility, construction of a roller-compacted concrete slope stabilization system, a new secondary access road, and upgrades to half of the plant's settling basins and filter valves. Significant projects over the next several years include the completion of refurbishment of the plant's settling basins and replacement of the valves used to control filter operation, and seismic retrofits to the filter buildings. The current cost estimate for all prior and projected improvements at the Diemer plant, not including the ozone facilities, is approximately \$432.1 million, with \$315.2 million spent through October 2020. Budgeted aggregate capital expenditures for improvements at the Diemer plant for fiscal years 2020-21 and 2021-22 are \$22.9 million.

## METROPOLITAN REVENUES

### General

Until water deliveries began in 1941, Metropolitan's activities were, by necessity, supported entirely through the collection of *ad valorem* property taxes. Since the mid-1980s, water revenues, which includes revenues from water sales, wheeling and exchanges, have provided approximately 80 percent of total revenues annually. In that time period, *ad valorem* property taxes have accounted for about 10 percent of total revenues, and in fiscal year 2019-20, *ad valorem* property taxes accounted for approximately 10 percent of total revenues. See "Revenue Allocation Policy and Tax Revenues." The remaining revenues have been derived principally from the sale of hydroelectric power, interest on investments and additional revenue sources (water standby charges and availability of service charges) beginning in 1992. *Ad valorem* taxes do not constitute a part of Operating Revenues and are not available to make payments with respect to the water revenue bonds issued by Metropolitan.

The basic rate for untreated water service for domestic and municipal uses is \$777 per acre-foot at the Tier 1 level, which became effective January 1, 2021. See "Rate Structure" and "Water Rates." The *ad valorem* tax rate for Metropolitan purposes has gradually been reduced from a peak equivalent rate of 0.1250 percent of full assessed valuation in fiscal year 1945-46 to 0.0035 percent of full assessed valuation for fiscal year 2020-21. The rates charged by Metropolitan represent the cost of Metropolitan's wholesale

water service to its member agencies, and not the cost of water to the ultimate consumer. Metropolitan does not exercise control over the rates charged by its member agencies or their subagencies to their customers.

### Summary of Revenues by Source

The following table sets forth Metropolitan’s sources of revenues for the five fiscal years ended June 30, 2020, on a modified accrual basis. All information is unaudited. Audited financial statements for the fiscal years ended June 30, 2020 and June 30, 2019 are included in APPENDIX B–“THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA INDEPENDENT AUDITORS’ REPORT AND BASIC FINANCIAL STATEMENTS FOR FISCAL YEARS ENDED JUNE 30, 2020 AND JUNE 30, 2019 AND BASIC FINANCIAL STATEMENTS FOR THE THREE MONTHS ENDED SEPTEMBER 30, 2020 AND 2019 (UNAUDITED).”

#### SUMMARY OF REVENUES BY SOURCE<sup>(1)</sup> Fiscal Years Ended June 30 (Dollars in Millions)

	2016	2017	2018	2019	2020
Water Revenues <sup>(2)</sup>	\$1,166	\$1,151	\$1,285	\$1,149	\$1,188
Taxes, Net <sup>(3)</sup>	108	116	131	145	147
Additional Revenue Sources <sup>(4)</sup>	200	184	172	170	165
Interest on Investments	18	4	8	34	20
Hydroelectric Power Sales	7	21	24	18	16
Other Revenues <sup>(5)</sup>	<u>245</u>	<u>51</u>	<u>28</u>	<u>22</u>	<u>14</u>
Total Revenues	<u>\$1,744</u>	<u>\$1,527</u>	<u>\$1,648</u>	<u>\$1,538</u>	<u>\$1,550</u>

Source: Metropolitan.

- (1) Does not include any proceeds from the sale of bonded indebtedness.
- (2) Water revenues include revenues from water sales, exchanges, and wheeling.
- (3) *Ad valorem* taxes levied by Metropolitan are applied solely to the payment of outstanding general obligation bonds of Metropolitan and to State Water Contract obligations.
- (4) Includes revenues derived from water standby charges, readiness-to-serve, and capacity charges.
- (5) Includes miscellaneous revenues and Build America Bonds (BABs) subsidy payment of \$12.3 million, \$9.8 million, \$15.0 million, \$12.5 million, and \$2.9 in fiscal years 2015-16 through 2019-20, respectively. Fiscal years 2015-16, 2016-17, and 2017-18, include \$222 million, \$33 million, and \$1 million, respectively, of water conservation and supply program expenses, funded from a like amount of funds transferred from the Water Management Fund.

### Revenue Allocation Policy and Tax Revenues

The Board determines the water revenue requirement for each fiscal year after first projecting the *ad valorem* tax levy for that year. The tax levy for any year is subject to limits imposed by the State Constitution, the Act and Board policy and to the requirement under the State Water Contract that in the event that Metropolitan fails or is unable to raise sufficient funds by other means, Metropolitan must levy upon all property within its boundaries not exempt from taxation a tax or assessment sufficient to provide for all payments under the State Water Contract. See “HISTORICAL AND PROJECTED REVENUES AND EXPENSES” in this Appendix A. Beginning with fiscal year 1990-91, the Act limits Metropolitan’s tax levy to the amount needed to pay debt service on Metropolitan’s general obligation bonds and to satisfy a portion of Metropolitan’s State Water Contract obligation. However, Metropolitan has authority to impose a greater tax levy if, following a public hearing, the Board finds that such revenue is essential to Metropolitan’s fiscal integrity. For each fiscal year since 2013-14, the Board has exercised that authority and voted to suspend the tax limit clause in the Act, maintaining the fiscal year 2012-13 *ad valorem* tax rate to pay for a greater portion of Metropolitan’s State Water Contract obligations. Any deficiency between tax levy receipts and Metropolitan’s State Water Contract obligations is expected to be paid from Operating Revenues, as defined

in the Senior Debt Resolutions (defined in this Appendix A under “METROPOLITAN EXPENSES—Limitations on Additional Revenue Bonds”).

The COVID-19 pandemic has negatively affected economic activity throughout the U.S., including within the Southern California region. These negative impacts may reduce or otherwise negatively affect future property tax values within Metropolitan’s service area and/or Metropolitan’s tax levy receipts. The assumptions underlying Metropolitan’s financial projections for fiscal years 2020-21 through 2024-25 include modest annual increases in assessed valuation over the five-year projection period that are significantly below the average annual assessed valuation increases actually observed, and property tax delinquency rates that are significantly in excess of the property tax delinquency rate actually experienced, over the five fiscal years 2014-15 through 2018-19, which is expected to help abate the financial effects of such COVID-19 impacts if they occur. See “INTRODUCTION—COVID-19 Pandemic.”

### **Water Revenues**

**General; Authority.** Water rates are established by the Board and are not subject to regulation or approval by the California Public Utilities Commission or by any other local, State or federal agency. In accordance with the Act, water rates must be uniform for like classes of service. Metropolitan, a wholesaler, provides two types of services: full-service water service (treated or untreated) and wheeling service. See “Classes of Water Service.”

No member agency of Metropolitan is obligated to purchase water from Metropolitan. However, 21 of Metropolitan’s 26-member agencies have entered into 10-year voluntary water supply purchase orders (“Purchase Orders”) effective through December 31, 2024. See “Member Agency Purchase Orders.” Consumer demand and locally supplied water vary from year to year, resulting in variability in water revenues. See “REGIONAL WATER RESOURCES” in this Appendix A. Metropolitan uses its financial reserves and budgetary tools to manage the financial impact of the variability in revenues due to fluctuations in annual water transactions. See “MANAGEMENT’S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES” in this Appendix A.

**Payment Procedure.** Water is delivered to the member agencies on demand and is metered at the point of delivery. Member agencies are billed monthly and a late charge of one percent of the delinquent payment is assessed for a payment that is delinquent for no more than five business days. A late charge of two percent of the amount of the delinquent payment is charged for a payment that is delinquent for more than five business days for each month or portion of a month that the payment remains delinquent. Metropolitan has the authority to suspend service to any member agency delinquent for more than 30 days. Delinquencies have been rare; in such instances late charges have been collected. No service has been suspended because of delinquencies.

**Water Revenues.** The following table sets forth water transactions (which includes water sales, exchanges, and wheeling) in acre-feet and water revenues (which includes revenues from water sales, exchanges, and wheeling) for the five fiscal years ended June 30, 2020, on a modified accrual basis. As reflected in the table below, water revenues for the fiscal year ended June 30, 2020 aggregated \$1,188.0 million, of which \$1,047.9 million was generated from water sales and \$140.1 million was generated from exchanges and wheeling. Water revenues of Metropolitan for the fiscal years ended June 30, 2020 and June 30, 2019, on an accrual basis, are shown in Metropolitan’s audited financial statements included in Appendix B.

**SUMMARY OF WATER TRANSACTIONS AND REVENUES**  
**Fiscal Years Ended June 30**

<b>Year</b>	<b>Water Transactions in Acre-Feet<sup>(1)</sup></b>	<b>Water Revenues<sup>(2)</sup> (in millions)</b>	<b>Dollars Per Acre-Foot</b>	<b>Average Dollars Per 1,000 Gallons</b>
2016	1,623,052	\$1,166.0	\$718	\$2.20
2017	1,540,915	1,150.5	747	2.29
2018	1,610,969	1,285.2	798	2.45
2019	1,418,324	1,148.7	810	2.49
2020	1,419,156	1,188.0	837	2.57

Source: Metropolitan.

<sup>(1)</sup> Water Transactions include water sales, exchanges, and wheeling with member agencies and third parties.

<sup>(2)</sup> Water Revenues include revenues from water sales, exchanges, and wheeling. Water Revenues from wheeling and exchange transactions were \$84.3 million, \$87.4 million, \$96.1 million, \$102.2 million and \$140.1 million in the fiscal years ended June 30, 2016 through 2020, respectively.

**Principal Customers**

Total water transactions accrued for the fiscal year ended June 30, 2020, were 1.42 million acre-feet, generating \$1.19 billion in water revenues for such period. Metropolitan's ten largest water customers for the year ended June 30, 2020 are shown in the following table, on an accrual basis. The SDCWA has filed litigation challenging Metropolitan's rates. See "--Litigation Challenging Rate Structure."

**TEN LARGEST WATER CUSTOMERS**  
**Year Ended June 30, 2020**  
**Accrual Basis**

<b>Agency</b>	<b>Water Revenues<sup>(1)</sup> (in Millions)</b>	<b>Percent of Total</b>	<b>Water Transactions in Acre-Feet<sup>(2)</sup></b>	<b>Percent of Total</b>
San Diego CWA	\$ 187.3	15.8%	324,660	22.9%
MWD of Orange County	152.6	12.8	157,346	11.1
City of Los Angeles	129.0	10.9	148,022	10.4
West Basin MWD	119.7	10.1	112,636	7.9
Calleguas MWD	99.6	8.4	93,802	6.6
Eastern MWD	93.9	7.9	105,215	7.4
Three Valleys MWD	65.4	5.5	73,239	5.2
Western MWD of Riverside County	59.8	5.0	64,811	4.6
Inland Empire Utilities Agency	47.0	4.0	64,538	4.5
City of Long Beach	30.2	2.5	28,332	2.0
<b>Total</b>	<b>\$ 984.5</b>	<b>82.9%</b>	<b>1,172,602</b>	<b>82.6%</b>
<b>Total Water Revenues<sup>(1)</sup></b>	<b>\$1,188.0</b>	<b>Total Acre-Feet<sup>(2)</sup></b>	<b>1,419,156</b>	

Source: Metropolitan.

<sup>(1)</sup> Water Revenues include revenues from water sales, exchanges, and wheeling.

<sup>(2)</sup> Water Transactions include water sales, exchanges, and wheeling with member agencies and third parties.

**Rate Structure**

The following rates and charges are elements of Metropolitan's unbundled rate structure:

**Tier 1 and Tier 2 Water Supply Rates.** The rate structure recovers supply costs through a two-tiered price structure. The Tier 1 Supply Rate supports a regional approach through the uniform, postage stamp

rate. The Tier 1 Supply Rate is calculated as the amount of the total supply revenue requirement that is not covered by the Tier 2 Supply Rate divided by the estimated amount of Tier 1 water sales. The Tier 2 Supply Rate is a volumetric rate that reflects Metropolitan's cost of purchasing water transfers north of the Delta. The Tier 2 Supply Rate encourages the member agencies and their customers to maintain existing local supplies and develop cost-effective local supply resources and conservation. Member agencies are charged the Tier 1 or Tier 2 Water Supply Rate for water purchases, as described under "–Member Agency Purchase Orders" below.

**System Access Rate.** The System Access Rate recovers the cost of the conveyance and distribution system that is used on an average annual basis through a uniform, volumetric rate. The System Access Rate is charged for each acre-foot of water transported by Metropolitan, regardless of the ownership of the water being transported. All users (including member agencies and third-party wheelers) using Metropolitan's water system to transport water pay the same System Access Rate for the use of the system conveyance and distribution capacity to meet average annual demands.

**Water Stewardship Rate.** The Water Stewardship Rate was designed to provide a dedicated source of funding for conservation and local resources development through a uniform, volumetric rate. The Water Stewardship Rate was charged on each acre-foot of water delivered by Metropolitan through December 31, 2020, except SDCWA Exchange Agreement deliveries as explained below, and is allocated to Metropolitan's transportation rates. All users (including member agencies and third-party wheelers) benefit from avoided system infrastructure costs through conservation and local resources development, and from the system capacity made available by investments in demand management programs like Metropolitan's Conservation Credits Program and Local Resources Program. Therefore, all users paid the Water Stewardship Rate, except on water delivered to SDCWA pursuant to the Exchange Agreement (see "METROPOLITAN REVENUES–Water Rates" and "–Litigation Challenging Rate Structure" in this Appendix A) in calendar years 2018, 2019, and 2020. The Water Stewardship Rate was not incorporated into Metropolitan's rates and charges for calendar years 2021 and 2022 and therefore has not been collected on water transactions after December 31, 2020. See also "CONSERVATION AND WATER SHORTAGE MEASURES–General."

In *San Diego County Water Authority v. Metropolitan Water District of Southern California, et al.* (see "–Litigation Challenging Rate Structure" below), the Court of Appeal held that the administrative record before it for the rates in calendar years 2011 through 2014 did not support Metropolitan's Water Stewardship Rate allocation to transportation rates, but the court did not address the allocation in subsequent years based on a different record. On April 10, 2018, the Board suspended the billing and collection of the Water Stewardship Rate on Exchange Agreement deliveries to SDCWA in calendar years 2018, 2019, and 2020, pending Metropolitan's completion of a cost allocation study of its demand management costs recovered through the Water Stewardship Rate. For calendar year 2018, the suspension was retroactive to January 1, 2018. The total effect of the suspension, taking into consideration the lower revenues over the three calendar years, is estimated to be up to approximately \$46 million.

Having completed a demand management cost allocation process, on December 10, 2019, Metropolitan's Board directed staff to incorporate the use of the 2019-20 fiscal year-end balance of the Water Stewardship Fund to fund demand management costs in the proposed biennial budget for fiscal years 2020-21 and 2021-22 and to not incorporate the Water Stewardship Rate (or any other rates or charges to recover demand management costs), with the proposed rates and charges for calendar years 2021 and 2022, to allow the Board to consider demand management funding in relation to the 2020 Integrated Resources Plan update and to undergo a rate structure refinement process. The balance of the Water Stewardship Fund as of June 30, 2020 was \$133 million, which based on the biennial budget for fiscal years 2020-21 and 2021-22, is expected to be sufficient to fund the demand management costs during the biennial budget period.

**System Power Rate.** The System Power Rate recovers the cost of energy required to pump water to Southern California through the State Water Project and CRA. The cost of power is recovered through a

uniform, volumetric rate. The System Power Rate is applied to all deliveries of Metropolitan water to member agencies. Wheeling parties pay for actual cost (not system average) of power needed to move the water. Member agencies engaging in wheeling transactions of up to one year pay the wheeling rate (consisting of the actual cost of power, the System Access Rate, the Water Stewardship Rate, and an administrative fee). Other wheeling transactions are pursuant to individual contracts. For example, a party wheeling water through the California Aqueduct would pay the variable power cost associated with using the State Water Project transportation facilities.

**Treatment Surcharge.** The Treatment Surcharge recovers all of the costs of providing treatment capacity and operations through a uniform, volumetric rate per acre-foot of treated water transactions. The Treatment Surcharge is charged to all treated water transactions.

The amount of each of these rates since January 1, 2016, is shown in the table entitled "SUMMARY OF WATER RATES" under "-Water Rates" below.

### **Member Agency Purchase Orders**

The current rate structure allows member agencies to choose to purchase water from Metropolitan by means of a Purchase Order. Purchase Orders are voluntary agreements that determine the amount of water that a member agency can purchase at the Tier 1 Supply Rate. Under the Purchase Orders, member agencies have the option to purchase a greater amount of water (based on past purchase levels) over the term of the Purchase Order. Such agreements allow member agencies to manage costs and provide Metropolitan with a measure of secure revenue.

In November 2014, the Metropolitan Board approved new Purchase Orders effective January 1, 2015 through December 31, 2024 (the "Purchase Order Term"). Twenty-one of Metropolitan's 26-member agencies have Purchase Orders, which commit the member agencies to purchase a minimum amount of supply from Metropolitan (the "Purchase Order Commitment").

The key terms of the Purchase Orders include:

- A ten-year term, effective January 1, 2015 through December 31, 2024;
- A higher Tier 1 limit based on the Base Period Demand, determined by the member agency's choice between (1) the Revised Base Firm Demand, which is the highest fiscal year purchases during the 13-year period of fiscal year 1989-90 through fiscal year 2001-02, or (2) the highest year purchases in the most recent 12-year period of fiscal year 2002-03 through 2013-14. The demand base is unique for each member agency, reflecting the use of Metropolitan's system water over time;
- An overall purchase commitment by the member agency based on the Demand Base period chosen, times ten to reflect the ten-year Purchase Order term. Those agencies choosing the more recent 12-year period may have a higher Tier 1 Maximum and commitment. The commitment is also unique for each member agency;
- The opportunity to reset the Base Period Demand using a five-year rolling average;
- Any obligation to pay the Tier 2 Supply Rate will be calculated over the ten-year period, consistent with the calculation of any Purchase Order commitment obligation; and
- An appeals process for agencies with unmet purchase commitments that will allow each acre-foot of unmet commitment to be reduced by the amount of production from a local resource project that commences operation on or after January 1, 2014.



Member agencies that do not have Purchase Orders in effect are subject to Tier 2 Supply Rates for amounts exceeding 60 percent of their base amount (equal to the member agency's highest fiscal year demand between 1989-90 and 2001-02) annually.

### **Other Charges**

The following paragraphs describe the additional charges for the use of Metropolitan's distribution system:

**Readiness-to-Serve Charge.** The Readiness-to-Serve Charge ("RTS") recovers the cost of the portion of the system that is available to provide emergency service and available capacity during outages and hydrologic variability. The RTS is a fixed charge that is allocated among the member agencies based on a ten-fiscal year rolling average of firm demands. Water transfers and exchanges, except SDCWA Exchange Agreement transactions, are included for purposes of calculating the ten-fiscal year rolling average. The Standby Charge, described below, will continue to be collected at the request of a member agency and applied as a direct offset to the member agency's RTS obligation. The RTS (including RTS charge amounts collected through the Standby Charge described below) generated \$137.5 million in fiscal year 2017-18, \$136.5 million in fiscal year 2018-19, and \$134.5 million in fiscal year 2019-20. Based on the adopted rates and charges, the RTS (including RTS charge amounts expected to be collected through the Standby Charge described below) is projected to generate \$133.0 million in fiscal year 2020-21 and \$135.0 million in fiscal year 2021-22.

**Water Standby Charges.** The Standby Charge is authorized by the State Legislature and has been levied by Metropolitan since fiscal year 1992-93. Metropolitan will continue to levy the Standby Charge only within the service areas of the member agencies that request that the Standby Charge be utilized to help fund a member agency's RTS obligation. See "- Readiness-to-Serve Charge" above. The Standby Charge for each acre or parcel of less than an acre will vary from member agency to member agency, reflecting current rates, which have not exceeded the rates set in fiscal year 1993-94, and range from \$5 to \$15 for each acre or parcel less than an acre within Metropolitan's service area, subject to specified exempt categories. Standby charges are assessments under the terms of Proposition 218, a State constitutional ballot initiative approved by the voters on November 5, 1996, but Metropolitan's current standby charges are exempt from Proposition 218's procedural requirements. See "-California Ballot Initiatives."

Twenty-two of Metropolitan's member agencies collect their RTS charges through Standby Charges. RTS charges collected by means of such Standby Charges were \$41.6 million in fiscal year 2017-18, \$41.7 million in fiscal year 2018-19, and \$41.7 million in fiscal year 2019-20.

**Capacity Charge.** The Capacity Charge recovers costs incurred to provide peak capacity within Metropolitan's distribution system. The Capacity Charge provides a price signal to encourage agencies to reduce peak demands on the distribution system and to shift demands that occur during the May 1 through September 30 period into the October 1 through April 30 period. This results in more efficient utilization of Metropolitan's existing infrastructure and deferring capacity expansion costs. Each member agency will pay the Capacity Charge per cfs based on a three-year trailing peak (maximum) day demand, measured in cfs. Each member agency's peak day is likely to occur on different days; therefore, this measure approximates peak week demands on Metropolitan. The Capacity Charge was \$8,800 per cfs effective as of January 1, 2020 and was \$10,700 per cfs effective as of January 1, 2021. The Capacity Charge will be \$12,200 per cfs effective as of January 1, 2022. The Capacity Charge generated \$34.6 million in fiscal year 2017-18, \$33.0 million in fiscal year 2018-19, and \$30.5 million in fiscal year 2019-20. Based on the adopted rates and charges, the Capacity Charge is projected to generate \$32.3 million in fiscal year 2020-21 and \$40.5 million in fiscal year 2021-22.

## Classes of Water Service

Metropolitan, a wholesaler, provides two types of services: full-service water service (treated or untreated) and wheeling service. Metropolitan has one class of customers: its member agencies. The level of rate unbundling in Metropolitan's rate structure provides transparency to show that rates and charges recover only those functions involved in the applicable service, and that no cross-subsidy of costs exists. Metropolitan's cost of service process and resulting unbundled rate structure ensures that its wholesale customers pay for only those services they elect to receive.

The applicable rate components and fixed charges for each class of water service are shown in the chart below.

### Current Services and Rate Components

Service	Rates & Charges That Apply						
	System Access	Water Stewardship <sup>(1)</sup>	System Power	Tier 1/ Tier 2	Readiness to Serve	Capacity Charge	Treatment Surcharge
Full Service Untreated	Yes	No	Yes	Yes	Yes	Yes	No
Full Service Treated	Yes	No	Yes	Yes	Yes	Yes	Yes
Wheeling Service <sup>(2)</sup>	Yes	No	No <sup>(3)</sup>	No	Yes	Yes	Yes <sup>(4)</sup>

<sup>(1)</sup> As described under "Rate Structure –Water Stewardship Rate," the Water Stewardship Rate has not been incorporated into Metropolitan's rates and charges for calendar years 2021 and 2022 and therefore has not been collected on water transactions after December 31, 2020.

<sup>(2)</sup> Metropolitan's rate for wheeling service applies to wheeling to member agencies in transactions of up to one year.

<sup>(3)</sup> Under Metropolitan's rate for wheeling service, wheeling parties must pay for their own cost for power (if such power can be scheduled by Metropolitan) or pay Metropolitan for the actual cost (not system average) of power service utilized for delivery of the wheeled water. In addition, wheeling parties shall be assessed an administration fee of not less than \$5,000 per transaction.

<sup>(4)</sup> If applicable.

Metropolitan offers three programs that encourage the member agencies to increase groundwater and emergency storage and for which certain Metropolitan charges are inapplicable.

*(1) Conjunctive Use Program.* The Conjunctive Use Program is operated through individual agreements with member and retail agencies for groundwater storage within Metropolitan's service area. Wet-year imported supplies are stored to enhance reliability during dry, drought, and emergency conditions. Metropolitan has the option to call water stored in the groundwater basins for the participating member agency pursuant to its contractual conjunctive use agreement. At the time of the call, the member agency pays the prevailing rate for that water, but the deliveries are excluded from the calculation of the Capacity Charge because Conjunctive Use Program deliveries are made at Metropolitan's discretion. Conjunctive use programs may also contain cost-sharing terms related to operational costs. See "REGIONAL WATER RESOURCES–Local Water Supplies" in this Appendix A.

*(2) Cyclic Storage Program.* The Cyclic Storage Program refers collectively to the existing Cyclic Storage Program agreements and the Pre-Deliveries Program approved in 2019. The Program is operated through individual agreements with member agencies for groundwater or surface water storage or pre-deliveries within Metropolitan's service area. Wet-year imported supplies are stored to enhance reliability during dry, drought, and emergency conditions. Deliveries to the cyclic storage accounts are at Metropolitan's discretion while member agencies have discretion on whether they want to accept the water. At the time the water is delivered from the cyclic storage account, the prevailing full-service rate applies, but deliveries are excluded from the calculation of the Capacity Charge because Cyclic Storage Program deliveries are made at Metropolitan's discretion. Cyclic agreements may also contain a credit payable to the member agencies under terms approved by the Board in April 2019. See "REGIONAL WATER RESOURCES–Local Water Supplies" in this Appendix A.

(3) *Emergency Storage Program.* The Emergency Storage Program is used for delivering water for emergency storage in surface water reservoirs and storage tanks. Emergency Storage Program purposes include initially filling a newly constructed reservoir or storage tank and replacing water used during an emergency. Because Metropolitan could interrupt delivery of this water, Emergency Storage Program Deliveries are excluded from the calculation of the RTS Charge, the Capacity Charge, and the Tier 1 maximum.

The applicable rate components and fixed charges applicable for each such program are shown in the following chart.

**Current Programs and Rate Components**

Program	Rates & Charges That Apply						
	Supply	System Access	Water Stewardship <sup>(1)</sup>	System Power	Readiness to Serve	Capacity Charge	Tier 1 Maximum
Full Service	Yes	Yes	No	Yes	Yes	Yes	Yes
Conjunctive Use	Yes	Yes	No	Yes	Yes	No	Yes
Cyclic	Yes	Yes	No	Yes	Yes	No	Yes
Emergency Storage	Yes	Yes	No	Yes	No	No	No <sup>(2)</sup>

<sup>(1)</sup> As described under “–Rate Structure –Water Stewardship Rate,” the Water Stewardship Rate has not been incorporated into Metropolitan’s rates and charges for calendar years 2021 and 2022 and therefore has not been collected on water transactions after December 31, 2020.

<sup>(2)</sup> Emergency Storage Program pays the Tier 1 Supply Rate; purchases under Emergency Storage program do not count towards a member agency’s Tier 1 Maximum.

**Water Rates**

The following table sets forth Metropolitan’s water rates by category beginning January 1, 2016. See also “MANAGEMENT’S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES–Water Revenues” in this Appendix A. In addition to the base rates for untreated water sold in the different classes of service, the columns labeled “Treated” include the surcharge that Metropolitan charges for water treated at its water treatment plants. See “–Rate Structure” and “–Classes of Water Service” for descriptions of current rates. See also “–Litigation Challenging Rate Structure” for a description of litigation challenging Metropolitan’s water rates.

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**SUMMARY OF WATER RATES  
(Dollars Per Acre-Foot)**

	SUPPLY RATE		SYSTEM ACCESS RATE	WATER STEWARDSHIP RATE <sup>(1)</sup>	SYSTEM POWER RATE	TREATMENT SURCHARGE
	Tier 1	Tier 2				
January 1, 2016	\$156	\$290	\$259	\$41	\$138	\$348
January 1, 2017	\$201	\$295	\$289	\$52	\$124	\$313
January 1, 2018	\$209	\$295	\$299	\$55	\$132	\$320
January 1, 2019	\$209	\$295	\$326	\$69	\$127	\$319
January 1, 2020	\$208	\$295	\$346	\$65	\$136	\$323
January 1, 2021*	\$243	\$285	\$373	\$--	\$161	\$327
January 1, 2022*	\$243	\$285	\$389	\$--	\$167	\$344

	FULL SERVICE TREATED <sup>(2)</sup>		FULL SERVICE UNTREATED <sup>(3)</sup>	
	Tier 1	Tier 2	Tier 1	Tier 2
January 1, 2016	\$942	\$1,076	\$594	\$728
January 1, 2017	\$979	\$1,073	\$666	\$760
January 1, 2018	\$1,015	\$1,101	\$695	\$781
January 1, 2019	\$1,050	\$1,136	\$731	\$817
January 1, 2020	\$1,078	\$1,165	\$755	\$842
January 1, 2021*	\$1,104	\$1,146	\$777	\$819
January 1, 2022*	\$1,143	\$1,185	\$799	\$841

Source: Metropolitan.

\* Rates effective January 1, 2021 and January 1, 2022 were adopted by Metropolitan's Board on April 14, 2020.

(1) As described under "Rate Structure - Water Stewardship Rate," the Water Stewardship Rate has not been incorporated into Metropolitan's rates and charges for calendar years 2021 and 2022 and therefore has not been collected on water transactions after December 31, 2020.

(2) Full service treated water rates are the sum of the applicable Supply Rate, System Access Rate, Water Stewardship Rate, System Power Rate and Treatment Surcharge.

(3) Full service untreated water rates are the sum of the applicable Supply Rate, System Access Rate, Water Stewardship Rate and System Power Rate.

**Financial Reserve Policy**

Metropolitan's reserve policy provides for a minimum reserve requirement and target amount of unrestricted reserves at June 30 of each year. The minimum reserve requirement at June 30 of each year is equal to the portion of fixed costs estimated to be recovered by water revenues for the 18 months beginning with the immediately succeeding July. Funds representing the minimum reserve requirement are held in the Revenue Remainder Fund. Any funds in excess of the minimum reserve requirement are held in the Water Rate Stabilization Fund. The target amount of unrestricted reserves is equal to the portion of the fixed costs estimated to be recovered by water revenues during the two years immediately following the 18-month period used to calculate the minimum reserve requirement. Funds in excess of the target amount are to be utilized for capital expenditures in lieu of the issuance of additional debt, or for the redemption, defeasance or purchase of outstanding bonds or commercial paper as determined by the Board. Provided that the fixed charge coverage ratio is at or above 1.2, amounts in the Water Rate Stabilization Fund may be expended for

any lawful purpose of Metropolitan, as determined by the Board. See "CAPITAL INVESTMENT PLAN–Capital Investment Plan Financing" in this Appendix A.

At June 30, 2020, unrestricted reserves, which consist of the Water Rate Stabilization Fund and the Revenue Remainder Fund, totaled \$448 million on a modified accrual basis. As of June 30, 2020, the minimum reserve requirement was \$269.5 million, and the target reserve level was \$654.4 million.

Due to SDCWA's litigation challenging Metropolitan's rates and pursuant to the Exchange Agreement between Metropolitan and SDCWA, Metropolitan is required to set aside funds based on the quantities of exchange water that Metropolitan provides to SDCWA and the amount of charges disputed by SDCWA. In April 2016, Metropolitan transferred these funds from unrestricted financial reserves to a new designated fund, the Exchange Agreement Set-Aside Fund. As of November 30, 2020, Metropolitan held \$57.90 million in the Exchange Agreement Set-Aside Fund. This amount contains the disputed Water Stewardship Rate payments and interest earned thereon based on the rate earned by Metropolitan's investment portfolio. The amounts held do not include the statutory prejudgment interest, post-judgment interest, attorneys' fees, or costs awards, none of which the Exchange Agreement requires to be held. Amounts held pursuant to the Exchange Agreement will continue to accumulate based on the quantities of exchange water that Metropolitan provides to SDCWA and the payments disputed by SDCWA, until the litigation, including all appeals, is concluded. See "METROPOLITAN'S WATER SUPPLY–Colorado River Aqueduct –Metropolitan and San Diego County Water Authority Exchange Agreement" in this Appendix A. See also "–Litigation Challenging Rate Structure" below.

Metropolitan projects that its unrestricted reserves as of June 30, 2021 will be approximately \$429 million. This amount does not include funds held in the Exchange Agreement Set-Aside Fund. This projection is based on the assumptions set forth in the table entitled "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" under "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A. In addition, this projection is based on the assumption that Metropolitan's Board will not authorize the use of any additional amounts in the unrestricted reserves.

### **California Ballot Initiatives**

Proposition 218, a State ballot initiative known as the "Right to Vote on Taxes Act," was approved by the voters on November 5, 1996 adding Articles XIIC and XIID to the California Constitution. Article XIID provides substantive and procedural requirements on the imposition, extension or increase of any "fee" or "charge" levied by a local government upon a parcel of real property or upon a person as an incident of property ownership. As a wholesaler, Metropolitan serves water to its member agencies, not to persons or properties as an incident of property ownership. Thus, water rates charged by Metropolitan to its member agencies are not property related fees and charges and therefore are exempt from the requirements of Article XIID. Fees for retail water service by Metropolitan's member agencies or their agencies are subject to the requirements of Article XIID.

Article XIID also imposes certain procedures with respect to assessments. Under Article XIID, "standby charges" are considered "assessments" and must follow the procedures required for "assessments," unless they were in existence on the effective date of Article XIID. Metropolitan has imposed its water standby charges since 1992 and therefore its current standby charges are exempt from the Article XIID procedures. Changes to Metropolitan's current standby charges could require notice to property owners and approval by a majority of such owners returning mail-in ballots approving or rejecting any imposition or increase of such standby charge. Twenty-two of Metropolitan's member agencies have elected to collect all or a portion of their readiness-to-serve charges through standby charges. See "–Other Charges – Readiness-to-Serve Charge" and "– Water Standby Charges" above. Even if Article XIID is construed to limit the ability of Metropolitan and its member agencies to impose or collect standby charges, the member agencies will continue to be obligated to pay the readiness-to-serve charges.

Article XIII C makes all taxes either general or special taxes and imposes voting requirements for each kind of tax. It also extends the people's initiative power to reduce or repeal previously authorized local taxes, assessments, fees and charges. This extension of the initiative power is not limited by the terms of Article XIII C to fees imposed after November 6, 1996 or to property-related fees and charges and absent other authority could result in retroactive reduction in existing taxes, assessments or fees and charges.

Proposition 26, a State ballot initiative aimed at restricting regulatory fees and charges, was approved by the California voters on November 2, 2010. Proposition 26 broadens the definition of "tax" in Article XIII C of the California Constitution to include: levies, charges and exactions imposed by local governments, except for charges imposed for benefits or privileges or for services or products granted to the payor (and not provided to those not charged) that do not exceed their reasonable cost; regulatory fees that do not exceed the cost of regulation and are allocated in a fair or reasonable manner; fees for the use of local governmental property; fines and penalties imposed for violations of law; real property development fees; and assessments and property-related fees imposed under Article XIII D of the California Constitution. Special taxes imposed by local governments including special districts are subject to approval by two-thirds of the electorate. Proposition 26 applies to charges imposed or increased by local governments after the date of its approval. Metropolitan believes its water rates and charges are not taxes under Proposition 26. SDCWA's lawsuit challenging the rates adopted by Metropolitan in April 2012 (part of which became effective January 1, 2013 and part of which became effective January 1, 2014) alleged that such rates violate Proposition 26. On June 21, 2017, the California Court of Appeal ruled that whether or not Proposition 26 applies to Metropolitan's rates, the System Access Rate and System Power Rate challenged by SDCWA in such lawsuit comply with Proposition 26. See "--Litigation Challenging Rate Structure."

Propositions 218 and 26 were adopted as measures that qualified for the ballot pursuant to the State's initiative process. Other initiative measures have been proposed from time to time, including presently, or could be proposed in the future, which if qualified for the ballot, could be adopted, or legislative measures could be approved by the Legislature, which may place limitations on the ability of Metropolitan or its member agencies to increase revenues or to increase appropriations. Such measures may further affect Metropolitan's ability to collect taxes, assessments or fees and charges, which could have an effect on Metropolitan's revenues.

### **Preferential Rights**

Section 135 of the Act gives each of Metropolitan's member agencies a preferential right to purchase for domestic and municipal uses within the agency a portion of the water served by Metropolitan, based upon a ratio of all payments on tax assessments and otherwise, except purchases of water, made to Metropolitan by the member agency compared to total payments made by all member agencies on tax assessments and otherwise since Metropolitan was formed, except purchases of water. Historically, these rights have not been used in allocating Metropolitan's water. In 2004, the California Court of Appeal upheld Metropolitan's methodology for calculation of the respective member agencies' preferential rights under Section 135 of the Act. SDCWA's litigation challenging Metropolitan's rate structure also challenged Metropolitan's exclusion of payments for Exchange Agreement deliveries from the calculation of SDCWA's preferential right. On June 21, 2017, the California Court of Appeal held that SDCWA's payments under the Exchange Agreement must be included in the preferential rights calculation. See "--Litigation Challenging Rate Structure."

### **Litigation Challenging Rate Structure**

SDCWA filed *San Diego County Water Authority v. Metropolitan Water District of Southern California, et al.* on June 11, 2010. The complaint alleges that the rates adopted by the Board on April 13, 2010, which became effective January 1, 2011 and January 1, 2012, misallocate certain State Water Contract costs to the System Access Rate and the System Power Rate, and thus affect charges for transportation of water, resulting in an overcharge to SDCWA by at least \$24.5 million per year. The complaint alleges that all State Water Project costs should be allocated instead to Metropolitan's Supply Rate, even though under the



State Water Contract Metropolitan is billed separately for transportation, power and supply costs. It states additionally that Metropolitan will overcharge SDCWA by another \$5.4 million per year by including the Water Stewardship Rate in transportation charges.

The complaint requested a court order invalidating the rates adopted April 13, 2010, and that Metropolitan be mandated to allocate costs associated with the State Water Contract and the Water Stewardship Rate to water supply rates and not to transportation rates. Rates in effect in prior years are not challenged in this lawsuit.

SDCWA filed its First Amended Petition for Writ of Mandate and Complaint on October 27, 2011, adding five new claims to this litigation, two of which were eliminated from the case on January 4, 2012. The three remaining new claims were for breach of the water Exchange Agreement between Metropolitan and SDCWA (described herein under "METROPOLITAN'S WATER SUPPLY-Colorado River Aqueduct - Metropolitan and San Diego County Water Authority Exchange Agreement") due to a price based on allegedly illegal rates; improper exclusion of SDCWA's payments under such Exchange Agreement from calculation of SDCWA's preferential rights to purchase Metropolitan supplies (see "-Preferential Rights" above); and illegality of the rate structure integrity provision in conservation and local resources incentive agreements between Metropolitan and SDCWA. The rate structure integrity provision permitted the Board to terminate incentives payable under conservation and local resources incentive agreements between Metropolitan and a member agency due to certain actions by the member agency to challenge the rates that are the source of incentive payments. In June 2011, Metropolitan's Board authorized termination of two incentive agreements with SDCWA under the rate structure integrity provision in such agreements after SDCWA filed its initial complaint challenging Metropolitan's rates. SDCWA filed a Second Amended Petition for Writ of Mandate and Complaint on April 17, 2012, which contained additional allegations but no new causes of action.

On June 8, 2012, SDCWA filed a new lawsuit challenging the rates adopted by Metropolitan on April 10, 2012 and effective on January 1, 2013 and January 1, 2014. The complaint contained allegations similar to those in the Second Amended Petition for Writ of Mandate and Complaint and new allegations asserting that Metropolitan's rates, adopted in April 2012, violate Proposition 26. See "-California Ballot Initiatives" for a description of Proposition 26.

SDCWA filed a Third Amended Petition for Writ of Mandate and Complaint on January 23, 2013, to add new allegations that Metropolitan's rates adopted in April 2010 did not meet the requirements of Proposition 26. The court granted Metropolitan's motion to strike allegations relating to Proposition 26 on March 29, 2013, expressly ruling that SDCWA may not allege a violation of Proposition 26 in its challenge to the rates adopted in April 2010. This ruling did not affect SDCWA's separate challenge to Metropolitan's rates adopted in April 2012, which also includes Proposition 26 allegations.

Following trial of both lawsuits in two phases, concluding on January 23, 2014 and April 30, 2015, respectively, the Superior Court of the State of California, County of San Francisco (the "Superior Court"), issued its Final Judgment and a Peremptory Writ of Mandate in the 2010 and 2012 SDCWA v. Metropolitan cases. Metropolitan appealed the trial court's decision in each case, and SDCWA filed a cross-appeal of the court's ruling on the rate structure integrity claim and an attorneys' fees order.

On June 21, 2017, the California Court of Appeal released its decision in the appeals and cross-appeal filed by Metropolitan and SDCWA, respectively. The Court of Appeal ruled that Metropolitan may lawfully include its State Water Project transportation costs in the System Access Rate and System Power Rate that are part of the Exchange Agreement's price term, and that Metropolitan may also lawfully include the System Access Rate in its wheeling rate, reversing the trial court decision on this issue. The Court held Metropolitan's allocation of the State Water Project transportation costs as its own transportation costs is proper and does not violate the wheeling statutes (Water Code, § 1810, *et seq.*), Proposition 26 (Cal. Const.,

Article XIII C, §1, subd.(e)), whether or not that Proposition applies to Metropolitan's rates, California Government Code section 54999.7, the common law, or the terms of the parties' Exchange Agreement.

The Court of Appeal also ruled that the administrative record before it for the rates in calendar years 2011 through 2014 did not support Metropolitan's inclusion of its Water Stewardship Rate as a transportation cost in the Exchange Agreement price or the wheeling rate, under the common law and wheeling statutes. Having made that determination, the Court of Appeal stated it need not evaluate the issue under any other law. The court did not address the allocation of the Water Stewardship Rate in subsequent years based on a different record. The court noted, and in a subsequent modification confirmed, that its holding does not preclude Metropolitan from including the Water Stewardship Rate in Metropolitan's full-service rate.

The Court of Appeal held that because the Water Stewardship Rate was included in the Exchange Agreement price, there was a breach by Metropolitan of the Exchange Agreement in 2011 through 2014. The court remanded the case to the trial court for a redetermination of damages in light of its ruling concerning the Water Stewardship Rate. The Court of Appeal agreed with the trial court that statutory prejudgment interest applies with respect to any damages award, not a lesser contractual interest. The Court of Appeal reversed the trial court by finding that the Exchange Agreement may entitle SDCWA to attorneys' fees for the second phase of the case concerning breach of contract; but directed the trial court on remand to make a new determination of the prevailing party, if any. The cases were therefore remanded to the trial court for a review of both damages and attorneys' fees.

With respect to other issues considered on appeal, the Court of Appeal upheld the trial court's ruling that Metropolitan improperly excludes SDCWA's payments under the Exchange Agreement in Metropolitan's calculation of SDCWA's preferential rights. The court also ruled that SDCWA had the constitutional right to challenge the rate structure integrity provision in Metropolitan's conservation and local resources incentive agreements and found that the rate structure integrity provision was invalid and unenforceable as an unconstitutional condition on the provision of a public benefit.

On September 27, 2017, the California Supreme Court denied SDCWA's petition for review, declining to consider the Court of Appeal's decision. The Court of Appeal's decision is therefore final.

On July 25, 2018, the Superior Court issued an order regarding the scope of the matters to be reconsidered by the Superior Court on remand pursuant to the Court of Appeal decision. With respect to the Superior Court's re-determination of damages in light of the Court of Appeal's ruling that the administrative record for calendar years 2011 through 2014 did not support Metropolitan's inclusion of its demand management costs in the Exchange Agreement price, the Superior Court ruled that it will award SDCWA \$28,678,190.90 in contract damages for breach of the Exchange Agreement, plus prejudgment interest at 10 percent per annum. The Superior Court determined that Metropolitan is not entitled in the remand proceedings to show what it could have lawfully charged SDCWA for demand management costs and to deduct that from SDCWA's damages.

The Superior Court further ruled that SDCWA is not entitled in the remand proceedings to litigate the issue of "offsetting benefits" under the wheeling statutes for the parties' Exchange Agreement. The Superior Court found that such claim is both outside the scope of remand and waived.

The Superior Court also ruled that SDCWA is entitled to judgment on its declaratory relief cause of action declaring the rate structure integrity provision in Metropolitan's conservation and local resources incentive agreements invalid and unenforceable, SDCWA is entitled to further proceedings to litigate the issue of an entitlement to monetary restitution for 2011 through 2014, and the parties shall also litigate in further proceedings the issue of what prospective relief SDCWA may be entitled to in connection with this cause of action.

Finally, the Superior Court confirmed, as the parties agreed, that it will conduct further proceedings for a redetermination of the prevailing party and attorneys' fees in this matter.

On September 14, 2018, Metropolitan filed a Petition for Writ of Mandate with the California Court of Appeal, requesting the court to require the Superior Court to recalculate contract damages for breach of the Exchange Agreement from years 2011 through 2014, to include a set-off for the additional sums SDCWA would have paid had Metropolitan collected the Water Stewardship Rate through its full service sales as SDCWA argued was correct. On November 1, 2018, the Court of Appeal determined that it would not review the issue at this stage of the cases. Metropolitan may raise this issue again on any later appeal from the cases' final judgment.

Due to SDCWA's litigation challenging Metropolitan's rates, and pursuant to the Exchange Agreement between Metropolitan and SDCWA, as of November 30, 2020, Metropolitan held \$57.90 million in a designated fund, the Exchange Agreement Set-Aside Fund. See "Financial Reserve Policy." This amount includes the disputed Water Stewardship Rate payments for calendar years 2011 through 2017, and interest earned by Metropolitan thereon. The amount held does not include statutory prejudgment interest or any post-judgment interest, attorneys' fees, or costs the Court may award.

On February 14, 2019, Metropolitan tendered to SDCWA payment of \$44.4 million for the San Francisco Superior Court's contract damages award for Water Stewardship Rate payments from 2011 through 2014, plus statutory interest through February 15, 2019, with a reservation of appeal rights, in the 2010 and 2012 SDCWA v. Metropolitan actions. This tender was made under compulsion to cease accrual of statutory interest in excess of market rates, but did not affect Metropolitan's rights to appeal, including its right to challenge the amount of the damages award. The tendered payment included \$31.6 million of amounts withdrawn from the Exchange Agreement Set-Aside Fund, and \$12.8 million withdrawn from reserves (representing statutory interest). On March 7, 2019, SDCWA rejected the tendered payment and returned the uncashed check for the tendered payment. The returned funds were credited back to the Exchange Agreement Set-Aside Fund and Metropolitan reserves in the amounts drawn. The balance in the Exchange Agreement Set-Aside Fund set forth above includes the returned funds. In the 2010-2012 Judgment (discussed below), the Superior Court confirmed that Metropolitan's tender was effective and stopped the accrual of interest in February 2019. On August 29, 2019, as a result of changes in reorganization of assignments at the San Francisco Superior Court, the 2010, 2012, 2016, and 2017 SDCWA v. Metropolitan cases were reassigned to a different department of the Court. SDCWA filed a motion for peremptory disqualification of the new judge and on September 6, 2019, the motion was sustained. On September 27, 2019, the 2010, 2012, 2016, and 2017 cases were assigned to Department 304, a different complex department in which the 2014 case is already pending.

The Superior Court had scheduled an evidentiary hearing for June 16 to June 18, 2020 on SDCWA's requested relief based on its rate structure integrity provision claim. Following action of the SDCWA Board of Directors on February 27, 2020 (discussed below), SDCWA informed Metropolitan and the court that it was no longer seeking this relief. Accordingly, the evidentiary hearing was canceled.

On August 13, 2020, the Superior Court entered a final judgment in the 2010 and 2012 SDCWA v. Metropolitan cases (the "2010-2012 Judgment"). On August 14, 2020, SDCWA served notice of entry of judgment and notice of the court's peremptory writ of mandate in the cases.

In the 2010-2012 Judgment, the Court entered judgment: (1) on the first three causes of action – for writ of mandate, declaratory relief, and invalidation (the rate challenges) – in SDCWA's favor, because the Court of Appeal found Metropolitan's inclusion of the Water Stewardship Rate as a component of the transportation rates charged under the Exchange Agreement and wheeling rate was unlawful, and ordered issuance of a writ of mandate as described below; (2) on the fourth cause of action – breach of contract – in favor of SDCWA but only with respect to its challenge to Metropolitan's inclusion of the Water Stewardship Rate in the Exchange Agreement price for deliveries in 2011-2014, the Court awarded SDCWA a total of

\$44,373,872.29, comprised of: (A) \$28,678,190.90 in damages; (B) prejudgment interest at the rate of 10 percent per annum through November 18, 2015 in the amount of \$7,484,315.54; and (C) post-judgment interest at the rate of 7 percent per annum from November 19, 2015 until February 15, 2019 (the date of Metropolitan's tender of \$44,373,872.29 to SDCWA), in the amount of \$8,211,365.85; (3) on the fifth cause of action – declaratory relief regarding the rate structure integrity (RSI) provision – in favor of SDCWA as the RSI provision is invalid and unenforceable; (4) on the sixth cause of action – declaratory relief regarding preferential rights calculation – in favor of SDCWA that Metropolitan's previous methodology for calculating preferential rights violates § 135 of the Metropolitan Water District Act; (5) on the previously-dismissed cause of action for breach of fiduciary duty – in favor of Metropolitan; and (6) on the previously dismissed cause of action for breach of the covenant of good faith and fair dealing – in favor of Metropolitan.

The peremptory writ of mandate commands Metropolitan to “enact only legal wheeling and transportation rates in the future and, specifically, not to do the things that [the Court of Appeal] held were unlawful,” and incorporates by reference the Court of Appeal decision; and to “exclude the costs of conservation programs and other demand management programs, enacted in [the 2010 and 2012] cases as the Water Stewardship Rate, from Metropolitan's wheeling rate published in Section 4405 of Metropolitan's Administrative Code and from the transportation rates charged under the [Exchange Agreement].” Metropolitan filed a notice of appeal of the 2010-2012 Judgment and the writ on September 11, 2020.

The court requested the parties' briefing as to whether it has jurisdiction to determine the prevailing party, if any, in the 2010 and 2012 cases, after the appeal was filed. The parties filed a joint submission that the court has jurisdiction and the court agreed. On December 16, 2020, the court heard the parties' cross-motions on the determination of a prevailing party, if any, under the Exchange Agreement's attorneys' fees and costs provision. On January 13, 2021, the court issued an order finding SDCWA is the prevailing party on the contract, entitled to its attorneys' fees and costs under the contract. The court will schedule further proceedings to determine fees. On January 12, 2021, the court heard the parties' motions to strike or tax each's memorandum of statutory costs, which involves a determination of prevailing party as to all claims. The court has not yet ruled on the costs motions. For both sets of motions, Metropolitan contended that it is the prevailing party entitled to attorneys' fees and costs, or else there is not a prevailing party in these mixed-result cases. The determinations as to prevailing party, attorneys' fees, and costs are subject to appeal after entry of the final order.

In May 2014, SDCWA filed a new lawsuit asserting essentially the same rate claims and breach of contract claim in connection with the Board's April 2014 rate adoption. Metropolitan filed its answer on June 30, 2014. On February 9, 2015, pursuant to stipulation by the parties, the San Francisco Superior Court ordered that the case be stayed.

On April 13, 2016, SDCWA filed a new lawsuit that alleged all rates and charges for 2017 and 2018 adopted by Metropolitan's Board on April 12, 2016 violate the California Constitution, statutes, and common law. The Petition for Writ of Mandate and Complaint asserted misallocation of costs as alleged in the previous cases listed above and additional claims of over-collection and misallocation of costs and procedural violations. Following a stipulated order issued by the court on November 10, 2016, SDCWA filed a First Amended Petition for Writ of Mandate and Complaint and the court ordered the case stayed pending final resolution of the 2010 and 2012 SDCWA v. Metropolitan cases' appeals. The amended petition/complaint added allegations of the same Exchange Agreement breach as in the previous cases listed above and breach of a provision that requires Metropolitan to set aside disputed amounts, relating to the manner in which Metropolitan has set aside the amounts; requested a judicial declaration that, if a judgment is owed to SDCWA under the Exchange Agreement, SDCWA will not be required to pay any portion of that judgment; and requests a refund to SDCWA of any amount Metropolitan has collected in excess of the reasonable costs of the services provided or, alternatively, a reduction in SDCWA's future fees.

On August 27, 2020, the court granted SDCWA's motion to lift the stays in the 2014 and 2016 SDCWA v. Metropolitan cases and to file a further amended petition/complaint. On August 28, 2020,

SDCWA filed the amended petitions/complaints, which included claims for offsetting benefits. On September 28, 2020, Metropolitan filed demurrers to, or in the alternative motions to strike, portions of the amended petitions/complaints, which are set for hearing on February 10, 2021. The pleadings seek to remove offsetting benefits claims in both cases as to alleged breach of contract and Metropolitan's wheeling rate, and the declaratory relief claim in the 2016 case as to how Metropolitan may satisfy a judgment.

On June 9, 2017, SDCWA filed a new Petition for Writ of Mandate and Complaint challenging the Readiness-to-Serve Charge and Capacity Charge for 2018 adopted by Metropolitan's Board on April 11, 2017. These two charges are set annually, and SDCWA's 2016 lawsuit included a challenge to these two charges for 2017. The new lawsuit similarly alleged the 2018 Readiness-to-Serve Charge and Capacity Charge violated the California Constitution, statutes, and common law. The petition/complaint asserts misallocation of costs. Metropolitan was served with the petition/complaint on June 20, 2017. On July 18, 2017, SDCWA filed a first amended petition/complaint to add Metropolitan's Board action of July 11, 2017 to make minor corrections to the Readiness-to-Serve Charge. On July 31, 2018, pursuant to stipulation by the parties, the San Francisco Superior Court ordered that the case be stayed. On July 23, 2020, the court entered SDCWA's requested dismissal of the 2017 case. The dismissal is without prejudice, which means SDCWA would not be precluded from re-initiating the case in the future.

On June 8, 2018, SDCWA filed a new lawsuit that alleges all rates and charges for 2019 and 2020 adopted by Metropolitan's Board on April 10, 2018 violate the California Constitution, statutes, and common law. The Petition for Writ of Mandate and Complaint asserts the Water Stewardship Rate is unlawful per se and its collection in transportation charges is also unlawful; failure to provide wheelers a reasonable credit for "offsetting benefits" pursuant to Water Code Section 1810, *et seq.*, which SDCWA contends (and Metropolitan disputes) applies to the parties' Exchange Agreement; over-collection and misallocation of costs, including misallocation of Metropolitan's California WaterFix costs as its transportation costs; and specified procedural violations. SDCWA states in the Petition and Complaint that it intends to amend its complaint to allege additional claims against Metropolitan, including but not limited to a claim for breach of contract. Following a stipulated order issued by the San Francisco Superior Court on January 10, 2019, SDCWA filed a First Amended Petition for Writ of Mandate and Complaint and the court ordered the case stayed pending final resolution of the 2010 and 2012 SDCWA v. Metropolitan cases. The amended petition/complaint adds a cause of action for breach of the Exchange Agreement alleging Metropolitan charged an unlawful price that includes the Water Stewardship Rate (despite suspension of this charge), failing to provide credit for offsetting benefits, charging transportation rates that are not based on costs of service, including California WaterFix costs, and not following procedural requirements; and requests a refund to SDCWA of any amount Metropolitan has collected in excess of the reasonable costs of the services provided or, alternatively, a reduction in SDCWA's future fees. On July 28, 2020, the parties filed a stipulation and application to designate the case complex and related to the 2010-2017 cases. Metropolitan is unable to assess at this time the likelihood of success of this case, any possible appeal or any future claims.

On November 15, 2019, Metropolitan provided a statutory Offer to Compromise to SDCWA to resolve all pending litigation filed by SDCWA. The offer, which was not confidential, was made under California Code of Civil Procedure Section 998 and was deemed withdrawn if not accepted by December 30, 2019. By letter dated December 19, 2019, SDCWA notified Metropolitan that it had determined not to act upon Metropolitan's Section 998 Offer to Compromise. Metropolitan's statutory Offer to Compromise was deemed withdrawn. SDCWA made its own settlement offer, which is public but non-statutory. SDCWA's settlement offer was made subject to acceptance by Metropolitan no later than the close of business on January 31, 2020. The Metropolitan Board reviewed SDCWA's proposal at its January 14, 2020 Board meeting and took no action.

On February 27, 2020, the SDCWA Board of Directors authorized its attorneys to dismiss, without prejudice, claims related to payments of the Water Stewardship Rate on supply purchases only and the unquantified claims in the stayed cases relating to cost-of-service grounds and the rate model. The above-

mentioned amended petitions/complaints in the 2014 and 2016 cases added, removed, and retained certain claims. Retained claims include SDCWA's challenge to Metropolitan's Water Stewardship Rate for calendar years 2015 through 2018 based on its allocation to transportation, with a request for the court to invalidate the transportation rates and the wheeling rate and award damages for breach of the parties' Exchange Agreement as a result. Added claims include a challenge to the wheeling rate and alleged breach of the Exchange Agreement for failure to provide offsetting benefits (only the stayed 2018 case had previously included an offsetting benefits claim). SDCWA has not yet dismissed claims in the 2018 case. Metropolitan has not yet assessed the impact of the authorized dismissals. Metropolitan is unable to assess at this time the likelihood of success of these cases, any possible appeals or any future claims.

### **Other Revenue Sources**

**Hydroelectric Power Recovery Revenues.** Metropolitan has constructed 16 small hydroelectric plants on its distribution system. The combined generating capacity of these plants is approximately 130 megawatts. The plants are located in Los Angeles, Orange, Riverside, and San Diego Counties at existing pressure control structures and other locations. The total capital cost of the 16 facilities is approximately \$176.1 million. Since 2000, annual energy generation sales revenues have ranged between \$7.3 million and nearly \$29.6 million. Including the sale of excess energy generation from Hoover and Parker dams, the total energy sales revenues were \$18.3 million in fiscal year 2018-19 and \$15.9 million in fiscal year 2019-20.

**Investment Income.** In fiscal years 2017-18, 2018-19 and 2019-20, Metropolitan's earnings on investments, including adjustments for gains and losses and premiums and discounts, including construction account and trust fund earnings, excluding gains and losses on swap terminations, on a cash basis (unaudited) were \$15.5 million, \$31.3 million, and \$18.1 million, respectively.

### **Investment of Moneys in Funds and Accounts**

The Board has delegated to the Treasurer the authority to invest funds. All moneys in any of the funds and accounts established pursuant to Metropolitan's water revenue or general obligation bond resolutions are managed by the Treasurer in accordance with Metropolitan's Statement of Investment Policy. All Metropolitan funds available for investment are currently invested in United States Treasury and agency securities, supranationals, commercial paper, negotiable certificates of deposit, banker's acceptances, corporate notes, municipal bonds, government-sponsored enterprise, money market funds, California Asset Management Program ("CAMP") and the California Local Agency Investment Fund ("LAIF"). CAMP is a program created through a joint powers agency as a pooled short-term portfolio and cash management vehicle for California public agencies. CAMP is a permitted investment for all local agencies under California Government Code Section 53601(p). LAIF is a voluntary program created by statute as an investment alternative for California's local governments and special districts. LAIF permits such local agencies to participate in an investment portfolio, which invests billions of dollars, managed by the State Treasurer's Office.

The Statement of Investment Policy provides that in managing Metropolitan's investments, the primary objective shall be to safeguard the principal of the invested funds. The secondary objective shall be to meet all liquidity requirements and the third objective shall be to achieve a return on the invested funds. Although the Statement of Investment Policy permits investments in some government-sponsored enterprise, the portfolio does not include any of the special investment vehicles related to sub-prime mortgages. The Statement of Investment Policy allows Metropolitan to exceed the portfolio and single issuer limits for purchases of California local agency securities when purchasing Metropolitan tendered bonds in conjunction with its self-liquidity program. Metropolitan's current investments comply with the Statement of Investment Policy.

As of November 30, 2020, the total market value (cash-basis) of all Metropolitan invested funds was \$1.0 billion, including bond reserves of \$1.7 million. The market value of Metropolitan's investment



portfolio is subject to market fluctuation and volatility and general economic conditions. Over the three years ended November 30, 2020 the market value of the month-end balance of Metropolitan's investment portfolio (excluding bond reserve funds) averaged approximately \$1.0 billion. The minimum month-end balance of Metropolitan's investment portfolio (excluding bond reserve funds) during such period was approximately \$831.9 million on July 31, 2019. See Note 3 to Metropolitan's audited financial statements in Appendix B for additional information on the investment portfolio.

Metropolitan's administrative code requires that (1) the Treasurer provide an annual Statement of Investment Policy for approval by Metropolitan's Board, (2) the Treasurer provide a monthly investment report to the Board and the General Manager showing by fund the description, maturity date, yield, par, cost and current market value of each security, and (3) the General Counsel review as to eligibility the securities invested in by the Treasurer for that month and report his or her determinations to the Board. The Board approved the Statement of Investment Policy for fiscal year 2020-21 on June 9, 2020.

Subject to the provisions of Metropolitan's water revenue or general obligation bond resolutions, obligations purchased by the investment of bond proceeds in the various funds and accounts established pursuant to a bond resolution are deemed at all times to be a part of such funds and accounts and any income realized from investment of amounts on deposit in any fund or account therein will be credited to such fund or account. The Treasurer is required to sell or present for redemption any investments whenever it may be necessary to do so in order to provide moneys to meet required payments or transfers from such funds and accounts. For the purpose of determining at any given time the balance in any such funds, any such investments constituting a part of such funds and accounts will be valued at the then estimated or appraised market value of such investments.

All investments, including those authorized by law from time to time for investments by public agencies, contain certain risks. Such risks include, but are not limited to, a lower rate of return than expected and loss or delayed receipt of principal. The occurrence of these events with respect to amounts held under Metropolitan's water revenue or general obligation revenue bond resolutions, or other amounts held by Metropolitan, could have a material adverse effect on Metropolitan's finances. These risks may be mitigated, but are not eliminated, by limitations imposed on the portfolio management process by Metropolitan's Statement of Investment Policy.

The Statement of Investment Policy requires that investments have a minimum credit rating of "A-1/P-1/F1" for short-term securities and "A" for longer-term securities, without regard to modifiers, at the time of purchase. If a security is downgraded below the minimum rating criteria specified in the Statement of Investment Policy, the Treasurer shall determine a course of action to be taken on a case-by-case basis considering such factors as the reason for the downgrade, prognosis for recovery or further rating downgrades, and the market price of the security. The Treasurer is required to note in the Treasurer's monthly report any securities which have been downgraded below Policy requirements and the recommended course of action.

The Statement of Investment Policy also limits the amount of securities that can be purchased by category, as well as by issuer, and prohibits investments that can result in zero interest income. Metropolitan's securities are settled on a delivery versus payment basis and are held by an independent third-party custodian. See Metropolitan's financial statements included in APPENDIX B—"THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA INDEPENDENT AUDITORS' REPORT AND BASIC FINANCIAL STATEMENTS FOR FISCAL YEARS ENDED JUNE 30, 2020 AND JUNE 30, 2019 AND BASIC FINANCIAL STATEMENTS FOR THE THREE MONTHS ENDED SEPTEMBER 30, 2020 AND 2019 (UNAUDITED)" for a description of Metropolitan's investments at June 30, 2020 and September 30, 2020.

Since July 2019, Metropolitan has retained one outside investment firm to manage the portion of Metropolitan's portfolio not needed to provide liquidity for expenditures over the next six months. As of November 30, 2020, this manager was managing approximately \$196.4 million in investments on behalf of Metropolitan. Since December 2018, Metropolitan has retained an outside investment firm to manage a portion of the liquidity portfolio and certain trust funds. As of November 30, 2020, this firm managed approximately \$529.5 million. The outside managers are required to adhere to Metropolitan's Statement of Investment Policy.

Metropolitan's Statement of Investment Policy may be changed at any time by the Board (subject to State law provisions relating to authorized investments). There can be no assurance that the State law and/or the Statement of Investment Policy will not be amended in the future to allow for investments that are currently not permitted under State law or the Statement of Investment Policy, or that the objectives of Metropolitan with respect to investments or its investment holdings at any point in time will not change.

## METROPOLITAN EXPENSES

### General

The following table sets forth a summary of Metropolitan's expenses, by major function, for the five years ended June 30, 2020, on a modified accrual basis. All information is unaudited. Expenses of Metropolitan for the fiscal years ended June 30, 2020 and June 30, 2019, on an accrual basis, are shown in Metropolitan's audited financial statements included in Appendix B.

### SUMMARY OF EXPENSES Fiscal Years Ended June 30 (Dollars in Millions)

	2016	2017	2018	2019	2020
Operation and Maintenance Costs <sup>(1)</sup>	\$ 799	\$ 559	\$ 568	\$ 569	\$ 641
Total State Water Project <sup>(2)</sup>	512	506	527	482	519
Total Debt Service	332	330	360	347	285
Construction Expenses from Revenues <sup>(3)</sup>	273	132	98	128	39
Other <sup>(4)</sup>	6	4	5	6	6
Total Expenses (net of reimbursements)	<u>\$1,922</u>	<u>\$1,531</u>	<u>\$1,558</u>	<u>\$1,532</u>	<u>\$1,490</u>

Source: Metropolitan.

<sup>(1)</sup> Includes operation and maintenance, debt administration, conservation and local resource programs, CRA power, and water supply expenses. Fiscal years 2015-16, 2016-17, and 2017-18 include \$222 million, \$33 million, and \$1 million, respectively, of conservation and supply program expenses funded from transfers from the Water Management Fund.

<sup>(2)</sup> Includes both operating and capital expense portions.

<sup>(3)</sup> At the discretion of the Board, in any given year, Metropolitan may increase or decrease funding available for construction disbursements to be paid from revenues. Includes \$160 million for acquiring properties in Riverside and Imperial Counties, funded by \$160 million from the Replacement and Refurbishment Fund Reserves in fiscal year 2015-16. Does not include expenditures of bond proceeds.

<sup>(4)</sup> Includes operating equipment.

### Revenue Bond Indebtedness and Other Obligations

As of December 1, 2020, Metropolitan had total outstanding indebtedness secured by a lien on Net Operating Revenues of \$3.81 billion. This indebtedness was comprised of \$2.40 billion of Senior Revenue Bonds issued under the Senior Debt Resolutions (each as defined below), which includes \$2.07 billion of fixed rate Senior Revenue Bonds, and \$331.9 million of variable rate Senior Revenue Bonds; \$1.36 billion of Subordinate Revenue Bonds issued under the Subordinate Debt Resolutions (each as defined below), which includes \$915.87 million of fixed rate Subordinate Revenue Bonds, and \$446.3 million of variable rate Subordinate Revenue Bonds; and \$46.8 million of subordinate lien short-term certificates, which bear a

variable rate, and are on parity with the Subordinate Revenue Bonds. In addition, Metropolitan has \$438.7 million of fixed-payor interest rate swaps which provides a fixed interest rate hedge to an equivalent amount of variable rate debt. Metropolitan's revenue bonds and other revenue obligations are more fully described below.

#### REVENUE BOND INDEBTEDNESS AND OTHER OBLIGATIONS

	Variable Rate	Fixed Rate	Total
Senior Lien Revenue Bonds	\$ 331,875,000	\$2,068,605,000	\$2,400,480,000
Subordinate Lien Revenue Bonds	446,255,000	915,865,000	1,362,120,000
Subordinate Lien Short-Term Certificates	<u>46,800,000</u>	--	<u>46,800,000</u>
<b>Total</b>	<b>\$ 824,930,000</b>	<b>\$2,984,470,000</b>	<b>\$3,809,400,000</b>
Fixed-Payor Interest Rate Swaps	<u>(438,665,000)</u>	<u>438,665,000</u>	--
<b>Net Amount (after giving effect to Swaps)</b>	<b>\$ 386,265,600</b>	<b>\$3,423,135,000</b>	<b>\$3,809,400,000</b>

*Source: Metropolitan.*

#### Limitations on Additional Revenue Bonds

Resolution 8329, adopted by Metropolitan's Board on July 9, 1991, as amended and supplemented (the "Master Senior Resolution," and collectively with all such supplemental resolutions, the "Senior Debt Resolutions"), provides for the issuance of Metropolitan's senior lien water revenue bonds. The Senior Debt Resolutions establish limitations on the issuance of additional obligations payable from Net Operating Revenues. Under the Senior Debt Resolutions, no additional bonds, notes or other evidences of indebtedness payable out of Operating Revenues may be issued having any priority in payment of principal, redemption premium, if any, or interest over any water revenue bonds authorized by the Senior Debt Resolutions ("Senior Revenue Bonds") or other obligations of Metropolitan having a lien and charge upon, or being payable from, the Net Operating Revenues on parity with such Senior Revenue Bonds ("Senior Parity Obligations"). No additional Senior Revenue Bonds or Senior Parity Obligations may be issued or incurred unless the conditions of the Senior Debt Resolutions have been satisfied.

Resolution 9199, adopted by Metropolitan's Board on March 8, 2016, as amended and supplemented (the "Master Subordinate Resolution," and collectively with all such supplemental resolutions, the "Subordinate Debt Resolutions," and together with the Senior Debt Resolutions, the "Revenue Bond Resolutions"), provides for the issuance of Metropolitan's subordinate lien water revenue bonds and other obligations secured by a pledge of Net Operating Revenues that is subordinate to the pledge securing Senior Revenue Bonds and Senior Parity Obligations. The Subordinate Debt Resolutions establish limitations on the issuance of additional obligations payable from Net Operating Revenues. Under the Subordinate Debt Resolutions, with the exception of Senior Revenue Bonds and Senior Parity Obligations, no additional bonds, notes or other evidences of indebtedness payable out of Operating Revenues may be issued having any priority in payment of principal, redemption premium, if any, or interest over any subordinate water revenue bonds authorized by the Subordinate Debt Resolutions ("Subordinate Revenue Bonds" and, together with Senior Revenue Bonds, "Revenue Bonds") or other obligations of Metropolitan having a lien and charge upon, or being payable from, the Net Operating Revenues on parity with the Subordinate Revenue Bonds ("Subordinate Parity Obligations"). No additional Subordinate Revenue Bonds or Subordinate Parity Obligations may be issued or incurred unless the conditions of the Subordinate Debt Resolutions have been satisfied.

The laws governing Metropolitan's ability to issue water revenue bonds currently provide two additional limitations on indebtedness that may be incurred by Metropolitan. The Act provides for a limit on general obligation bonds, water revenue bonds and other evidences of indebtedness of 15 percent of the assessed value of all taxable property within Metropolitan's service area. As of December 1, 2020, outstanding general obligation bonds, water revenue bonds and other evidences of indebtedness in the

amount of \$3.84 billion represented approximately 0.12 percent of the fiscal year 2020-21 taxable assessed valuation of \$3,263.4 billion. The second limitation under the Act specifies that no revenue bonds may be issued, except for the purpose of refunding, unless the amount of net assets of Metropolitan as shown on its balance sheet as of the end of the last fiscal year prior to the issuance of such bonds, equals at least 100 percent of the aggregate amount of revenue bonds outstanding following the issuance of such bonds. The net assets of Metropolitan at June 30, 2020 were \$6.94 billion. The aggregate amount of revenue bonds outstanding as of December 1, 2020 was \$3.76 billion. The limitation does not apply to other forms of financing available to Metropolitan. Audited financial statements including the net assets of Metropolitan as of June 30, 2020 and June 30, 2019 are shown in Metropolitan's audited financial statements included in APPENDIX B—"THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA INDEPENDENT AUDITORS' REPORT AND BASIC FINANCIAL STATEMENTS FOR FISCAL YEARS ENDED JUNE 30, 2020 AND JUNE 30, 2019 AND BASIC FINANCIAL STATEMENTS FOR THE THREE MONTHS ENDED SEPTEMBER 30, 2020 AND 2019 (UNAUDITED)."

Metropolitan provides no assurance that the Act's limitations on indebtedness will not be revised or removed by future legislation. Limitations under the Revenue Bond Resolutions respecting the issuance of additional obligations payable from Net Operating Revenues on parity with the Senior Revenue Bonds and Subordinate Revenue Bonds of Metropolitan will remain in effect so long as any Senior Revenue Bonds and Subordinate Revenue Bonds authorized pursuant to the applicable Revenue Bond Resolutions are outstanding, provided however, that the Revenue Bond Resolutions are subject to amendment and supplement in accordance with their terms.

#### **Variable Rate Exposure Policy**

As of December 1, 2020, Metropolitan had outstanding \$331.9 million of variable rate obligations issued as Senior Revenue Bonds under the Senior Debt Resolutions (described under "–Outstanding Senior Revenue Bonds and Senior Parity Obligations –Variable Rate and Swap Obligations" below). In addition, as of December 1, 2020, \$493.1 million of Metropolitan's \$1.41 billion of outstanding Subordinate Revenue Bonds issued under the Subordinate Debt Resolutions and other Subordinate Parity Obligations were variable rate obligations (described under "–Outstanding Subordinate Revenue Bonds and Subordinate Parity Obligations" below).

As of December 1, 2020, of Metropolitan's \$824.9 million of variable rate obligations, \$438.7 million of such variable rate demand obligations are treated by Metropolitan as fixed rate debt, by virtue of interest rate swap agreements (described under "–Outstanding Senior Revenue Bonds and Senior Parity Obligations –Variable Rate and Swap Obligations – Interest Rate Swap Transactions" below), for the purpose of calculating debt service requirements. The remaining \$386.3 million of variable rate obligations represent approximately 10.1 percent of total outstanding water revenue secured indebtedness (including Senior Revenue Bonds and Senior Parity Obligations and Subordinate Revenue Bonds and Subordinate Parity Obligations), as of December 1, 2020.

Metropolitan's variable rate exposure policy requires that variable rate debt be managed to limit net interest cost increases within a fiscal year as a result of interest rate changes to no more than \$5 million. In addition, the maximum amount of variable interest rate exposure (excluding variable rate bonds associated with interest rate swap agreements) is limited to 40 percent of total outstanding water revenue bond debt. Variable rate debt capacity will be reevaluated as interest rates change and managed within these parameters.

The periodic payments due to Metropolitan from counterparties under its outstanding interest rate swap agreements and the interest payments to be payable by Metropolitan under certain of its outstanding variable rate obligations (including some of Metropolitan's Subordinate Revenue Bonds and certain notes issued pursuant to its short-term revolving credit agreement and subordinate note purchase agreements as hereinafter described) are calculated by reference to the London interbank offering rate ("LIBOR"). On July 27, 2017, the Financial Conduct Authority (the "FCA"), the U.K. regulatory body currently responsible

for the regulation and supervision of LIBOR, announced that it will no longer persuade or compel banks to submit rates for the calculation of the LIBOR rates after 2021 (the “FCA Announcement”). On November 30, 2020, Intercontinental Exchange Benchmark Administration (“IBA”), the administrator of LIBOR authorized and regulated by the FCA, announced, with the support of the Federal Reserve Board and the FCA, that it is commencing a consultation on its intention to cease publication of (1) only the one-week and two-month USD LIBOR on December 31, 2021, and (2) all other tenors of USD LIBOR, including the one-month LIBOR and three-month LIBOR, the most widely used tenors of USD LIBOR and which are used to determine the periodic payments due to Metropolitan from swap counterparties and the interest payments to be payable by Metropolitan under certain of its outstanding variable rate obligations, on June 30, 2023. The IBA proposal isn’t final and is subject to feedback on the consultation. IBA has indicated that it expects to complete the consultation process by the end of January 2021. Metropolitan staff is monitoring alternate benchmark rates. Metropolitan is unable to predict the outcome of the IBA’s ongoing consultation as to the specific timing for the cessation of publication of USD LIBOR, or how the prospective phasing out of LIBOR as a reference rate and transition to an alternate benchmark rate will ultimately be implemented, but increased volatility in the reported LIBOR rates may occur and the level of Metropolitan’s LIBOR-based swap and interest payments may be affected by the transition to an alternate benchmark rate when it occurs.

### **Outstanding Senior Revenue Bonds and Senior Parity Obligations**

#### **Senior Revenue Bonds**

The water revenue bonds issued under the Senior Debt Resolutions outstanding as of December 1, 2020, are set forth below:

<u>Name of Issue</u>	<u>Principal Outstanding</u>
Water Revenue Refunding Bonds, 1993 Series A	\$ 2,040,000
Water Revenue Bonds, 2000 Authorization, Series B-3 <sup>(1)</sup>	78,900,000
Water Revenue Refunding Bonds, 2011 Series C	118,700,000
Water Revenue Refunding Bonds, 2012 Series A	181,180,000
Water Revenue Refunding Bonds, 2012 Series C	5,635,000
Water Revenue Refunding Bonds, 2012 Series F	37,735,000
Water Revenue Refunding Bonds, 2012 Series G	89,820,000
Water Revenue Refunding Bonds, 2014 Series A	4,870,000
Water Revenue Refunding Bonds, 2014 Series C-3	2,810,000
Water Revenue Refunding Bonds, 2014 Series E	86,060,000
Water Revenue Bonds, 2015 Authorization, Series A	201,535,000
Water Revenue Refunding Bonds, 2016 Series A	239,455,000
Special Variable Rate Water Revenue Refunding Bonds, 2016 Series B-1 and B-2 <sup>(1)</sup>	82,905,000
Water Revenue Bonds, 2017, Authorization, Series A <sup>(1)</sup>	80,000,000
Special Variable Water Revenue Refunding Bonds, 2018 Series A-1 and A-2 <sup>(1)</sup>	90,070,000
Water Revenue Refunding Bonds, 2018 Series B	133,510,000
Water Revenue Refunding Bonds, 2019 Series A	218,090,000
Water Revenue Bonds, 2020 Series A	207,355,000
Special Variable Rate Water Revenue Refunding Bonds, 2020 Series B <sup>(2)</sup>	271,815,000
Water Revenue Refunding Bonds, 2020 Series C	267,995,000
<b>Total</b>	<b>\$2,400,480,000</b>

Source: Metropolitan.

<sup>(1)</sup> Outstanding variable rate obligation.

<sup>(2)</sup> Initially delivered in a long mode at a fixed interest rate to April 2, 2021.

#### **Variable Rate and Swap Obligations**

As of December 1, 2020, Metropolitan had outstanding \$331.9 million of senior lien variable rate obligations. The outstanding variable rate obligations consist of Senior Revenue Bonds issued under the Senior Debt Resolutions (described under this caption “–Variable Rate and Swap Obligations”) as variable rate demand obligations in a daily mode supported by standby bond purchase agreements between

Metropolitan and various liquidity providers (the “Liquidity Supported Bonds”). Metropolitan also has an outstanding Short-Term Revolving Credit Facility under which it may incur variable rate Senior Parity Obligations (described under “–Senior Parity Obligations – Short-Term Revolving Credit Facility” below).

**Liquidity Supported Bonds.** The interest rates for Metropolitan’s variable rate demand obligations issued under the Senior Debt Resolutions, totaling \$331.9 million as of December 1, 2020, are currently reset on a daily basis. While bearing interest at a daily rate, such variable rate demand obligations are subject to optional tender on any business day with same day notice by the owners thereof and mandatory tender upon specified events. Such variable rate demand obligations are supported by standby bond purchase agreements between Metropolitan and liquidity providers that provide for purchase of variable rate bonds by the applicable liquidity provider upon tender of such variable rate bonds and a failed remarketing. Metropolitan has secured its obligation to repay principal and interest advanced under the standby bond purchase agreements as Senior Parity Obligations. A decline in the creditworthiness of a liquidity provider will likely result in an increase in the interest rate of the applicable variable rate bonds, as well as an increase in the risk of a failed remarketing of such tendered variable rate bonds. Variable rate bonds purchased by a liquidity provider (“bank bonds”) would initially bear interest at a per annum interest rate equal to, depending on the liquidity facility, either: (a) the highest of (i) the Prime Rate, (ii) the Federal Funds Rate plus one-half of a percent, or (iii) seven and one-half percent (with the spread or rate increasing in the case of each of (i), (ii) and (iii) of this clause (a) by one percent after 60 days); or (b) the highest of (i) the Prime Rate plus one percent, (ii) Federal Funds Rate plus two percent, and (iii) seven percent (with the spread or rate increasing in the case of each of (i), (ii) and (iii) of this clause (b) by one percent after 90 days). To the extent such bank bonds have not been remarketed or otherwise retired as of the earlier of the 60<sup>th</sup> day following the date such bonds were purchased by the liquidity provider or the stated expiration date of the related liquidity facility, Metropolitan’s obligation to reimburse the liquidity provider may convert the term of the variable rate bonds purchased by the liquidity provider into a term loan payable under the terms of the current liquidity facilities in semi-annual installments over a period ending on either the third anniversary or fifth anniversary, depending on the applicable liquidity facility, of the date on which the variable rate bonds were purchased by the liquidity provider. In addition, upon an event of default under any such liquidity facility, including a failure by Metropolitan to perform or observe its covenants under the applicable standby bond purchase agreement, a default in other specified indebtedness of Metropolitan, or other specified events of default (including a reduction in the credit rating assigned to Senior Revenue Bonds issued under the Senior Debt Resolutions by any of Fitch, S&P or Moody’s below “A–” or “A3”), the liquidity provider could require all bank bonds to be subject to immediate mandatory redemption by Metropolitan.

The following table lists the liquidity providers, the expiration date of each facility and the principal amount of outstanding variable rate demand obligations covered under each facility as of December 1, 2020.

**Liquidity Facilities and Expiration Dates**

<u>Liquidity Provider</u>	<u>Bond Issue</u>	<u>Principal Outstanding</u>	<u>Facility Expiration</u>
The Toronto-Dominion Bank, New York Branch	2018 Series A-1 and Series A-2	\$ 90,070,000	June 2021 <sup>(1)</sup>
Bank of America, N.A.	2016 Series B-1 and Series B-2	\$ 82,905,000	July 2021 <sup>(1)</sup>
PNC Bank, N.A.	2017 Authorization Series A	\$ 80,000,000	March 2023
PNC Bank, N.A.	2000 Authorization Series B-3	<u>\$ 78,900,000</u>	March 2023
<b>Total</b>		<b>\$331,875,000</b>	

Source: Metropolitan.

<sup>(1)</sup> Metropolitan expects to renew or replace such liquidity facilities prior to their expiration date.



**Interest Rate Swap Transactions.** By resolution adopted on September 11, 2001, Metropolitan's Board authorized the execution of interest rate swap transactions and related agreements in accordance with a master swap policy, which was subsequently amended by resolutions adopted on July 14, 2009 and May 11, 2010. Metropolitan may execute interest rate swaps if the transaction can be expected to reduce exposure to changes in interest rates on a particular financial transaction or in the management of interest rate risk derived from Metropolitan's overall asset/liability balance, result in a lower net cost of borrowing or achieve a higher net rate of return on investments made in connection with or incidental to the issuance, incurring or carrying of Metropolitan's obligations or investments, or manage variable interest rate exposure consistent with prudent debt practices and Board-approved guidelines. The Chief Financial Officer reports to the Finance and Insurance Committee of Metropolitan's Board each quarter on outstanding swap transactions, including notional amounts outstanding, counterparty exposures and termination values based on then-existing market conditions.

Metropolitan currently has one type of interest rate swap, referred to in the table below as "Fixed Payor Swaps." Under this type of swap, Metropolitan receives payments that are calculated by reference to a floating interest rate and makes payments that are calculated by reference to a fixed interest rate.

Metropolitan's obligations to make regularly scheduled net payments under the terms of the interest rate swap agreements are payable on a parity with the Senior Parity Obligations. Termination payments under the 2002A and 2002B interest rate swap agreements would be payable on a parity with the Senior Parity Obligations. Termination payments under all other interest rate swap agreements would be on parity with the Subordinate Parity Obligations.

The following swap transactions were outstanding as of December 1, 2020:

**FIXED PAYOR SWAPS:**

<b>Designation</b>	<b>Notional Amount Outstanding</b>	<b>Swap Counterparty</b>	<b>Fixed Payor Rate</b>	<b>Metropolitan Receives</b>	<b>Maturity Date</b>
2002 A	\$ 48,282,000	Morgan Stanley Capital Services, Inc.	3.300%	57.74% of one-month LIBOR	7/1/2025
2002 B	18,063,000	JPMorgan Chase Bank	3.300	57.74% of one-month LIBOR	7/1/2025
2003	150,047,500	Wells Fargo Bank	3.257	61.20% of one-month LIBOR	7/1/2030
2003	150,047,500	JPMorgan Chase Bank	3.257	61.20% of one-month LIBOR	7/1/2030
2004 C	7,760,500	Morgan Stanley Capital Services, Inc.	2.980	61.55% of one-month LIBOR	10/1/2029
2004 C	6,349,500	Citigroup Financial Products, Inc.	2.980	61.55% of one-month LIBOR	10/1/2029
2005	29,057,500	JPMorgan Chase Bank	3.360	70% of 3-month LIBOR	7/1/2030
2005	<u>29,057,500</u>	Citigroup Financial Products, Inc.	3.360	70% of 3-month LIBOR	7/1/2030
<b>Total</b>	<b>\$438,665,000</b>				

Source: Metropolitan.

These interest rate swap agreements entail risk to Metropolitan. The counterparty may fail or be unable to perform, interest rates may vary from assumptions, Metropolitan may be required to post collateral in favor of its counterparties and Metropolitan may be required to make significant payments in the event of

an early termination of an interest rate swap. Metropolitan believes that if such an event were to occur, it would not have a material adverse impact on its financial position. Metropolitan seeks to manage counterparty risk by diversifying its swap counterparties, limiting exposure to any one counterparty, requiring collateralization or other credit enhancement to secure swap payment obligations, and by requiring minimum credit rating levels. Initially, swap counterparties must be rated at least "Aa3" or "AA-", or equivalent by any two of the nationally recognized credit rating agencies; or use a "AAA" subsidiary as rated by at least one nationally recognized credit rating agency. Should the credit rating of an existing swap counterparty drop below the required levels, Metropolitan may enter into additional swaps if those swaps are "offsetting" and risk-reducing swaps. Each counterparty is initially required to have minimum capitalization of at least \$150 million. See Note 5(e) in Metropolitan's audited financial statements in Appendix B.

Early termination of an interest rate swap agreement could occur due to a default by either party or the occurrence of a termination event (including defaults under other specified swaps and indebtedness, certain acts of insolvency, if a party may not legally perform its swap obligations, or, with respect to Metropolitan, if its credit rating is reduced below "BBB-" by Moody's or "Baa3" by S&P (under most of the interest rate swap agreements) or below "BBB" by Moody's or "Baa2" by S&P (under one of the interest rate swap agreements)). As of September 30, 2020, Metropolitan would have been required to pay to some of its counterparties termination payments if its swaps were terminated on that date. Metropolitan's net exposure to its counterparties for all such termination payments on that date was approximately \$68.1 million. Metropolitan does not presently anticipate early termination of any of its interest rate swap agreements due to default by either party or the occurrence of a termination event. However, Metropolitan has previously exercised, and may in the future exercise, from time to time, optional early termination provisions to terminate all or a portion of certain interest rate swap agreements.

Metropolitan is required to post collateral in favor of a counterparty to the extent that Metropolitan's total exposure for termination payments to that counterparty exceeds the threshold specified in the applicable swap agreement. Conversely, the counterparties are required to release collateral to Metropolitan or post collateral for the benefit of Metropolitan as market conditions become favorable to Metropolitan. As of September 30, 2020, Metropolitan had no collateral posted with any counterparty. The highest, month-end, amount of collateral posted was \$36.8 million, on June 30, 2012, which was based on an outstanding swap notional amount of \$1.4 billion at that time. The amount of required collateral varies from time to time due primarily to interest rate movements and can change significantly over a short period of time. See "METROPOLITAN REVENUES—Financial Reserve Policy" in this Appendix A. In the future, Metropolitan may be required to post additional collateral, or may be entitled to a reduction or return of the required collateral amount. Collateral deposited by Metropolitan is held by the counterparties; a bankruptcy of any counterparty holding collateral posted by Metropolitan could adversely affect the return of the collateral to Metropolitan. Moreover, posting collateral limits Metropolitan's liquidity. If collateral requirements increase significantly, Metropolitan's liquidity may be materially adversely affected. See "METROPOLITAN REVENUES—Financial Reserve Policy" in this Appendix A.

#### **Direct Purchase Long Mode Bonds**

In April 2020, Metropolitan entered into a Bond Purchase Agreement, dated as of April 1, 2020 (the "2020 Direct Purchase Agreement") with Wells Fargo Municipal Capital Strategies, LLC ("WFMCS"), for the purchase by WFMCS and sale by Metropolitan of Metropolitan's \$271.8 million Special Variable Rate Water Revenue Refunding Bonds 2020 Series B (the "2020B Senior Revenue Bonds"). The 2020B Senior Revenue Bonds were issued for the purpose of refunding all of Metropolitan's then outstanding variable rate Senior Revenue Bonds that were designated as self-liquidity bonds as part of Metropolitan's self-liquidity program ("Self-Liquidity Bonds").

The 2020B Senior Revenue Bonds were issued under the Senior Debt Resolutions and are further described in a related paying agent agreement, dated as of April 1, 2020 (the "2020B Paying Agent Agreement"), by and between Metropolitan and Wells Fargo Bank, N.A., as paying agent. Pursuant to the

2020B Paying Agent Agreement, the 2020B Senior Revenue Bonds may bear interest from time to time in any one of several interest rate modes at the election of Metropolitan. The 2020B Senior Revenue Bonds were initially issued in a Long Mode under the 2020B Paying Agent Agreement and initially bear interest at a Long Rate equal to 1.04 percent per annum for the initial Long Period ending on April 2, 2021. The 2020B Senior Revenue Bonds are subject to mandatory tender for purchase on April 2, 2021 (the "Mandatory Tender Date"), the last day of the Long Period. The 2020B Senior Revenue Bonds were initially designated as Self-Liquidity Bonds pursuant to the 2020B Paying Agent Agreement and no standby bond purchase agreement or other liquidity facility is in effect for the purchase of such bonds.

On or before the date 120 days prior to the end of the Long Period, Metropolitan may request WFMCS to purchase the 2020B Senior Revenue Bonds for another Long Period, or Metropolitan may seek to remarket the 2020B Senior Revenue Bonds to another bank or in the public debt markets in a new interest rate mode or at a fixed interest rate. In the event the 2020B Bonds are not purchased by WFMCS for a subsequent Long Period, Metropolitan is obligated under the 2020 Direct Purchase Agreement to cause 2020B Senior Revenue Bonds that have not been converted to another interest rate mode or remarketed to a purchaser or purchasers other than WFMCS ("Unremarketed 2020B Bonds") to be redeemed on the Mandatory Tender Date; provided, that if no default or event of default under the 2020 Direct Purchase Agreement shall have occurred and be continuing and the representations and warranties of Metropolitan shall be true and correct on the Mandatory Tender Date, then the principal amount of the Unremarketed 2020B Senior Revenue Bonds shall be due and payable on the date that is 30 days following the Mandatory Tender Date and shall accrue interest at the Purchaser Rate, a fluctuating interest per annum equal to, the greatest of the (i) the Prime Rate, (ii) Federal Funds Rate plus one-half of one percent, and (iii) five percent, as specified in the 2020 Direct Purchase Agreement. If no default or event of default under the 2020 Direct Purchase Agreement shall have occurred and be continuing and the representations and warranties of Metropolitan shall be true and correct at the end of such 30-day period, the Unremarketed 2020B Senior Revenue Bonds will continue to bear interest at the Purchaser Rate plus, after 180 days from the Mandatory Tender Date, a spread of one percent, and the principal amount of such Unremarketed 2020B Senior Revenue Bonds may, at Metropolitan's request, instead be subject to mandatory redemption in substantially equal installments payable every six months over an amortization period commencing six months after the Mandatory Tender Date and ending on the third anniversary of the Mandatory Tender Date.

Under the 2020 Direct Purchase Agreement, upon a failure by Metropolitan to pay principal or interest of any 2020B Senior Revenue Bonds, a failure by Metropolitan to perform or observe its covenants, a default in other specified indebtedness of Metropolitan, certain acts of bankruptcy or insolvency, or other specified events of default (including if S&P shall have assigned a credit rating below "BBB-", or if any of Fitch, S&P or Moody's shall have assigned a credit rating below "A-" or "A3," to Senior Revenue Bonds issued under the Senior Debt Resolutions), WFMCS has the right to cause a mandatory tender of the 2020B Senior Revenue Bonds and accelerate (depending on the event, seven days after the occurrence, or for certain events, only after 180 days' notice) Metropolitan's obligation to repay the 2020B Senior Revenue Bonds.

In connection with the execution of the 2020 Direct Purchase Agreement, Metropolitan designated the principal payable on the 2020B Senior Revenue Bonds on the Mandatory Tender Date as Excluded Principal Payments under the Senior Debt Resolutions and thus, for purposes of calculating Maximum Annual Debt Service, included the amount of principal and interest due and payable in connection therewith on a schedule of Assumed Debt Service. This schedule of Assumed Debt Service assumes that Metropolitan will pay the principal of the 2020B Senior Revenue Bonds over a period of 30 years at a fixed interest rate of approximately 5.00 percent.

Metropolitan has previously, and may in the future, enter into one or more self-liquidity revolving credit agreements which may be drawn upon for the purpose of paying the purchase price of any Self-Liquidity Bonds issued by Metropolitan, the repayment obligations of Metropolitan under which may be secured as either Senior Parity Obligations or Subordinate Parity Obligations.

### **Term Mode Bonds**

As of December 1, 2020, Metropolitan had outstanding \$2.8 million of Senior Revenue Bonds bearing interest in a term mode, comprised of its 2014 Series C-3 Bonds (the "Term Mode Bonds"). The Term Mode Bonds initially bear interest at a fixed rate for a specified period from their date of issuance, after which there shall be determined a new interest mode for such Term Mode Bonds (which may be another term mode, a daily mode, a weekly mode, a short-term mode or an index mode) or the Term Mode Bonds may be converted to bear fixed interest rates through the maturity date thereof. The owners of the Term Mode Bonds must tender for purchase, and Metropolitan must purchase, all of the Term Mode Bonds on the specified scheduled mandatory tender date of each term period for such Term Mode Bonds. The Term Mode Bonds outstanding as of December 1, 2020, are summarized in the following table:

<b>Term Mode Bonds</b>		
<b>Series</b>	<b>Original Principal Amount Issued</b>	<b>Next Scheduled Mandatory Tender Date</b>
2014 C-3	\$ 2,810,000	October 1, 2021 <sup>(1)</sup>

*Source: Metropolitan.*

<sup>(1)</sup> Metropolitan expects to refund or remarket the Term Mode Bonds prior to their next scheduled mandatory tender date.

Metropolitan will pay the principal of, and interest on, the Term Mode Bonds on parity with its other Senior Revenue Bonds. Metropolitan anticipates that it will pay the purchase price of tendered Term Mode Bonds from the proceeds of remarketing such Term Mode Bonds or from other available funds. Metropolitan's obligation to pay the purchase price of any tendered Term Mode Bonds is an unsecured, special limited obligation of Metropolitan payable from Net Operating Revenues. Purchase price payments of Term Mode Bonds are subordinate to both the Senior Revenue Bonds and Senior Parity Obligations and to the Subordinate Revenue Bonds and Subordinate Parity Obligations. Metropolitan has not secured any liquidity facility or letter of credit to support the payment of the purchase price of Term Mode Bonds in connection with any scheduled mandatory tender. If the purchase price of the Term Mode Bonds is not paid from the proceeds of remarketing or other funds following a scheduled mandatory tender, such Term Mode Bonds will then bear interest at a default rate of up to 12 percent per annum until purchased by Metropolitan or redeemed. Failure to pay the purchase price of Term Mode Bonds on a scheduled mandatory tender date is a default under the related paying agent agreement, upon the occurrence and continuance of which a majority in aggregate principal amount of the owners of such Term Mode Bonds may elect a bondholders' committee to exercise rights and powers of such owners under such paying agent agreement. Failure to pay the purchase price of Term Mode Bonds on a scheduled mandatory tender date is not a default under the Senior Debt Resolutions. If the purchase price of the Term Mode Bonds is not paid on a scheduled mandatory tender date, such Term Mode Bonds will also be subject to special mandatory redemption, in part, 18, 36 and 54 months following the purchase default. Any such special mandatory redemption payment will constitute an obligation payable on parity with the Senior Revenue Bonds and Senior Parity Obligations.

### **Senior Parity Obligations**

**Short-Term Revolving Credit Facility.** In April 2016, Metropolitan entered into a noteholder's agreement (such agreement as subsequently amended, the "RBC Short-Term Revolving Credit Facility") with RBC Municipal Products, LLC ("RBC") and a related note purchase agreement with RBC Capital Products, LLC, as the underwriter, for the issuance and sale by Metropolitan and the purchase by RBC of Metropolitan's short-term Index Notes. Pursuant to the RBC Short-Term Revolving Credit Facility, Metropolitan may borrow, pay down and re-borrow amounts, through the issuance and sale from time to time of up to \$200 million of notes (including, subject to certain terms and conditions, notes to refund maturing notes) to be purchased by RBC during the term of RBC's commitment thereunder (which commitment currently extends to April 5, 2022). As of December 1, 2020, Metropolitan had outstanding \$0 of short-term notes under the RBC Short-Term Revolving Credit Facility. Any unpaid principal remaining outstanding at

the April 5, 2022 commitment end date of the RBC Short-Term Revolving Credit Facility is required to be paid by Metropolitan in quarterly installments over a period of approximately one year.

Notes under the RBC Short-Term Revolving Credit Facility bear interest at a variable rate of interest: for taxable borrowings, at a spread of 0.54 percent (so long as the current credit rating on Metropolitan's Senior Revenue Bonds issued under the Senior Debt Resolutions is maintained) to the one-month LIBOR; and for tax-exempt borrowings, at a spread of 0.38 percent (so long as the current credit rating on Metropolitan's Senior Revenue Bonds issued under the Senior Debt Resolutions is maintained) to the SIFMA Municipal Swap Index. Under the RBC Short-Term Revolving Credit Facility, upon a failure by Metropolitan to pay principal or interest of any note thereunder, a failure by Metropolitan to perform or observe its covenants, a default in other specified indebtedness of Metropolitan, certain acts of insolvency, or other specified events of default (including a reduction in the credit rating assigned to Senior Revenue Bonds issued under the Senior Debt Resolutions by Fitch, S&P or Moody's below "A-" or "A3"), the bank has the right to terminate its commitments and may accelerate (depending on the event, seven days after the occurrence, or for certain events, only after 180 days' notice) Metropolitan's obligation to repay its borrowings. Metropolitan has secured its obligation to pay principal and interest on notes evidencing borrowings under the RBC Short-Term Credit Facility as Senior Parity Obligations.

In connection with the execution of the RBC Short-Term Revolving Credit Facility, Metropolitan designated the principal and interest payable on the notes thereunder as Excluded Principal Payments under the Senior Debt Resolutions and thus, for purposes of calculating Maximum Annual Debt Service, included the amount of principal and interest due and payable under the RBC Short-Term Revolving Credit Facility on a schedule of Assumed Debt Service. This schedule of Assumed Debt Service assumes that Metropolitan will pay the principal under the RBC Short-Term Revolving Credit Facility over a period of 30 years at a fixed interest rate of approximately 3.3 percent.

Metropolitan has previously, and may in the future, enter into one or more other or alternative short-term revolving credit facilities, the repayment obligations of Metropolitan under which may be secured as either Senior Parity Obligations or Subordinate Parity Obligations.

## Outstanding Subordinate Revenue Bonds and Subordinate Parity Obligations

### Subordinate Revenue Bonds

The water revenue bonds issued under the Subordinate Debt Resolutions outstanding as of December 1, 2020, are set forth below:

<u>Name of Issue</u>	<u>Principal Outstanding</u>
Subordinate Water Revenue Bonds, 2016 Authorization Series A <sup>(1)</sup>	\$ 175,000,000
Subordinate Water Revenue Refunding Bonds, 2017 Series A	232,715,000
Subordinate Water Revenue Refunding Bonds, 2017 Series B <sup>(2)</sup>	142,575,000
Subordinate Water Revenue Bonds, 2017 Series C <sup>(1)</sup>	80,000,000
Subordinate Water Revenue Refunding Bonds, 2017 Series D <sup>(1)</sup>	95,630,000
Subordinate Water Revenue Refunding Bonds, 2017 Series E <sup>(1)</sup>	95,625,000
Subordinate Water Revenue Refunding Bonds, 2018 Series A	90,115,000
Subordinate Water Revenue Bonds, 2018 Series B	64,345,000
Subordinate Water Revenue Refunding Bonds, 2019 Series A	233,660,000
Subordinate Water Revenue Refunding Bonds, 2020 Series A	152,455,000
<b>Total</b>	<b>\$1,362,120,000</b>

Source: Metropolitan.

<sup>(1)</sup> Outstanding variable rate obligation.

<sup>(2)</sup> Metropolitan expects to refund the \$35,645,000 principal amount of these bonds maturing on August 1, 2021 on or after their July 1, 2021 optional call date and prior to their maturity date.

### **Variable Rate Bonds**

As of December 1, 2020, of the \$1.36 billion outstanding Subordinate Revenue Bonds, \$446.3 million were variable rate obligations. The outstanding variable rate Subordinate Revenue Bonds (described under this caption “-Variable Rate Bonds”) are all bonds bearing interest in a LIBOR Index Mode or a SIFMA Index Mode (referred to herein as “Index Tender Bonds”). Metropolitan also has outstanding \$46.8 million short-term notes issued as variable rate Subordinate Parity Obligations (described under “-Subordinate Parity Obligations – Subordinate Short-Term Certificates” below).

**Direct Purchase LIBOR Index Mode Bonds.** In December 2016, Metropolitan entered into a Continuing Covenant Agreement with Bank of America, N.A. (“BANA,” and the “2016 BANA Agreement”), for the purchase by BANA and sale by Metropolitan of \$175 million Subordinate Water Revenue Bonds, 2016 Authorization Series A (the “Subordinate 2016 Series A Bonds”), which was the first series of bonds issued under the Subordinate Debt Resolutions. Proceeds were used to reimburse Metropolitan for the purchase of the Delta Islands in the San Francisco Bay\Sacramento-San Joaquin River Delta that was funded from Metropolitan’s reserves in July 2016.

The Subordinate 2016 Series A Bonds bear interest at a variable rate of interest, at a spread of 0.32 percent (so long as the current credit rating on Metropolitan’s Senior Revenue Bonds issued under the Senior Debt Resolutions is maintained) to one-month LIBOR. Under the 2016 BANA Agreement, upon a failure by Metropolitan to pay principal or interest of any Subordinate 2016 Series A Bonds, a failure by Metropolitan to perform or observe its covenants, a default in other specified indebtedness of Metropolitan, certain acts of insolvency, or other specified events of default (including if S&P shall have assigned a credit rating below “BBB-,” or if any of Fitch, S&P or Moody’s shall have assigned a credit rating below “BBB” or “Baa2,” to Senior Revenue Bonds issued under the Senior Debt Resolutions), BANA has the right to accelerate (depending on the event, seven days after the occurrence, or for certain events, only after 180 days’ notice) Metropolitan’s obligation to repay the Subordinate 2016 Series A Bonds. Metropolitan has secured its obligation to pay principal and interest under the 2016 BANA Agreement as a Subordinate Parity Obligation. The Subordinate 2016 Series A Bonds are Index Tender Bonds and are subject to mandatory tender for purchase on the scheduled mandatory tender date of June 21, 2021, or, if directed by BANA upon the occurrence and continuance of an event of default under the 2016 BANA Agreement, five business days after receipt of such direction. On or before the scheduled mandatory tender date, Metropolitan may request an extension of the 2016 BANA Agreement for another tender period or may request BANA to purchase the Subordinate 2016 Series A Bonds in another interest rate mode, or Metropolitan may seek to remarket the Subordinate 2016 Series A Bonds to another bank or in the public debt markets. In the event the 2016 BANA Agreement is not extended, Metropolitan is obligated under the 2016 BANA Agreement to cause unremarketed Subordinate 2016 Series A Bonds to be redeemed five business days after the scheduled mandatory tender date in the event the purchase price of the Subordinate 2016 Series A Bonds is not paid from the proceeds of a remarketing or other funds on the scheduled mandatory tender date. A failure to pay the purchase price of the Subordinate 2016 Series A Bonds upon a mandatory tender would constitute a default under the Subordinate Debt Resolutions if not remedied within five business days.

**SIFMA Index Mode Bonds.** Metropolitan’s Subordinate Water Revenue Bonds, 2017 Series C, Subordinate Water Revenue Refunding Bonds, 2017 Series D and Subordinate Water Revenue Refunding Bonds, 2017 Series E (collectively, the “Subordinate 2017 Series C, D and E Bonds”) bear interest at a rate that fluctuates weekly based on the SIFMA Municipal Swap Index plus a spread. The Subordinate 2017 Series C, D and E Bonds are Index Tender Bonds and are subject to mandatory tender under certain circumstances, including on certain scheduled mandatory tender dates (unless earlier remarketed or otherwise retired). Metropolitan anticipates that it will pay the purchase price of tendered Subordinate 2017 Series C, D and E Bonds from the proceeds of remarketing such Index Tender Bonds or from other available funds. Metropolitan’s obligation to pay the purchase price of any such tendered Subordinate 2017 Series C, D and E Bonds is a special limited obligation of Metropolitan payable solely from Net Operating Revenues subordinate to the Senior Revenue Bonds and Senior Parity Obligations and on parity with the other



outstanding Subordinate Revenue Bonds and Subordinate Parity Obligations. Metropolitan has not secured any liquidity facility or letter of credit to support the payment of the purchase price of Subordinate 2017 Series C, D and E Bonds in connection with a scheduled mandatory tender. Failure to pay the purchase price of any Subordinate 2017 Series C, D and E Bonds on a scheduled mandatory tender date for such Index Tender Bonds for a period of five business days following written notice by any Owner of such Subordinate 2017 Series C, D and E Bonds will constitute an event of default under the Subordinate Debt Resolutions, upon the occurrence and continuance of which the owners of 25 percent in aggregate principal amount of the Subordinate Revenue Bonds then outstanding may elect a bondholders' committee to exercise rights and powers of such owners under the Subordinate Debt Resolutions, including the right to declare the entire unpaid principal of the Subordinate Revenue Bonds then outstanding to be immediately due and payable.

The mandatory tender dates and related tender periods for the Index Tender Bonds outstanding as of December 1, 2020, are summarized in the following table:

<b>Index Tender Bonds</b>				
<b>Series</b>	<b>Date of Issuance</b>	<b>Original Principal Amount Issued</b>	<b>Next Scheduled Mandatory Tender Date</b>	<b>Maturity Date</b>
Subordinate 2016 Authorization Series A	December 21, 2016	\$175,000,000	June 21, 2021 <sup>(1)</sup>	July 1, 2045
Subordinate 2017 Series C	July 3, 2017	80,000,000	June 21, 2021 <sup>(1)</sup>	July 1, 2047
Subordinate 2017 Refunding Series D	July 3, 2017	95,630,000	June 21, 2021 <sup>(1)</sup>	July 1, 2037
Subordinate 2017 Refunding Series E	July 3, 2017	<u>95,625,000</u>	June 21, 2021 <sup>(1)</sup>	July 1, 2037
<b>Total</b>		<b>\$446,255,000</b>		

Source: Metropolitan.

<sup>(1)</sup> Metropolitan expects to refund or remarket the Index Tender Bonds prior to their next scheduled mandatory tender date.

### **Subordinate Parity Obligations**

**Subordinate Short-Term Certificates.** In August 2019, Metropolitan entered into an amended and restated note purchase and continuing covenant agreement with BANA (the "Subordinate Refunding Note Purchase Agreement") for the purchase by BANA and sale by Metropolitan of Metropolitan's \$46.8 million principal amount of Short-Term Revenue Refunding Certificates, Series 2019 A (the "2019A Subordinate Short-Term Refunding Notes"). The \$46.8 principal amount of 2019A Subordinate Short-Term Refunding Notes issued by Metropolitan and purchased by BANA on August 1, 2019 refunded all of the outstanding notes previously issued by Metropolitan under a prior note purchase and continuing covenant agreement entered into in 2018 between Metropolitan and BANA. Such refunded notes were issued for the purpose of providing advance funding to support the California WaterFix as authorized by the Board on July 10, 2018. On May 2, 2019, DWR withdrew its approval of California WaterFix and announced plans to pursue a new planning and environmental review process for a single tunnel Bay-Delta conveyance project. See "METROPOLITAN'S WATER SUPPLY—State Water Project —Bay-Delta Proceedings Affecting State Water Project — Bay-Delta Planning Activities; Delta Conveyance" in this Appendix A.

The 2019A Subordinate Short-Term Refunding Notes bear interest at a fluctuating per annum interest rate, equal to one-month LIBOR plus a spread of 0.32 percent (which spread is subject to increase on a scale based upon the then applicable credit ratings on Metropolitan's Senior Revenue Bonds), not to exceed 18 percent per annum. The scheduled maturity date of the 2019A Subordinate Short-Term Refunding Notes is August 1, 2021. On or before the date 120 days prior to the scheduled maturity date of the 2019A Subordinate Short-Term Refunding Notes, Metropolitan may request BANA to extend its commitment and to refund and exchange the 2019A Subordinate Short-Term Refunding Notes with new refunding notes, or Metropolitan may seek to refund the 2019A Subordinate Short-Term Refunding Notes with another bank or

to refinance the 2019A Subordinate Short-Term Refunding Notes on a short or long-term basis in the public debt markets.

Concurrently with the execution of the Subordinate Refunding Note Purchase Agreement, in August 2019, Metropolitan entered into an additional note purchase and continuing covenant agreement (the "2019 Subordinate Note Purchase Agreement") with BANA for the purchase by BANA and sale by Metropolitan, from time to time, of Metropolitan's Short-Term Revenue Certificates, Series 2019. Pursuant to the terms of the 2019 Subordinate Note Purchase Agreement, Metropolitan may borrow, through the issuance and sale from time to time of short-term notes (with maturity dates not exceeding one year from their delivery date), an aggregate principal amount not to exceed \$39.2 million (including, subject to certain terms and conditions, notes to refund maturing notes) to be purchased by BANA during the term of BANA's commitment thereunder (the stated expiration date of which is July 30, 2021). As of December 1, 2020, Metropolitan had outstanding \$0 of Short-Term Revenue Certificates under the 2019 Subordinate Note Purchase Agreement.

Notes under the 2019 Subordinate Note Purchase Agreement bear interest at a fluctuating per annum interest rate: (i) for taxable borrowings, equal to one-month LIBOR plus a spread of 0.32 percent; and (ii) for tax-exempt borrowings, equal to 80 percent of one-month LIBOR plus a spread of 0.20 percent; in each case, which spread is subject to increase on a scale based upon the then applicable credit ratings on Metropolitan's Senior Revenue Bonds. The per annum interest rate on notes under 2019 Subordinate Note Purchase Agreement shall not exceed 12 percent on notes issued for new money purposes and shall not exceed 18 percent on notes issued to refund maturing notes.

Metropolitan has secured its obligations to pay principal and interest under the Subordinate Refunding Note Purchase Agreement and the 2019 Subordinate Note Purchase Agreement as Subordinate Parity Obligations, payable from Net Operating Revenues on a basis junior and subordinate to Metropolitan's Senior Revenue Bonds and Senior Parity Obligations and on parity with Metropolitan's Subordinate Revenue Bonds.

Under each of Subordinate Refunding Note Purchase Agreement and the 2019 Subordinate Note Purchase Agreement, upon a failure by Metropolitan to pay principal or interest of any note thereunder, upon a failure by Metropolitan to perform or observe its covenants, a default in other specified indebtedness of Metropolitan, certain acts of bankruptcy or insolvency, or other specified events of default (including if S&P shall have assigned a credit rating below "BBB-", or if any of Fitch, S&P or Moody's shall have assigned a credit rating below "BBB" or "Baa2," to Metropolitan's Senior Revenue Bonds), BANA has the right to terminate its commitments thereunder and may accelerate (depending on the event, seven days after the occurrence, or for certain events, only after 180 days' notice) Metropolitan's obligation to repay its borrowings. Upon the occurrence and during the continuation of an event of default under the Subordinate Refunding Note Purchase Agreement or the 2019 Subordinate Note Purchase Agreement, outstanding notes thereunder would bear interest at a default rate of 12 percent per annum.

#### **Other Junior Obligations**

Metropolitan currently is authorized to issue up to \$400,000,000 of Commercial Paper Notes payable from Net Operating Revenues on a basis subordinate to both the Senior Revenue Bonds and Senior Parity Obligations and to the Subordinate Revenue Bonds and Subordinate Parity Obligations. Although no Commercial Paper Notes are currently outstanding, the authorization remains in full force and effect and Metropolitan may issue Commercial Paper Notes from time to time.

#### **General Obligation Bonds**

As of December 1, 2020, \$32,230,000 aggregate principal amount of general obligation bonds payable from *ad valorem* property taxes were outstanding. See "METROPOLITAN REVENUES-General" and "--Revenue Allocation Policy and Tax Revenues" in this Appendix A. Metropolitan's revenue bonds are not payable from the levy of *ad valorem* property taxes.

<u>General Obligation Bonds</u>	<u>Amount Issued<sup>(1)</sup></u>	<u>Principal Outstanding</u>
Waterworks General Obligation Refunding Bonds, 2014 Series A	\$49,645,000	\$ 4,540,000
Waterworks General Obligation Refunding Bonds, 2019 Series A	16,755,000	14,025,000
Water Works General Obligation Refunding Bonds, 2020 Series A	<u>13,665,000</u>	<u>13,665,000</u>
<b>Total</b>	<b><u>\$80,065,000</u></b>	<b><u>\$32,230,000</u></b>

Source: Metropolitan.

<sup>(1)</sup> Voters authorized Metropolitan to issue \$850,000,000 of Waterworks General Obligation Bonds, Election 1966, in multiple series, in a special election held on June 7, 1966. This authorization has been fully utilized. This table lists bonds that refunded such Waterworks General Obligation Bonds, Election 1966.

### State Water Contract Obligations

**General.** As described herein, in 1960, Metropolitan entered into its State Water Contract with DWR to receive water from the State Water Project. All expenditures for capital and operations, maintenance, power and replacement costs associated with the State Water Project facilities used for water delivery are paid for by the 29 Contractors that have executed State water supply contracts with DWR, including Metropolitan. Contractors are obligated to pay allocable portions of the cost of construction of the system and ongoing operating and maintenance costs through at least 2035, regardless of quantities of water available from the project. Other payments are based on deliveries requested and actual deliveries received, costs of power required for actual deliveries of water, and offsets for credits received. In exchange, Contractors have the right to participate in the system, with an entitlement to water service from the State Water Project and the right to use the portion of the State Water Project conveyance system necessary to deliver water to them at no additional cost as long as capacity exists. Metropolitan's State Water Contract accounts for nearly one-half of the total entitlement for State Water Project water contracted for by all Contractors.

DWR and other State Water Contractors, including Metropolitan, have reached an Agreement in Principle to extend their State water supply contracts to 2085 and to make certain changes related to the financial management of the State Water Project in the future. See "METROPOLITAN'S WATER SUPPLY—State Water Project" in this Appendix A.

Metropolitan's payment obligation for the State Water Project for the fiscal year ended June 30, 2020 was \$518.9 million, which amount reflects prior year's credits of \$33.2 million. For the fiscal year ended June 30, 2020, Metropolitan's payment obligations under the State Water Contract were approximately 35 percent of Metropolitan's total annual expenses. A portion of Metropolitan's annual property tax levy is for payment of State Water Contract obligations, as described above under "METROPOLITAN REVENUES—Revenue Allocation Policy and Tax Revenues" in this Appendix A. Any deficiency between tax levy receipts and Metropolitan's State Water Contract obligations is expected to be paid from Operating Revenues, as defined in the Senior Debt Resolutions. See Note 9(a) to Metropolitan's audited financial statements in Appendix B for an estimate of Metropolitan's payment obligations under the State Water Contract. See also "—Power Sources and Costs; Related Long-Term Commitments" for a description of current and future costs for electric power required to operate State Water Project pumping systems and a description of litigation involving the federal relicensing of the Hyatt-Thermalito hydroelectric generating facilities at Lake Oroville.

Metropolitan capitalizes its share of the State Water Project capital costs as participation rights in State Water Project facilities as such costs are billed by DWR. Unamortized participation rights essentially represent a prepayment for future water deliveries through the State Water Project system. Metropolitan's share of system operating and maintenance costs are annually expensed.

DWR and various subsets of the State Water Contractors have entered into amendments to the State water supply contracts related to the financing of certain State Water Project facilities. The amendments establish procedures to provide for the payment of construction costs financed by DWR bonds by establishing separate subcategories of charges to produce the revenues required to pay all of the annual financing costs (including coverage on the allocable bonds) relating to the financed project. If any affected Contractor defaults on payment under certain of such amendments, the shortfall may be collected from the non-defaulting affected Contractors, subject to certain limitations.

These amendments represent additional long-term obligations of Metropolitan, as described below.

***Devil Canyon-Castaic Contract.*** On June 23, 1972, Metropolitan and five other Southern California public agencies entered into a contract (the "Devil Canyon-Castaic Contract") with DWR for the financing and construction of the Devil Canyon and Castaic power recovery facilities, located on the aqueduct system of the State Water Project. Under this contract, DWR agreed to build the Devil Canyon and Castaic facilities, using the proceeds of revenue bonds issued by DWR under the State Central Valley Project Act. DWR also agreed to use and apply the power made available by the construction and operation of such facilities to deliver water to Metropolitan and the other contracting agencies. Metropolitan, in turn, agreed to pay to DWR 88 percent of the debt service on the revenue bonds issued by DWR. For calendar year 2020, this represented a payment of \$7.8 million. In addition, Metropolitan agreed to pay 78.5 percent of the operation and maintenance expenses of the Devil Canyon facilities and 96 percent of the operation and maintenance expenses of the Castaic facilities. Metropolitan's obligations under the Devil Canyon-Castaic Contract continue until the bonds are fully retired in 2022 even if DWR is unable to operate the facilities or deliver power from these facilities.

***Off-Aqueduct Power Facilities.*** In addition to system "on-aqueduct" power facilities costs, DWR has, either on its own or by joint venture, financed certain off-aqueduct power facilities. The power generated is utilized by the system for water transportation and other State Water Project purposes. Power generated in excess of system needs is marketed to various utilities and the California Independent System Operator ("CAISO"). Metropolitan is entitled to a proportionate share of the revenues resulting from sales of excess power. By virtue of a 1982 amendment to the State Water Contract and the other water supply contracts, Metropolitan and the other water Contractors are responsible for paying the capital and operating costs of the off-aqueduct power facilities regardless of the amount of power generated.

***East Branch Enlargement Amendment.*** In 1986, Metropolitan's State Water Contract and the water supply contracts of certain other State Water Contractors were amended for the purpose, among others, of financing the enlargement of the East Branch of the California Aqueduct. Under the amendment, enlargement of the East Branch can be initiated either at Metropolitan's request or by DWR finding that enlargement is needed to meet demands. Metropolitan, the other State Water Contractors on the East Branch, and DWR are currently in discussions on the timetable and plan for future East Branch enlargement actions.

The amendment establishes a separate subcategory of the Transportation Charge under the State Water Contract for the East Branch Enlargement and provides for the payment of costs associated with financing and operating the East Branch Enlargement. Under the amendment, the annual financing costs for such facilities financed by bonds issued by DWR are allocated among the participating Contractors based upon the delivery capacity increase allocable to each participating Contractor. Such costs include, but are not limited to, debt service, including coverage requirements, deposits to reserves, and certain operation and maintenance expenses, less any credits, interest earnings or other moneys received by DWR in connection with this facility.

If any participating Contractor defaults on payment of its allocable charges under the amendment, among other things, the non-defaulting participating Contractors may assume responsibility for such charges and receive delivery capability that would otherwise be available to the defaulting participating Contractor in

proportion to the non-defaulting Contractor's participation in the East Branch Enlargement. If participating Contractors fail to cure the default, Metropolitan will, in exchange for the delivery capability that would otherwise be available to the defaulting participating Contractor, assume responsibility for the capital charges of the defaulting participating Contractor.

***Water System Revenue Bond Amendment.*** In 1987, the State Water Contract and other water supply contracts were amended for the purpose of financing State Water Project facilities through revenue bonds. This amendment establishes a separate subcategory of the Delta Water Charge and the Transportation Charge under the State water supply contracts for projects financed with DWR water system revenue bonds. This subcategory of charge provides the revenues required to pay the annual financing costs of the bonds and consists of two elements. The first element is an annual charge for repayment of capital costs of certain revenue bond financed water system facilities under the existing water supply contract procedures. The second element is a water system revenue bond surcharge to pay the difference between the total annual charges under the first element and the annual financing costs, including coverage and reserves, of DWR's water system revenue bonds.

If any Contractor defaults on payment of its allocable charges under this amendment, DWR is required to allocate a portion of the default to each of the nondefaulting Contractors, subject to certain limitations, including a provision that no nondefaulting Contractor may be charged more than 125 percent of the amount of its annual payment in the absence of any such default. Under certain circumstances, the nondefaulting Contractors would be entitled to receive an allocation of the water supply of the defaulting Contractor.

The following table sets forth Metropolitan's projected costs of State Water Project water based upon DWR's Appendix B to Bulletin 132-19 (an annual report produced by DWR setting forth data and computations used by the State in determining State Water Contractors' Statements of Charges), Metropolitan's share of the forecasted costs associated with the planning of a single tunnel Bay-Delta conveyance project (see "METROPOLITAN'S WATER SUPPLY-State Water Project -Bay-Delta Proceedings Affecting State Water Project - Bay-Delta Planning Activities; Delta Conveyance"), and power costs forecasted by Metropolitan.

The projections for fiscal year 2020-21 are revised from the projections adopted in the fiscal year 2020-21 and 2021-22 biennial budget and based on results through November 2020. The projections for fiscal years 2021-22 through 2024-25 reflect Metropolitan's biennial budget for fiscal years 2020-21 and 2021-22, which includes a ten-year financial forecast. See also "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A. The projections reflect certain assumptions concerning future events and circumstances which may not occur or materialize. Actual costs may vary from these projections if such events and circumstances do not occur as expected or materialize, and such variances may be material.

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**PROJECTED COSTS OF METROPOLITAN  
FOR STATE WATER CONTRACT AND DELTA CONVEYANCE  
(Dollars in Millions)**

Year Ending June 30	Capital Costs <sup>(1)</sup>	Minimum OMP&R <sup>(1)</sup>	Power Costs <sup>(2)</sup>	Refunds & Credits <sup>(1)</sup>	Delta Conveyance <sup>(3)</sup>	Total <sup>(4)</sup>
2021	\$180.4	\$262.8	\$126.6	\$(39.9)	\$25.0	\$554.9
2022	211.9	275.2	212.4	(70.1)	25.0	654.4
2023	189.4	283.9	212.2	(63.5)	50.0	672.0
2024	209.9	294.9	212.5	(64.0)	--	653.3
2025	228.2	309.8	218.9	(66.8)	--	690.1

Source: Metropolitan.

- (1) Capital Costs, Minimum Operations, Maintenance, Power and Replacement ("OMP&R") and Refunds and Credits projections are based on DWR's Appendix B to Bulletin 132-19. Capital costs reflect DWR's October 2019 capital expenditures projections based upon its condition assessment review of State Water Project repair and replacement needs.
- (2) Power costs are forecasted by Metropolitan based on a 50 percent State Water Project allocation. Availability of State Water Project supplies vary and deliveries may include transfers and storage. All deliveries are based upon availability, as determined by hydrology, water quality and wildlife conditions. See "METROPOLITAN'S WATER SUPPLY-State Water Project" and "Endangered Species Act and Other Environmental Considerations" in this Appendix A.
- (3) Based on Metropolitan's share of the forecasted planning costs for a single tunnel project. Does not include any capital costs associated with any future proposed Bay-Delta conveyance project.
- (4) Totals may not add due to rounding.

**Power Sources and Costs; Related Long-Term Commitments**

Current and future costs for electric power required for operating the pumping systems of the CRA and the State Water Project are a substantial part of Metropolitan's overall expenses. Metropolitan's power costs include various ongoing fixed annual obligations under its contracts with the U.S. Department of Energy Western Area Power Administration and the Bureau of Reclamation for power from the Hoover and Parker Power Plants respectively. Expenses for electric power for the CRA for the fiscal years 2018-19 and 2019-20 were approximately \$39.3 million and \$39.6 million, respectively. Expenses for electric power and transmission service for the State Water Project for fiscal years 2018-19 and 2019-20 were approximately \$127.5 million and \$134.0 million, respectively. Electricity markets are subject to volatility and Metropolitan is unable to give any assurance with respect to the magnitude of future power costs.

**Colorado River Aqueduct.** Approximately 50 percent of the annual power requirements for pumping at full capacity (1.25 million acre-feet of Colorado River water) in Metropolitan's CRA are secured through long-term contracts for energy generated from federal facilities located on the Colorado River (Hoover Power Plant and Parker Power Plant). Payments made under the Hoover Power Plant and Parker Power Plant contracts are operation and maintenance expenses. These contracts provide Metropolitan with reliable and economical power resources to pump Colorado River water to Metropolitan's service area.

As provided for under the Hoover Power Allocation Act of 2011 (H.R. 470), Metropolitan has executed a 50-year agreement with the Western Area Power Administration for the continued purchase of electric energy generated at the Hoover Power Plant through September 2067, succeeding Metropolitan's prior Hoover contract that expired on September 30, 2017.

Depending on pumping conditions, Metropolitan can require additional energy in excess of the base resources available to Metropolitan from the Hoover and Parker Power Plants. The remaining up to approximately 50 percent of annual pumping power requirements for full capacity pumping on the CRA is obtained through energy purchases from municipal and investor-owned utilities, third party suppliers, or the



CAISO markets. Metropolitan is a member of the Western Systems Power Pool (“WSPP”) and utilizes its industry standard form contract to make wholesale power purchases at market cost.

Gross diversions of water from Lake Havasu for fiscal years 2018-19 and 2019-20 were approximately 798,000 acre-feet and 552,000 acre-feet, respectively, including Metropolitan’s basic apportionment of Colorado River water and supplies from water transfer and storage programs. In fiscal years 2018-19 and 2019-20, Metropolitan purchased approximately 395,000 and sold 54,000 megawatt-hours, respectively, of additional energy.

Metropolitan has agreements with the Arizona Electric Power Cooperative (“AEPSCO”) to provide transmission and energy purchasing services to support CRA power operations. The term of these agreements extends to December 31, 2035.

**State Water Project.** The State Water Project’s power requirements are met from a diverse mix of resources, including State-owned hydroelectric generating facilities. DWR has short-term contracts with Metropolitan (hydropower), Kern River Conservation District (hydropower), Northern California Power Agency (natural gas generation), Wells Fargo Company (Solar), Dominion Solar Holdings (Solar), and S-Power Corporation (Solar). The remainder of the State Water Project power needs is met by purchases from the CAISO.

DWR is seeking renewal of the license issued by FERC for the State Water Project’s Hyatt-Thermalito hydroelectric generating facilities at Lake Oroville. A Settlement Agreement containing recommended conditions for the new license was submitted to FERC in March 2006. That agreement was signed by over 50 stakeholders, including Metropolitan and other State Water Contractors. With only a few minor modifications, FERC staff recommended that the Settlement Agreement be adopted as the condition for the new license. DWR issued a final EIR for the relicensing project on July 22, 2008.

Butte County and Plumas County filed separate lawsuits against DWR challenging the adequacy of the final EIR. This lawsuit also named all of the signatories to the Settlement Agreement, including Metropolitan, as “real parties in interest,” since they could be adversely affected by this litigation. On September 5, 2019, the Court of Appeal ruled that review pursuant to CEQA is preempted in certain respects by the Federal Power Act. The case is now before the California Supreme Court. If the decision is affirmed, the case will be dismissed. If the California Supreme Court finds in favor of the plaintiffs, the case will be remanded to the California Court of Appeal for a determination of sufficiency regarding the merits of the CEQA petition.

Regulatory permits and authorizations are also required before the new license can take effect. In December 2016, NMFS issued a biological opinion setting forth the terms and conditions under which the relicensing project must operate in order to avoid adverse impacts to threatened and endangered species. This was the last major regulatory requirement prior to FERC issuing a new license. Following the 2017 Oroville Dam spillway incident, Butte County, the City of Oroville, and others requested that FERC not issue a new license until an Independent Forensic Team (“IFT”) delivered their final report to FERC and FERC has had adequate time to review the report. The Final IFT report was delivered on January 5, 2018. DWR submitted a plan to address the findings of the report to FERC on March 12, 2018. See “METROPOLITAN’S WATER SUPPLY—State Water Project –2017 Oroville Dam Spillway Incident.” Metropolitan anticipates that FERC will issue the new license; however, the timeframe for FERC approval is not currently known. However, FERC has issued one-year renewals of the existing license since its initial expiration date on January 31, 2007 and is expected to issue successive one-year renewals until a new license is obtained.

DWR receives transmission service from the CAISO. The transmission service providers participating in the CAISO may seek increased transmission rates, subject to the approval of FERC. DWR

has the right to contest any such proposed increase. DWR may also be subject to increases in the cost of transmission service as new electric grid facilities are constructed.

On September 10, 2018, Governor Brown signed SB 100 into law, which took effect on January 1, 2019. SB 100 establishes a goal of providing 100 percent carbon-free electricity by 2045 and increases the 2030 Renewables Portfolio Standard ("RPS") requirement for retail electric utilities from 50 percent to 60 percent. Simultaneously, the Governor announced Executive Order B-55-18 directing state agencies to develop a framework to achieve and maintain carbon neutrality by 2045. Metropolitan and DWR are not subject to the RPS requirements. However, as a state agency, DWR is subject to the Executive Order. DWR has an existing climate action plan in order to achieve carbon neutrality by 2045.

October 9, 2019, Governor Newsom signed SB 49 into law. SB 49 requires Natural Resources, in collaboration with the Energy Commission and the Department of Water Resources to assess by January 1, 2022 the opportunities and constraints for potential operational and structural upgrades to the State Water Project to aid California in achieving its climate and energy goals, and to provide associated recommendations consistent with California's energy goals.

### **Defined Benefit Pension Plan and Other Post-Employment Benefits**

Metropolitan is a member of the California Public Employees' Retirement System ("PERS"), a multiple-employer pension system that provides a contributory defined-benefit pension for substantially all Metropolitan employees. PERS provides retirement and disability benefits, annual cost-of-living adjustments and death benefits to plan members and beneficiaries. PERS acts as a common investment and administrative agent for participating public entities within the State. PERS is a contributory plan deriving funds from employee contributions as well as from employer contributions and earnings from investments. A menu of benefit provisions is established by State statutes within the Public Employees' Retirement Law. Metropolitan selects optional benefit provisions from the benefit menu by contract with PERS.

Metropolitan makes contributions to PERS based on actuarially determined employer contribution rates. The actuarial methods and assumptions used are those adopted by the PERS Board of Administration ("PERS Board"). Employees hired prior to January 1, 2013 are required to contribute 7.00 percent of their earnings (excluding overtime pay) to PERS. Pursuant to the current memoranda of understanding, Metropolitan contributes the requisite 7.00 percent contribution for all employees represented by the Management and Professional Employees Association, the Association of Confidential Employees, Supervisors and Professional Personnel Association and AFSCME Local 1902 and who were hired prior to January 1, 2012. Employees in all four bargaining units who were hired on or after January 1, 2012 but before January 1, 2013, pay the full 7.00 percent contribution to PERS for the first five years of employment. After the employee completes five years of employment, Metropolitan contributes the requisite 7.00 percent contribution. Metropolitan also contributes the entire 7.00 percent on behalf of unrepresented employees. Employees hired on or after January 1, 2013 and who are "new" PERS members as defined by Public Employees' Pension Reform Act of 2013 pay a member contribution of 6.00 percent in fiscal years 2018-19 through 2019-20 and 7.25 percent in fiscal years 2020-21 through 2021-22. In addition, Metropolitan is required to contribute the actuarially determined remaining amounts necessary to fund the benefits for its members.

The contribution requirements of the plan members are established by State statute and the employer contribution rate is established and may be amended by PERS. The fiscal year contributions were/are based on the following actuarial reports and discount rates:

<b>Fiscal Year</b>	<b>Actuarial Valuation</b>	<b>Discount Rate</b>
2018-19	June 30, 2016	7.375%
2019-20	June 30, 2017	7.25%
2020-21	June 30, 2018	7.00%
2021-22	June 30, 2019	7.00%

Metropolitan was required to contribute 25.97 percent and 29.97 percent of annual projected payroll for fiscal years 2018-19 and 2019-20, respectively. Metropolitan's actual contribution for fiscal years 2018-19 and 2019-20 were \$68.3 million or 32.14 percent of annual covered payroll and \$77.6 million or 34.38 percent of annual covered payroll, respectively. The fiscal years 2018-19 and 2019-20 actual contribution included \$11.8 million or 5.56 percent and \$11.5 million or 5.10 percent of annual covered payroll, respectively, for Metropolitan's pick-up of the employees' 7.00 percent share. For fiscal years 2020-21 and 2021-22, Metropolitan is required to contribute 32.43 percent and 34.39 percent, respectively, of annual projected payroll, in addition to member contributions paid by Metropolitan.

Metropolitan's required contributions to PERS fluctuate each year and include a normal cost component and a component equal to an amortized amount of the unfunded liability. Many assumptions are used to estimate the ultimate liability of pensions and the contributions that will be required to meet those obligations. The PERS Board has adjusted and may in the future further adjust certain assumptions used in the PERS actuarial valuations, which may increase Metropolitan's required contributions to PERS in future years. Accordingly, Metropolitan cannot provide any assurances that its required contributions to PERS in future years will not significantly increase (or otherwise vary) from any past or current projected levels of contributions.

On December 21, 2016, the PERS Board approved lowering the discount rate to 7.00 percent over a three-year period. PERS has estimated that with a reduction in the rate of return to 7.00 percent, most employers could expect a rate increase of 1.00 percent to 3.00 percent of normal cost as a percent of payroll for miscellaneous plans and an increase in payments toward unfunded accrued liabilities of between 30 to 40 percent. As a result, required contributions of employers, including Metropolitan, are expected to increase.

Beginning with fiscal year 2017-18 PERS began collecting employer contributions towards the plan's unfunded liability as dollar amounts instead of the prior method of contribution rate. This change addresses potential funding issues that could arise from a declining payroll or reduction in the number of active members in the plan.

On December 19, 2017, the PERS Board adopted new actuarial assumptions based on the recommendations in the December 2017 CalPERS Experience Study and Review of Actuarial Assumptions. This study reviewed the retirement rates, termination rates, mortality rates, rates of salary increases and inflation assumption for public agencies. These new assumptions were incorporated in the June 30, 2017 actuarial valuation and reflected in the required contribution for fiscal year 2019-20. In addition, the Board adopted a new asset portfolio as part of its Asset Liability Management. The new asset mix supports a 7.00 percent discount rate. The reduction of the inflation assumption will be implemented in two steps in conjunction with the decreases in the discount rate. For the June 30, 2017 valuation an inflation rate of 2.625 percent was used and for the June 30, 2018 and subsequent valuations, an inflation rate of 2.50 percent was/will be used.

The PERS Board has adopted a new amortization policy effective with the June 30, 2019 actuarial valuation. The new policy shortens the period over which actuarial gains and losses are amortized from 30 years to 20 years with the payments computed using a level dollar amount. In addition, the new policy removes the five-year ramp-up and ramp-down on unfunded accrued liability bases attributable to

assumption changes and non-investment gains/losses. The new policy removes the five-year ramp-down on investment gains/losses. These changes will apply only to new unfunded accrued liability bases established on or after June 30, 2019.

The following table shows the funding progress of Metropolitan’s pension plan.

<b>Valuation Date</b>	<b>Accrued Liability (\$ in billions)</b>	<b>Market Value of Assets (\$ in billions)</b>	<b>Unfunded Accrued Liability (\$ in billions)</b>	<b>Funded Ratio</b>
6/30/19 <sup>(1)</sup>	\$2.534	\$1.810	\$(0.724)	71.4%
6/30/18	\$2.433	\$1.744	\$(0.689)	71.7%
6/30/17	\$2.269	\$1.651	\$(0.618)	72.7%
6/30/16	\$2.166	\$1.524	\$(0.642)	70.3%
6/30/15	\$2.060	\$1.556	\$(0.504)	75.5%
6/30/14	\$1.983	\$1.560	\$(0.423)	78.7%
6/30/13	\$1.805	\$1.356	\$(0.449)	75.1%

<sup>(1)</sup> Most recent actuarial valuation available.

Source: California Public Employees’ Retirement System.

The market value of assets reflected above is based upon the most recent actuarial valuation as of June 30, 2019. The actuarial valuation as of June 30, 2020 is not expected to be available before summer 2021. The June 30, 2020 valuation report will be used to establish the contribution requirements for fiscal year 2022-23. Increased volatility has been experienced in the financial markets in recent months and the market value at the time of the June 30, 2020 valuation is not yet known. Significant losses in market value or failure to achieve projected investment returns could substantially increase unfunded pension liabilities and future pension costs. See also “INTRODUCTION–COVID-19 Pandemic.” However, as noted above, under the amortization policy adopted by PERS, changes in the unfunded accrued liability due to actuarial gains or losses are amortized over a fixed 20-year period with a five-year ramp up at the beginning and a five-year ramp down at the end of the amortization period, as a result of which the immediate fiscal impact of any one year’s negative return on Metropolitan’s contribution rates is reduced.

The following tables show the changes in Net Pension Liability and related ratios of Metropolitan’s pension plan for fiscal years 2019-20 and 2018-19, and for fiscal years 2018-19 and 2017-18.

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<u>(Dollars in thousands)</u>	<u>06/30/20</u>	<u>6/30/19</u>	<u>Increase/ (Decrease)</u>
<b>Total Pension Liability</b>	\$2,479,307	\$2,376,778	\$102,529
<b>Plan Fiduciary Net Position</b>	1,810,312	1,742,741	67,571
<b>Plan Net Pension Liability</b>	\$ 668,995	\$ 634,037	\$ 34,958
Plan fiduciary net positions as a % of the total pension liability	73.02%	73.32%	
Covered payroll	\$ 212,558	\$ 204,635	
Plan net pension liability as a % of covered payroll	314.74%	309.84%	

<u>(Dollars in thousands)</u>	<u>06/30/19</u>	<u>6/30/18</u>	<u>Increase/ (Decrease)</u>
<b>Total Pension Liability</b>	\$2,376,778	\$2,315,248	\$61,530
<b>Plan Fiduciary Net Position</b>	1,742,741	1,654,331	88,410
<b>Plan Net Pension Liability</b>	\$ 634,037	\$ 660,917	\$(26,880)
Plan fiduciary net positions as a % of the total pension liability	73.32%	71.45%	
Covered payroll	\$ 204,635	\$ 199,186	
Plan net pension liability as a % of covered payroll	309.84%	331.81%	

The Net Pension Liability for Metropolitan's Miscellaneous Plan for the fiscal years ended June 30, 2020 and 2019 was measured as of June 30, 2019 and June 30, 2018, respectively, and the Total Pension Liability used to calculate the Net Pension Liability as of such dates was determined by an annual actuarial valuation as of June 30, 2018 and June 30, 2017, respectively.

For more information on the plan, see APPENDIX B—"THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA INDEPENDENT AUDITORS' REPORT AND BASIC FINANCIAL STATEMENTS FOR FISCAL YEARS ENDED JUNE 30, 2020 AND JUNE 30, 2019 AND BASIC FINANCIAL STATEMENTS FOR THE THREE MONTHS ENDED SEPTEMBER 30, 2020 AND 2019 (UNAUDITED)."

Metropolitan currently provides post-employment medical insurance to retirees and pays the post-employment medical insurance premiums to PERS. On January 1, 2012, Metropolitan implemented a longer vesting schedule for retiree medical benefits, which applies to all new employees hired on or after January 1, 2012. Payments for this benefit were \$27.3 million in fiscal year 2018-19 and \$45.3 million in fiscal year 2019-20. Under Governmental Accounting Standards Board Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*, Metropolitan is required to account for and report the outstanding obligations and commitments related to such benefits, commonly referred to as other post-employment benefits ("OPEB"), on an accrual basis.

The actuarial valuations dated June 30, 2017 and June 30, 2019, were released in March of 2018 and June of 2020, respectively. The 2017 valuation indicated that the Actuarially Determined Contribution ("ADC") in fiscal year 2019-20 was \$28.1 million and 2019 valuation indicate that the ADC will be

\$23.2 million and \$23.6 million in fiscal years 2020-21 and 2021-22, respectively. The ADC was based on the entry-age normal actuarial cost method with contributions determined as a level percent of pay. The actuarial assumptions included the following:

	June 30, 2019 Valuation	June 30, 2017 Valuation
Investment Rate of Return	6.75%	6.75%
Inflation	2.75%	2.75%
Salary Increases	3.00%	3.00%
Health Care Cost Trends	Medicare – starting at 6.3%, grading down to 4.0% over fifty-five years. Non-Medicare – starting at 7.25%, grading down to 4.0% over fifty-five years	Medicare – starting at 6.5%, grading down to 4.0% over fifty-seven years. Non-Medicare – starting at 7.5%, grading down to 4.0% over fifty-seven years.
Mortality, Termination, Disability	CalPERS 1997-2015 Experience Study Mortality projected fully generational with Scale MP-2019	CalPERS 1997-2011 Experience Study Mortality projected fully generational with Scale MP-2017
Affordable Care Act (ACA) Excise Tax	Not included. Repealed in December 2019.	2% load on retiree medical premium subsidy

As of June 30, 2019, the date of the most recent OPEB actuarial report, the unfunded actuarial accrued liability was estimated to be \$164.3 million and projected to be \$156.7 million at June 30, 2020. The amortization period for the unfunded actuarial accrued liability is 23 years closed with 17 years remaining as of fiscal year end 2020 and the amortization period of actuarial gains and losses is 15 years closed. Adjustments to the ADC include amortization of the unfunded actuarial accrued liability and actuarial gains and losses.

In September 2013, Metropolitan’s Board established an irrevocable OPEB trust fund with the California Employers’ Retiree Benefit Trust Fund. The market value of assets in the trust as of June 30, 2020 was \$287.7 million. As part of its biennial budget process, the Board approved the full funding of the ADC for fiscal years 2020-21 and 2021-22.

As noted above, the COVID-19 pandemic and related economic consequences have contributed to increased volatility in the financial markets. Declines in the market value of the OPEB trust fund or failure to achieve projected investment returns could negatively affect the funding status of the trust fund and increase ADCs in the future. See also “INTRODUCTION–COVID-19 Pandemic.”

The following tables show the changes in Net OPEB Liability and related ratios of Metropolitan’s OPEB plan for fiscal years 2019-20 and 2018-19, and for fiscal years 2018-19 and 2017-18.



<u>(Dollars in thousands)</u>	<u>06/30/20</u>	<u>6/30/19</u>	<u>Increase/ (Decrease)</u>
<b>Total OPEB Liability</b>	\$434,759	\$468,185	\$(33,426)
<b>Plan Fiduciary Net Position</b>	266,773	239,851	26,922
<b>Plan Net OPEB Liability</b>	\$167,986	\$228,334	\$(60,348)
Plan fiduciary net positions as a % of the total OPEB liability	61.36%	51.23%	
Covered payroll	\$212,558	\$204,635	
Plan net OPEB liability as a % of covered payroll	79.03%	111.58%	

<u>(Dollars in thousands)</u>	<u>06/30/19</u>	<u>6/30/18</u>	<u>Increase/ (Decrease)</u>
<b>Total OPEB Liability</b>	\$468,185	\$448,095	\$ 20,090
<b>Plan Fiduciary Net Position</b>	239,851	207,526	32,325
<b>Plan Net OPEB Liability</b>	\$228,334	\$240,569	\$(12,235)
Plan fiduciary net positions as a % of the total OPEB liability	51.23%	46.31%	
Covered payroll	\$204,635	\$199,186	
Plan net OPEB liability as a % of covered payroll	111.58%	120.78%	

The Net OPEB Liability for the fiscal years ended June 30, 2020 and 2019 was measured as of June 30, 2019 and June 30, 2018, respectively, and the Total OPEB Liability used to calculate the Net OPEB Liability as of such dates was determined by an annual actuarial valuation as of June 30, 2019 and June 30, 2017, respectively.

### HISTORICAL AND PROJECTED REVENUES AND EXPENSES

The "Historical and Projected Revenues and Expenses" table below provides a summary of revenues and expenses of Metropolitan prepared on a modified accrual basis. This is consistent with the biennial budget for fiscal years 2020-21 and 2021-22, which includes a ten-year financial forecast. The table does not reflect the accrual basis of accounting, which is used to prepare Metropolitan's annual audited financial statements. The modified accrual basis of accounting varies from the accrual basis of accounting in the following respects: depreciation and amortization are not recorded and payments for debt service and pay-as-you-go construction are recorded when paid. Under the modified accrual basis of accounting, revenues are recognized in the fiscal year in which they are earned, and expenses are recognized when incurred. Thus, water revenues are recognized in the month the water transaction occurs and expenses are recognized when goods have been received and services have been rendered. The change to modified accrual accounting is for budgeting purposes and Metropolitan will continue to calculate compliance with its rate covenant, limitations on additional bonds and other financial covenants in the Revenue Bond Resolutions in accordance with their terms.

The projections are based on assumptions concerning future events and circumstances that may impact revenues and expenses and represent management's best estimates of results at this time. See the

footnotes to the table below entitled “HISTORICAL AND PROJECTED REVENUES AND EXPENSES” and “MANAGEMENT’S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES” for relevant assumptions, including projected water transactions and the average annual increase in the effective water rate, and “MANAGEMENT’S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES” for a discussion of potential impacts. Some assumptions inevitably will not materialize, and unanticipated events and circumstances may occur. Therefore, the actual results achieved during the projection period will vary from the projections and the variations may be material. The budget and projection information, and all other forward-looking statements in this Appendix A, are based on current expectations and are not intended as representations of facts or guarantees of future results.

The COVID-19 outbreak is a significant recent development that is currently materially adversely affecting global, national, State, and local economic activity and prospects. Because of the unprecedented nature of the COVID-19 pandemic, historical data may not be an accurate predictor of future performance. Accordingly, any trends that may be suggested by historical data and budgets or projections described herein which pre-date the onset of the COVID-19 emergency or do not include information regarding its impact should be considered in light of a possible or probable negative impact of COVID-19. Moreover, the COVID-19 pandemic is ongoing and possible future impacts involve many developing and unknown outcomes, several of which are identified in the discussion included under “INTRODUCTION- COVID-19 Pandemic.”

As discussed under “INTRODUCTION–COVID-19 Pandemic,” Metropolitan modified certain assumptions made in its preliminary biennial budget as initially presented to the Board in February 2020 following the onset of the COVID-19 outbreak to consider certain then-anticipated effects of COVID-19, primarily potential effects on the regional economy, financial impacts to member agencies and impacts on construction schedules and timing of capital expenditures. The biennial budget for fiscal years 2020-21 and 2021-22, and water rates and charges for calendar years 2021 and 2022 as adopted by the Board on April 14, 2020, reflect these adjustments. In recognition of the changed circumstances and the ongoing uncertainties related to COVID-19 (including those referenced above), as was contemplated in connection with its approval of the biennial budget for fiscal years 2020-21 and 2021-22, Metropolitan’s Board reviewed the adopted budget and rates in September 2020 to consider further impacts resulting from the COVID-19 crisis.

As noted herein, the financial projection for fiscal year 2020-21 reflects revised projections based on results through November 2020, and the financial projections for fiscal years 2021-22 through 2024-25 reflect the biennial budget for fiscal years 2020-21 and 2021-22 and ten-year financial forecast provided therein. The financial projections include Metropolitan’s share of the forecasted costs associated with the planning of a single tunnel Bay-Delta conveyance project. See “METROPOLITAN’S WATER SUPPLY–State Water Project –Bay-Delta Proceedings Affecting State Water Project – Bay-Delta Planning Activities; Delta Conveyance” in this Appendix A.

Metropolitan’s resource planning projections are developed using a comprehensive analytical process that incorporates demographic growth projections from recognized regional planning entities, historical and projected data acquired through coordination with local agencies, and the use of generally accepted empirical and analytical methodologies. See “METROPOLITAN’S WATER SUPPLY–Integrated Water Resources Plan” in this Appendix A. Due to the variability of supplemental wholesale water transactions and unpredictability of future hydrologic conditions, projections of the volume of annual water transactions are based on projections in Metropolitan’s latest Board adopted Integrated Resources Plan, the 2015 IRP Update and recently recalibrated by Metropolitan’s Water Resource Management for the biennial budget for fiscal years 2020-21 and 2021-22 and ten-year financial forecast provided therein.

Nevertheless, Metropolitan’s assumptions have been questioned by directors representing SDCWA on Metropolitan’s Board. Metropolitan has reviewed SDCWA’s concerns and, while recognizing that

assumptions may vary, believes that the estimates and assumptions that support Metropolitan's projections are reasonable based upon history, experience and other factors as described herein.

Metropolitan's projections of the level of water transactions are the result of a comprehensive retail demand, conservation, and local supply estimation process, including supply projections from member agencies and other water providers within Metropolitan's service area. Retail demands for water are estimated with a model driven by projections of relevant demographics provided by SCAG and SANDAG. Retail demands are adjusted downward for conservation savings and local supplies, with the remainder being the estimated demand for Metropolitan supplies. Conservation savings estimates include all conservation programs in place to date as well as estimates of future conservation program goals outlined in the 2015 IRP Update. See "CONSERVATION AND WATER SHORTAGE MEASURES" in this Appendix A. Local supplies include water produced by local agencies from various sources including but not limited to groundwater, surface water, locally-owned imported supplies, recycled water, and seawater desalination (see "REGIONAL WATER RESOURCES" in this Appendix A). For additional description of Metropolitan's water transactions projections, see "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A.

The water transactions projections used to determine water rates and charges assume an average year hydrology. Actual water transactions are likely to vary from projections. As shown in the chart entitled "Historical Water Transactions" below, transactions can vary significantly from average and demonstrates the degree to which Metropolitan's commitments to meet supplemental demands can impact transactions. In years when actual transactions exceed projections, the revenues from water transactions during the fiscal year will exceed budget, potentially resulting in an increase in financial reserves. In years when actual transactions are less than projections, Metropolitan uses various tools to manage reductions in revenues, such as reducing expenses below budgeted levels, reducing funding of capital from revenues, and drawing on reserves. See "METROPOLITAN REVENUES—Financial Reserve Policy" in this Appendix A. Metropolitan considers actual transactions, revenues and expenses, and financial reserve balances in setting rates for future fiscal years.

Projections in the following table reflect revised projections for fiscal year 2020-21 based on results through November 2020. Financial projections for fiscal years 2021-22 through 2024-25 reflect the biennial budget for fiscal year 2020-21 and 2021-22 and ten-year financial forecast provided therein. This includes the issuance of \$585 million of bonds for fiscal years 2020-21 through 2024-25 to finance the CIP. See "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES" and "CAPITAL INVESTMENT PLAN—Capital Investment Plan Financing" in this Appendix A.

Water transactions with member agencies were 1.37 million acre-feet in fiscal year 2019-20. Water transactions with member agencies are projected to be 1.48 million acre-feet for fiscal year 2020-21, 1.60 million acre-feet for fiscal years 2021-22 and 2022-23, 1.64 million acre-feet for fiscal year 2023-24, and 1.69 million acre-feet for fiscal year 2024-25. Rates and charges increased by 3.0 percent on January 1, 2021 and will increase by 4.0 percent on January 1, 2022. Rates and charges are projected to increase 5.0 percent for each of calendar years 2023 and 2024, and 4.0 percent for calendar year 2025. Actual rates and charges to be effective in 2023 and thereafter are subject to adoption by Metropolitan's Board.

The projections were prepared by Metropolitan and have not been reviewed by independent certified public accountants or any entity other than Metropolitan. Dollar amounts are rounded.

**HISTORICAL AND PROJECTED REVENUES AND EXPENSES<sup>(a)</sup>**  
**Fiscal Years Ended June 30**  
**(Dollars in Millions)**

	Actual				Projected				
	2017	2018	2019	2020	2021	2022	2023	2024	2025
Water Revenues <sup>(b)</sup>	\$1,151	\$1,285	\$1,149	\$1,188	\$1,328	\$1,476	\$1,542	\$1,667	\$1,793
Additional Revenue Sources <sup>(c)</sup>	184	172	170	165	165	175	183	189	202
<b>Total Operating Revenues</b>	<b>1,335</b>	<b>1,457</b>	<b>1,319</b>	<b>1,353</b>	<b>1,493</b>	<b>1,651</b>	<b>1,725</b>	<b>1,856</b>	<b>1,995</b>
O&M, CRA Power and Water Transfer Costs <sup>(d)</sup>	(559)	(568)	(569)	(642)	(710)	(750)	(796)	(847)	(877)
Total SWC OMP&R and Power Costs <sup>(e)</sup>	(368)	(395)	(347)	(384)	(424)	(513)	(546)	(507)	(529)
<b>Total Operation and Maintenance</b>	<b>(927)</b>	<b>(963)</b>	<b>(916)</b>	<b>(1,026)</b>	<b>(1,134)</b>	<b>(1,263)</b>	<b>(1,342)</b>	<b>(1,354)</b>	<b>(1,406)</b>
<b>Net Operating Revenues</b>	<b>\$ 408</b>	<b>\$ 494</b>	<b>\$ 403</b>	<b>\$ 327</b>	<b>\$ 359</b>	<b>\$ 388</b>	<b>\$ 383</b>	<b>\$ 502</b>	<b>\$ 589</b>
Miscellaneous Revenue <sup>(f)</sup>	18	27	22	14	8	26	27	27	28
Transfer from Reserve Funds <sup>(g)</sup>	33	1	--	--	--	--	--	--	--
Sales of Hydroelectric Power <sup>(h)</sup>	21	24	18	16	15	22	23	14	14
Interest on Investments <sup>(i)</sup>	4	8	34	20	18	18	18	18	19
<b>Adjusted Net Operating Revenues<sup>(j)</sup></b>	<b>484</b>	<b>554</b>	<b>477</b>	<b>377</b>	<b>400</b>	<b>454</b>	<b>451</b>	<b>561</b>	<b>650</b>
Senior and Subordinate Obligations <sup>(k)</sup>	(308)	(340)	(333)	(272)	(279)	(298)	(306)	(323)	(320)
<b>Funds Available from Operations</b>	<b>\$ 176</b>	<b>\$ 214</b>	<b>\$ 144</b>	<b>\$ 105</b>	<b>\$ 121</b>	<b>\$ 156</b>	<b>\$ 145</b>	<b>\$ 238</b>	<b>\$ 330</b>
<b>Debt Service Coverage on all Senior and Subordinate Bonds<sup>(l)</sup></b>	<b>1.57</b>	<b>1.63</b>	<b>1.43</b>	<b>1.39</b>	<b>1.43</b>	<b>1.52</b>	<b>1.47</b>	<b>1.74</b>	<b>2.03</b>
<b>Funds Available from Operations</b>	<b>\$ 176</b>	<b>\$ 214</b>	<b>\$ 144</b>	<b>\$ 105</b>	<b>\$ 121</b>	<b>\$ 156</b>	<b>\$ 145</b>	<b>\$ 238</b>	<b>\$ 330</b>
Other Revenues (Expenses)	(4)	(5)	(6)	(6)	(7)	(7)	(7)	(8)	(8)
Pay-As-You Go Construction	(132)	(98)	(128)	(39)	(110)	(135)	(180)	(180)	(210)
Pay-As-You Go Funded from Replacement & Refurbishment Fund Reserves	1	1	--	1	--	--	--	--	--
<b>Total SWC Capital Costs Paid from Current Year Operations</b>	<b>(45)</b>	<b>(21)</b>	<b>(4)</b>	<b>(1)</b>	<b>1</b>	<b>(10)</b>	<b>12</b>	<b>(8)</b>	<b>(24)</b>
<b>Remaining Funds Available from Operations</b>	<b>(4)</b>	<b>91</b>	<b>6</b>	<b>60</b>	<b>5</b>	<b>4</b>	<b>(30)</b>	<b>42</b>	<b>88</b>
Fixed Charge Coverage <sup>(m)</sup>	1.37	1.53	1.42	1.38	1.44	1.47	1.53	1.69	1.89
Property Taxes	116	131	145	147	140	140	140	140	140
General Obligation Bonds Debt Service	(22)	(20)	(14)	(13)	(7)	(8)	(2)	(2)	(2)
SWC Capital Costs Paid from Taxes	(94)	(111)	(131)	(134)	(133)	(132)	(138)	(138)	(138)
<b>Net Funds Available from Current Year</b>	<b>\$ (4)</b>	<b>\$ 91</b>	<b>\$ 6</b>	<b>\$ 60</b>	<b>\$ 5</b>	<b>\$ 4</b>	<b>\$ (30)</b>	<b>\$ 42</b>	<b>\$ 88</b>

Source: Metropolitan.

(Footnotes on next page)

(Footnotes to table on prior page)

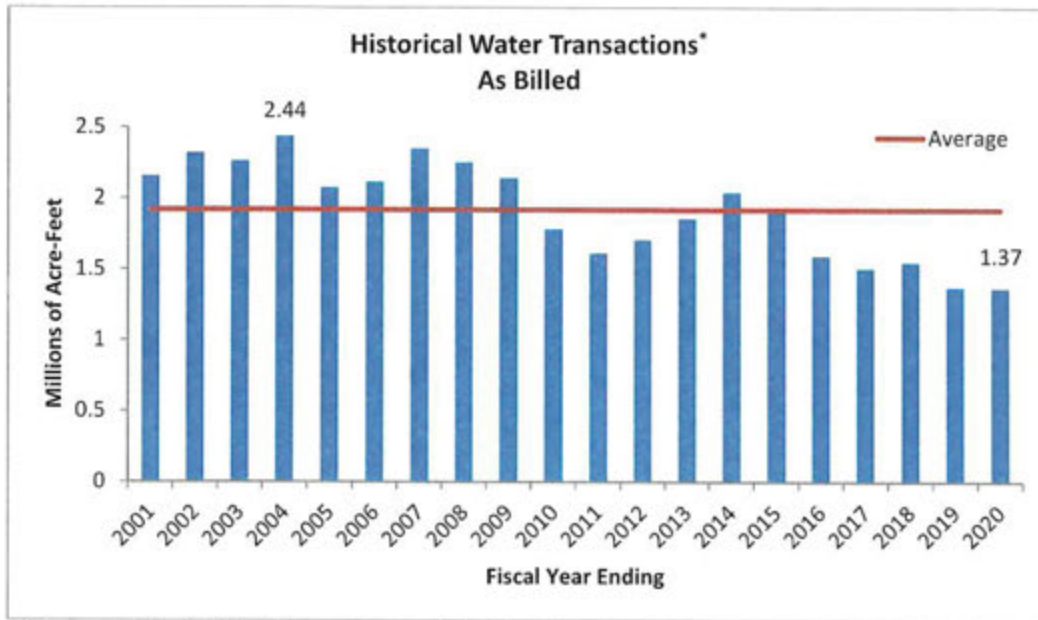
- (a) Unaudited. Prepared on a modified accrual basis. Projected revenues and expenses in fiscal year 2020-21 are based on results through November 2020 and revised from the projections provided in the adopted biennial budget for fiscal years 2020-21 and 2021-22. Projections for fiscal year 2021-22 through fiscal year 2024-25 are based on assumptions and estimates used in the biennial budget for fiscal years 2020-21 and 2021-22 and ten-year financial forecast provided therein, and reflect the projected issuance of additional bonds. See "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A.
- (b) Water Revenues include revenues from water sales, exchanges, and wheeling. During the fiscal years ended June 30, 2018 through June 30, 2020, annual water transactions with member agencies (in acre-feet) were 1.55 million, 1.37 million, and 1.37 million, respectively. See the table entitled "Summary of Water Transactions and Revenues" under "METROPOLITAN REVENUES—Water Revenues" in this Appendix A. The water transactions projections (in acre-feet) are 1.48 million acre-feet for fiscal year 2020-21, 1.60 million acre-feet for fiscal years 2021-22 and 2022-23, 1.64 million acre-feet for fiscal year 2023-24, and 1.69 million acre-feet for fiscal year 2024-25. Projections reflect adopted overall rate and charge increases of 3.0 percent effective on January 1, 2021 and 4.0 percent effective on January 1, 2022. Rates and charges are projected to increase an average of 5.0 percent in each of calendar years 2023 and 2024, and an average of 4.0 percent for calendar year 2025, subject to adoption by Metropolitan's Board. See "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A.
- (c) Includes revenues from water standby, readiness-to-serve, and capacity charges. The term Operating Revenues excludes *ad valorem* taxes. See "METROPOLITAN REVENUES—Other Charges" in this Appendix A.
- (d) Water Transfer Costs and Regional Recycled Water Program planning costs (described under "REGIONAL WATER RESOURCES—Local Water Supplies – Recycled Water-Metropolitan Regional Recycled Water Program") are included in operation and maintenance expenses for purposes of calculating the debt service coverage on all Obligations.
- (e) Includes on- and off-aqueduct power and operation, maintenance, power and replacement costs payable under the State Water Contract and Bay-Delta conveyance planning costs. See "METROPOLITAN EXPENSES—State Water Contract Obligations" in this Appendix A. See also "METROPOLITAN'S WATER SUPPLY—State Water Project –Bay-Delta Proceedings Affecting State Water Project – Bay-Delta Planning Activities; Delta Conveyance" in this Appendix A.
- (f) May include lease and rental net proceeds, net proceeds from sale of surplus property, reimbursements, and historically, federal interest subsidy payments for Build America Bonds.
- (g) Reflects transfers from the Water Management Fund, the Water Stewardship Fund, and the Water Rate Stabilization Fund, of \$33 million in fiscal year 2016-17, and \$1 million in fiscal year 2017-18, to fund a like amount of costs for conservation and supply programs. See "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A.
- (h) Includes CRA power sales.
- (i) Does not include interest applicable to Bond Construction Funds, the Excess Earnings Funds, other trust funds and the Deferred Compensation Trust Fund.
- (j) Adjusted Net Operating Revenues is the sum of all available revenues that the revenue bond resolutions specify may be considered by Metropolitan in setting rates and issuing additional Senior Revenue Bonds and Senior Parity Obligations and Subordinate Revenue Bonds and Subordinate Parity Obligations.
- (k) Includes debt service on outstanding Senior Revenue Bonds, Senior Parity Obligations, Subordinate Revenue Bonds, Subordinate Parity Obligations, and additional Revenue Bonds (projected). Assumes issuance of approximately \$255 million in additional Revenue Bonds in fiscal year 2020 21, approximately \$120 million in each of fiscal years 2022 23 and 2023-24, and approximately \$90 million in fiscal year 2024 25. Fiscal year 2017-18 debt service increased by \$15.3 million for debt service prepaid through bond refunding transactions in June 2018, rather than on July 1, 2018 and fiscal year 2018-19 debt service is therefore reduced by \$15.3 million. Fiscal year 2018-19 debt service increased by \$28.5 million for debt service prepaid in June 2019, rather than on July 1, 2019 and fiscal year 2019-20 debt service is therefore reduced by \$28.5 million. See "CAPITAL INVESTMENT PLAN—Capital Investment Plan Financing" in this Appendix A.
- (l) Adjusted Net Operating Revenues, divided by the sum of debt service on outstanding Senior Revenue Bonds, Senior Parity Obligations, Subordinate Revenue Bonds and Subordinate Parity Obligations, including the subordinate lien California Safe Drinking Water Revolving Fund Loan (prior to its discharge in 2017) and projected Revenue Bonds. See "METROPOLITAN EXPENSES—Outstanding Senior Revenue Bonds and Senior Parity Obligations" and "—Outstanding Subordinate Revenue Bonds and Subordinate Parity Obligations" in this Appendix A.
- (m) Adjusted Net Operating Revenues, divided by the sum of State Water Contract capital costs paid from current year operations and debt service on outstanding Senior Revenue Bonds, Senior Parity Obligations, Subordinate Revenue Bonds and Subordinate Parity Obligations, including the subordinate lien California Safe Drinking Water Revolving Fund Loan (prior to its discharge in 2017) and additional Revenue Bonds (projected).

## MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES

### Water Transactions Projections

The water transactions with member agencies in the table above for fiscal year 2019-20 were 1.37 million acre-feet. The water transactions forecast is 1.48 million acre-feet for fiscal year 2020-21 (reflecting the revised projections based on results through November 2020), and 1.60 million acre-feet for fiscal years 2021-22 and 2022-23, 1.64 million acre-feet for fiscal year 2023-24, and 1.69 million acre-feet for fiscal year 2024-25, consistent with the biennial budget and ten-year financial forecast. For purposes of comparison, Metropolitan's highest level of water transactions during the past 20 fiscal years was approximately 2.44 million acre-feet in fiscal year 2003-04 and the lowest was 1.37 million acre-feet in fiscal

year 2019-20. The chart below shows the volume of water transactions with member agencies over the last 20 fiscal years.



**Water Revenues**

Metropolitan relies on revenues from water transactions for about 75 percent of its total revenues. In adopting the budget and rates and charges for each fiscal year, Metropolitan’s Board reviews the anticipated revenue requirements and projected water transactions to determine the rates necessary to produce the required revenues to be derived from water transactions during the fiscal year. Metropolitan sets rates and charges estimated to provide operating revenues sufficient, with other sources of funds, to provide for payment of its expenses. See “HISTORICAL AND PROJECTED REVENUES AND EXPENSES” in this Appendix A.

Metropolitan’s Board has adopted annual increases in water rates each year beginning with the rates effective January 1, 2004. See “METROPOLITAN REVENUES–Rate Structure” and “–Classes of Water Service” in this Appendix A. On April 14, 2020, the Board adopted average increases in rate and charges of 3.0 percent, to become effective on January 1, 2021, and 4.0 percent, to become effective on January 1, 2022. Rates and charges are projected to increase 5.0 percent for each of calendar years 2023 and 2024, and 4.0 percent for calendar year 2025. Actual rates and charges to be effective in 2023 and thereafter are subject to adoption by Metropolitan’s Board.

**Projected Fiscal Year 2020-21 Results**

Projections for fiscal year 2020-21, in the table above, are revised from the projections adopted in the fiscal year 2020-21 and 2021-22 biennial budget and based on results through November 2020. Financial projections for fiscal years 2021-22 through 2024-25 are reflected in the fiscal year 2020-21 and 2021-22 biennial budget and ten-year financial forecast provided therein. The fiscal year 2020-21 and 2021-22 biennial budget and rates set the stage for predictable and reasonable rate increases over the ten-year planning period, with Board adopted overall rate increases of 3.0 percent for calendar year 2021 and 4.0 percent for calendar year 2022. The fiscal year 2020-21 and 2021-22 biennial budget and ten-year financial forecast includes rate increases of 5.0 percent for each of calendar years 2023 and 2024, and



4.0 percent for calendar year 2025. Actual rates and charges to be effective in 2023 and thereafter are subject to adoption by Metropolitan's Board as part of the biennial budget process, at which point the ten-year forecast will be updated as well. Increases in rates and charges reflect the impact of reduced water transactions projections, increasing operations and maintenance costs, and increasing State Water Project costs, when compared to prior fiscal years.

Operation and maintenance expenses in fiscal year 2020-21 are projected to be \$1,134 million, which represents approximately 68.1 percent of total costs. These expenses include the costs of labor, electrical power, materials and supplies of both Metropolitan and its contractual share of the State Water Project. Metropolitan's operation and maintenance expenses are projected to be \$96 million under budget in fiscal year 2020-21. Comparatively, operations and maintenance expenses in fiscal year 2019-20 were \$1,026 million, which represents approximately 69.0 percent of total costs. Overall, projected expenses for the twelve months ending June 30, 2021 are \$1.7 billion. This is \$112 million, or 6.3 percent, less than budgeted expenses.

Fiscal year 2020-21 revenue bond debt service coverage is projected to be 1.43x and fixed charge coverage to be 1.44x. Fiscal year 2020-21 capital expenditures, currently estimated at \$304.6 million, will be partially funded by the proceeds of bonds issued for Fiscal Year 2020-21 for such purpose and the remainder from pay-as-you-go funding. Metropolitan's unrestricted reserves are projected to be approximately \$429 million at June 30, 2021. See "METROPOLITAN REVENUES—Financial Reserve Policy" in this Appendix A. This amount does not include funds held in the Exchange Agreement Set-Aside Fund.

As discussed under "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" and noted above, projections for fiscal year 2020-21 are based on results through November 2020. Metropolitan's biennial budget for fiscal years 2020-21 and 2021-22, adopted by the Board on April 14, 2020, and the financial projections for fiscal years 2020-21 through 2024-25 included in the ten-year financial forecast provided therein, reflect adjustments made to the underlying assumptions to consider certain then-identified potential effects of the COVID-19 outbreak. Metropolitan is continuing to monitor the pandemic but is not able to fully predict the effect it will have on Metropolitan's financial performance or operations. Metropolitan's financial results during the fiscal years 2020-21 through 2024-25 projection period may be impacted by subsequent developments relating to the COVID-19 pandemic and its consequences. Metropolitan's Board action on April 14, 2020 to adopt the biennial budget for fiscal years 2020-21 and 2021-22, and water rates and charges for calendar years 2021 and 2022, included a review of the adopted budget and rates in September 2020 to consider further impacts resulting from the COVID-19 crisis. In September 2020, the Board determined to maintain the previously adopted rates and charges for calendar years 2021 and 2022. Among other things, at that time, the Board took certain other actions, including approving cost containment measures for fiscal years 2020-21 and 2021-22, and directing staff to develop a payment deferral program for member agencies that record and report significant customer payment delinquencies and likewise grant deferrals to their customers; evaluate potential new revenue-generating programs; and place a moratorium on on-emergency unbudgeted spending.

See also the "Management's Discussion and Analysis" contained in APPENDIX B—"THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA INDEPENDENT AUDITORS' REPORT AND BASIC FINANCIAL STATEMENTS FOR FISCAL YEARS ENDED JUNE 30, 2020 AND JUNE 30, 2019 AND BASIC FINANCIAL STATEMENTS FOR THE THREE MONTHS ENDED SEPTEMBER 30, 2020 AND 2019 (UNAUDITED)."

## Appendix G

### Water Supply Assessment Checklist

### Water Supply Assessment Checklist

Water Code Section	Water Supply Assessment Content	Page # in WSA
10910(c)(2)	Incorporate data from UWMP.	1-37
10910(d)(1)	Identification of existing water supply entitlements, water rights, or water service contracts relevant to identified water supply for proposed project, and description of quantity of water received in prior years.	22-37
10910(d)(2)(A)	Written contracts or other proof of entitlement to an identified water supply.	22-37
10910(d)(2)(B)	Capital outlay program for financing the delivery of a water supply that has been adopted.	36
10910(d)(2)(C)	Federal, state, and local permits for construction of necessary infrastructure associated with delivering the water supply.	11-36
10910(d)(2)(D)	Any necessary regulatory approval to deliver/convey the water supply.	13-36
10910(f)(1)	Review of any information contained in the UWMP relevant to the identified water supply for the proposed project.	1-37
10910(f)(2)	Description of any groundwater basin(s) from which proposed project will be supplied. For basins with adjudicated groundwater pumping rights, include a copy of the order/decree adopted by the court or the board and a description of quantity of groundwater public water system has the legal right to pump under the order/decree.	19-21, 24-26 Appendix D
10910(f)(3)	Description and analysis of amount and location of groundwater pumped for the past 5 years from any groundwater basin from which the proposed project will be supplied.	24-26
10910(f)(4)	Description and analysis of amount and location of groundwater that is projected to be pumped from any basin to provided water to the proposed project.	19-21, 24-26
10910(f)(5)	Analysis of sufficiency of groundwater from the basins from which the proposed project will be supplied to meet projected water demand of the proposed project.	19-21, 24-26



**WATER SUPPLY ASSESSMENT**

**FOR THE DOWNTOWN LOS ANGELES SOUTH PARK  
PROPERTIES SITE 3 PROJECT**

Prepared by:  
Water Resources Division

Prepared on  
April 19, 2021

## Table of Contents

Introduction .....	4
Findings.....	5
The Downtown Los Angeles South Park Properties Site 3 Project Description.....	6
The Downtown Los Angeles South Park Properties Site 3 Project Water Demand Estimate .....	7
Water Demand Forecast .....	10
Los Angeles Department of Water and Power – 2015 UWMP .....	10
Near-Term Conservation Strategies.....	11
Long-Term Local Supply Strategies .....	13
1.0 Increase Water Conservation Through Reduction of Outdoor Water Use and New Technology .....	13
2.0 Water Recycling.....	16
3.0 Enhancing Stormwater Capture.....	17
4.0 Accelerating Clean-Up of SFB.....	19
Water Supplies.....	22
1.0 Los Angeles Aqueducts .....	22
2.0 Groundwater .....	24
3.0 Metropolitan Water District of Southern California.....	26
4.0 Secondary Sources and Other Considerations.....	34
Water System Financing Program .....	36
Conclusion .....	37

## References

California Department of Water Resources California's Groundwater Bulletin 118 Update 2003

Upper Los Angeles River Area Watermaster Report for 2017/2018  
Dated December 2019

Los Angeles Department of Water and Power 2015 Urban Water Management Plan  
Metropolitan Water District of Southern California Integrated Water Resources Plan  
2015 Update

Metropolitan Water District of Southern California 2015 Urban Water Management  
Water Plan

California Code of Regulations Title 23. Waters, Division 2. Department of Water  
Resources, Chapter 2.7. Model Water Efficient Landscape Ordinance

City of Los Angeles Department of Public Works Bureau of Sanitation (LASAN) Sewer  
Generation Rates Table

## Appendix

- A. City of Los Angeles, Department of City Planning letter, Request for Water Supply Assessment, received on November 20, 2020, and Scope Confirmation e-mail received on April 16, 2021
- B. Water Conservation Commitment Letter
- C. Project Location Map
- D. Adjudicated Groundwater Basin Judgments
- E. Water Supply Assessment Provisions – California Water Code Section 10910-10915
- F. MWD of Southern California (Appendix A)
- G. Water Supply Assessment Checklist



## **Introduction**

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Proposed major projects subject to certain requirements in the California Water Code Sections 10910-10915 require that a city or county identify any public water system that may supply water to the Downtown Los Angeles South Park Properties Site 3 Project (Project) and request the public water system provide a Water Supply Assessment (WSA). The WSA is a determination by the water supplier that the demands associated with the Project were included in its most recently adopted 2015 Urban Water Management Plan (2015 UWMP) showing that there is an adequate 20-year water supply. The UWMP serves as the City of Los Angeles' (City) master plan for reliable water supply and resources management.

The City of Los Angeles Department of City Planning (Planning Department), serving as the lead agency as prescribed by the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.), for the Project, has identified Los Angeles Department of Water and Power (LADWP) as the public water system that will supply water. In response to Planning Department's request for a WSA on November 20, 2020, LADWP has performed the assessment contained herein.

LADWP has supplied the City with a safe and reliable water supply for over a century. Over time, the City's water supplies have evolved from primarily local groundwater to predominantly imported supplies. As of Fiscal Year Ending (FYE) 2020, the City relies on over 85 percent of its water from imported sources. To reduce the City's dependence on purchased imported supplies, LADWP's 2015 UWMP outlines the City's strategy to achieve its goals and policy objectives. In April 2019, LADWP, in conjunction with the City, developed short-term and long-term sustainability targets through LA's Green New Deal (Green New Deal), to form a more reliable and resilient water supply. LADWP is committed to meet all the City's water needs while increasing supply reliability, stabilizing imported water purchases, and increasing locally produced water. For more information on the Green New Deal, it is available for download at [http://plan.lamayor.org/sites/default/files/pLAn\\_2019\\_final.pdf](http://plan.lamayor.org/sites/default/files/pLAn_2019_final.pdf).

The WSA is prepared to meet the applicable requirements of state law as set forth in California State Water Code Sections 10910-10915. Significant references and data for this WSA are from the LADWP's 2015 UWMP, adopted by the Board of Water and Power Commissioners (Board) on June 7, 2016. LADWP's 2015 UWMP is incorporated by reference and is available through LADWP's Web site, [www.ladwp.com/uwmp](http://www.ladwp.com/uwmp).

## Findings

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The Project is estimated to increase the total net water demand within the site by 92 acre-feet (AF) annually based on review of information submitted by Planning Department. The total net water demand included additional water use efficiency measures that DTLA South Park Properties Propco II, LLC (Applicant) has committed to include in the Project. Therefore, LADWP finds adequate water supplies will be available to meet the total additional water demand of 92 AF annually for the Project. LADWP anticipates the projected water demand from the Project can be met during normal, single-dry, and multiple-dry water years, in addition to the existing and planned future demands on LADWP.

The basis for approving WSAs for developments is LADWP's most recently adopted UWMP. LADWP's water demand forecast, as contained in LADWP's 2015 UWMP, uses long-term demographic projections for population, housing, and employment. The California Urban Water Management Planning Act requires water suppliers to develop a UWMP every five years to identify short-term and long-term water resources management measures to meet growing water demands during normal, single-dry, and multiple-dry years. If the projected water demand associated with the Project was not accounted for in the most recently adopted LADWP 2015 UWMP, the WSA must include a discussion with regard to whether LADWP's total projected water supplies available during normal, single-dry, and multiple-dry water years during a 20-year projection will meet the projected water demand associated with the Project, in addition to LADWP's existing and planned future uses.

The City's water demand projection in LADWP's 2015 UWMP was developed based on the 2012 Regional Transportation Plan (RTP) demographic projection by the Southern California Association of Governments (SCAG) using the 2010 United States (U.S.) Census for the City. LADWP's 2015 UWMP identified water supplies to meet projected water demands through 2040. Therefore, the City's water supply projections in LADWP's 2015 UWMP are sufficient to meet the water demand for projects that are determined by the CEQA lead agency to be consistent with the 2012 RTP by SCAG.

The Planning Department has indicated that the Project conforms with the use and intensity of development permitted by the City's General Plan. The Planning Department has also determined that the Project is consistent with the demographic projections for the City from both the 2012 and 2016 RTPs. Based on the information provided by Planning Department, anticipated water demand for the Project is within LADWP's 2015 UWMP's projected water supplies for normal, single-dry, and multiple-dry years through the year 2040 and is within the LADWP 2015 UWMP's 25-year water demand growth projection. This WSA can be approved based on the fact that the Project's water demand falls within the LADWP 2015 UWMP's projected increase in citywide water demands, while anticipating multi-dry year water supply conditions occurring at the same time. Additionally, LADWP's 2015 UWMP contains a water shortage contingency plan for multi-year dry hydrological periods and the City's Water Rate Ordinance. This water shortage contingency plan was based on the City's



Emergency Water Conservation Plan (Conservation Ordinance), which was implemented on June 1, 2009, when the Board adopted Shortage Year Rates, and the City Council implemented the landscape irrigation and prohibited use restrictions contained in the City's Water Conservation Ordinance. This water shortage contingency plan helps to ensure sufficient use of water during multi-year dry periods. The City's Water Rate Ordinance, originally adopted in June 1995, was last amended by the Board, and became effective April 15, 2016. The revised rate ordinance restructured the rates to help further promote conservation, which is reflected in the 2015 UWMP's 25-year water demand projections. For example, single family rates switched to a four-tier system that sends a strong price signal to deter against wasteful water use. The Board finds that the price signals contained in the Water Rate Ordinance encourage conservation and support further reduction in City-wide demand. Past and current implementation of water rate price signals and higher ordinance phases have resulted in reducing the total customer water usage.

This WSA approval addresses the City's long-term water supply and demand forecasts to accommodate the Project. It is not an approval for water service connection. A separate request shall be made to LADWP requesting an evaluation of water service connection for the Project.

### **The Downtown Los Angeles South Park Properties Site 3 Project Description**

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The following project information was obtained from Planning Department's WSA Request Letter and the scope confirmation e-mail (Appendix A):

Project Name: Downtown Los Angeles South Park Properties Site 3  
Lead Agency: Planning Department  
Community Plan: Central City Community Plan

The Project will develop an approximately 1.07-acre site within the Central City Community Plan area of the City for residential and commercial land use. The Project site is generally bounded by 11<sup>th</sup> Street to the north, an alley to the east, an office tower to the south, and Olive Street to the west. The Project site currently contains a surface parking lot and does not contain any vegetation or landscaping.

The Project is proposing a 60-story mixed use development. It will include 713 new residential units. There will be residential amenities such as a swimming pool, fitness space, lounges, recreation space, and shared office spaces for the resident's use only. The ground floor will contain commercial offices, retail, and a 7,056 square feet (sf) restaurant. The Project will also include covered parking, a 1,200 ton cooling tower, and landscaping on the ground floor and throughout the building.

LADWP staff performed the water demand analysis and determined the net increase in water demand for the Project is 92 AFY.

A subsequent revised WSA may be required if one or more of the following occurs:

1. Changes in the Project result in a substantial increase in water demand for the Project.
2. Changes in the circumstances or conditions substantially affecting the ability of LADWP to provide a sufficient supply of water for the Project.
3. Significant new information becomes available which was not known and could not have been known at the time when WSA was prepared.

If deemed necessary, the Applicant may request a revised WSA through the CEQA lead agency.

### **The Downtown Los Angeles South Park Properties Site 3 Project Water Demand Estimate**

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Projected total net water demand increase for the Project is estimated to be 92 AF annually. This amount takes into account savings due to water conservation ordinances which are approximately 67 AFY, and savings due to additional voluntary conservation measures which are approximately 1 AFY.

In evaluating the Project's water demand, the Sewer Generation Factors (SGF), published by the City of Los Angeles Department of Public Works Bureau of Sanitation (LASAN) in 2012, are applied to the Project scope for calculating indoor water use. SGFs are factors of how much wastewater is generated (gallons per day) per unit (per sf, per dwelling unit, per seat, etc.). LASAN publishes a list of SGFs for approximately 175 different building use types in the City, and updates factors to make necessary adjustments due to water conservation efforts and increased efficiencies in new appliances and plumbing fixtures. Outdoor landscape water demand is estimated per California Code of Regulations Title 23 Division 2 Chapter 2.7 Model Water Efficient Landscape Ordinance. Historical billing records are used to establish existing baseline water demand on the property. LADWP also encouraged the Project to implement additional water conservation measures above and beyond the current water conservation ordinance requirements.

The net increase in water demand, which is the projected additional water demand of the Project, is calculated by subtracting the existing baseline water demand and water saving amount from the total proposed water demand.

Table I shows a breakdown of the existing and proposed new types of uses for the Project, and the corresponding estimated volume of water usage with the implementation of the required and voluntary conservation measures for this project. Types of use were derived from the WSA Request Letter and the scope confirmation e-mail in Appendix A.

Table II shows an estimation of the total volume of additional water conservation based on conservation measures the Applicant has committed for the Project (Appendix B).



TABLE I Downtown Los Angeles South Park Properties - Site 3 Calculated Total Additional Water Demand						
Existing Use to be Removed <sup>1</sup>	Quantity	Unit	Water Use Factor <sup>2</sup> (gpd/unit)		Existing Water Use to be Removed (gpd) (af/y)	
Surface Parking Lot	46,807	sf	0		0	
<b>Existing to be Removed Total</b>					<b>0</b>	<b>0.00</b>
Proposed Use <sup>1</sup>	Quantity	Unit	Water Use Factor <sup>2</sup> (gpd/unit)	Base Demand (gpd)	Required Ordinances Water Savings <sup>3</sup> (gpd)	Proposed Water Demand (gpd) (af/y)
Residential: Studios	188	du	75.00	14,100		
Residential: 1 bd	366	du	110.00	40,260		
Residential: 2 bd	156	du	150.00	23,400		
Residential: 3 bd	3	du	190.00	570		
Base Demand Adjustment (Residential Units) <sup>4</sup>				8,424		
<b>Residential Units Total</b>	<b>713</b>	<b>du</b>		<b>86,754</b>	<b>15,321</b>	<b>71,433 80.02</b>
Dog Spa (lvl 4 mezz) <sup>5</sup>	406	sf	0.18	74		
Dog Lounge (lvl 4 mezz) <sup>5</sup>	491	sf	0.18	89		
Synthetic Turf Areas (lvl 4 Dog Park, lvl 5 pool and flex deck, lvl 5B Roof deck)	3,201	sf		0.05		
Pool/Spa on Landscape Amenity Deck (lvl 5) <sup>6</sup>	2,529	sf		241		
Club Room and Lounge (lvl 5) <sup>7</sup>	51	seats	12.86	656		
Fitness and Spin Studio (lvl 5)	5,076	sf	0.22	1,100		
Sky Lounge (lvl 5B) <sup>7</sup>	39	seats	12.86	501		
Business/Co-Lab/Office (lvl 6)	4,269	sf	0.06	256		
Office (lvl 1)	2,586	sf	0.12	310		
Restaurant-seating area (lvl 1) <sup>8</sup>	235	seats	30.00	7,056		
Restaurant- kitchen/storage/etc (lvl 1) <sup>8</sup>	3,528	sf	0.300	1,058		
Retail (lvl 1)	4,221	sf	0.025	106		
<b>Residential Amenities/Commercial Total</b>				<b>11,447</b>	<b>1,784</b>	<b>9,663 10.82</b>
Landscaping <sup>9</sup>	13,291	sf		1,262	577	685 0.77
Covered Parking <sup>10</sup>	325,995	sf	0.02	214	0	214 0.24
<b>Cooling Tower Total</b>	<b>1,200</b>	<b>ton</b>	<b>35.64</b>	<b>42,768</b>	<b>42,330</b>	<b>438 0.49</b>
<b>Proposed Subtotal</b>				<b>142,445</b>	<b>60,012</b>	<b>82,433 92.34</b>
Less Existing to be Removed Total					0	0.00
Less Additional Conservation <sup>11</sup>					480	0.54
<b>Net Additional Water Demand</b>					<b>81,953 gpd</b>	<b>92.00 af/y</b>

<sup>1</sup> Provided by City of Los Angeles Department of City Planning in the Request for Water Supply Assessment letter and Scope Confirmation e-mail. See Appendix A. Proposed Uses that do not have additional water demands are not shown here.

<sup>2</sup> Indoor water uses are based on 2012 City of Los Angeles Department of Public Works, Bureau of Sanitation Sewer Generation Rates table available at <http://www.lacitysan.org/fmd/pdf/sfcfeerates.pdf>.

<sup>3</sup> The proposed development land uses will conform to City of Los Angeles Ordinance No. 186488, 184248, 2020 Los Angeles Plumbing Code, and 2020 Los Angeles Green Building Code.

<sup>4</sup> Base Demand Adjustment is the estimated savings due to Ordinance No. 180822 accounted for in the current version of Bureau of Sanitation Sewer Generation Rates.

<sup>5</sup> For a conservative estimate, the dog spa and lounge are assumed to have a water demand similar to beauty parlor.

<sup>6</sup> For the Landscape Amenity Deck, the water demand comes from the outdoor pool and spa.

<sup>7</sup> For a conservative estimate, only lounges containing plumbing fixtures will have a water demand.

<sup>8</sup> Restaurant space. Half the total area (7056 SF) is assumed for dining and the other half is kitchen/storage area.

<sup>9</sup> Landscaping water use is estimated per California Code of Regulations Title 23, Division 2, Chapter 2.7, Model Water Efficient Landscape Ordinance.

<sup>10</sup> Auto parking water uses are based on City of Los Angeles Department of Public Works, Bureau of Sanitation Sewer Generation Rates table, and 12 times/year cleaning assumption.

<sup>11</sup> Water conservation due to additional conservation commitments agreed by the Applicant. See Table II.

**Abbreviations:** sf - square feet du - dwelling gpd - gallons per day af/y - acre feet per year

**TABLE II**  
**Downtown Los Angeles South Park Properties - Site 3**  
**Estimated Additional Water Conservation**

Conservation Measures <sup>1</sup>	Quantity <sup>2</sup>	Units	Water Saving Factor <sup>3</sup> (gpd/unit)	Water Saved	
				(gpd)	(af/y)
Showerhead - Residential: studio Apartment	188	du	0.27	50	0.06
Showerhead - Residential: 1 bd Apartment	366	du	0.27	97	0.11
Showerhead - Residential: 2 bd Apartment	156	du	0.66	103	0.12
Showerhead - Residential: 3 bd Apartment	3	du	1.06	3	0.00
<b>Residential Unit Conservation Total</b>				<b>253</b>	<b>0.28</b>
Showerhead	7	ea	1.25	9	0.01
<b>Amenities/Commercial Total</b>				<b>9</b>	<b>0.01</b>
<b>Landscaping Total Conservation<sup>4</sup></b>				<b>218</b>	<b>0.24</b>
<b>Total Additional Water Conserved =</b>				<b>480</b>	<b>1.00</b>

<sup>1</sup> Water conservation measures agreed to by the Applicant. See Appendix B.

<sup>2</sup> Plumbing fixture quantities were provided by the Applicant.

<sup>3</sup> Based on LADWP estimates.

<sup>4</sup> Landscaping water conservation is estimated per California Code of Regulations Title 23, Division 2, Chapter 2.7, Model Water Efficient Landscape Ordinance.



## **Water Demand Forecast**

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LADWP's 2015 UWMP projects yearly water demand to reach 675,700 AF by fiscal-year-ending (FYE) 2040 with passive water conservation, or an increase of 31.6 percent from FYE 2015 actual water demand. Water demand projections in five-year increments through FYE 2040 are available in LADWP's 2015 UWMP for each of the major customer classes: single-family, multifamily, commercial/governmental, and industrial. Demographic data from the Southern California Association of Government's 2012 RTP, as well as billing data for each major customer class, weather, conservation, price of water, personal income, family size, economy, and dry period conservation effect were factors used in forecasting future water demand growth.

LADWP's 2015 UWMP used a modified-unit-use approach to develop its service area-wide water demand projections. This methodology does not rely on individual development demands to determine area-wide growth, because such an inventory in LADWP service area in the next 25 years is only a subset of the total development potential. Therefore, the growth or decline in population, housing units, and employment for the entire service area was considered in developing long-term water projections for the City through FYE 2040. The historical water demand for a unit of customer class, such as gallons-per-day per single family, is modified to account for future changes, including water conservation, and applied to the 2012 RTP demographic projections by SCAG. This modified-unit-use-approach has proven to be a reliable forecast historically, when compared with actual consumption, excluding the effects of conservation.

Collaboration between LADWP and Metropolitan Water District of Southern California (MWD) is critical in ensuring that the City's anticipated water demands are incorporated into the development of MWD's long-term Integrated Water Resources Plan (MWD's IRP). MWD's IRP is a continuous regional effort to develop regional water resources involving all of MWD's member agencies, which includes the City. Successful implementation of MWD's IRP has resulted in reliable supplemental water supplies for the City from MWD.

## **Los Angeles Department of Water and Power – 2015 UWMP**

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The California Urban Water Management Planning Act (first effective on January 1, 1984) requires every urban water supplier prepare and adopt a UWMP every five years. The main goals of UWMPs are to forecast future water demands and water supplies under average and dry year conditions, identify future water supply projects such as recycled water, provide a summary of water conservation Best Management Practices (BMP), and provide a single and multi-dry year management strategy.<sup>1</sup>

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<sup>1</sup> *City of Los Angeles Department of Water and Power 2015 Urban Water Management Plan*, at ES-2.

LADWP's 2015 UWMP, available for reference through [www.ladwp.com/uwmp](http://www.ladwp.com/uwmp), serves two purposes: (1) achieve full compliance with requirements of California's Urban Water Management Planning Act; and (2) serve as a master plan for water supply and resources management consistent with the City's goals and policy objectives.<sup>2</sup>

A number of new requirements have been added to the Urban Water Management Planning Act and incorporated LADWP's 2015 UWMP, including: an extension of the submittal deadline from December 31, 2015 to July 1, 2016, a narrative description of water demand measures implemented over the past five years and future measures planned to meet 20 percent demand reduction targets by 2020, implementation of a standard methodology for calculating system water loss, a mandatory electronic filing of UWMPs, a voluntary reporting of passive conservation savings, energy intensity, and climate change, and a requirement to analyze and define water features that are artificially supplied with water. Currently, LADWP has implemented a Water Loss Task Force to develop strategies to reduce water losses and increase efficiencies in the water distribution system, LADWP continues to track the energy intensity of water, update its climate change study, and maintain a daily per capita water use below the 2020 target of 142 gallons per capita per day (gpcd). The 142 gpcd target meets the Senate Bill X7-7's requirement to achieve 20 percent reduction in urban per capita water use by December 31, 2020.

## **Near-Term Conservation Strategies**

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***Enforcing prohibited uses of water.*** Prohibited uses of water are intended to eliminate waste and increase awareness of the need to conserve water. In effect at all times, prohibited uses have been in place since the early 1990s. Under enforcement, failure to comply would be subject to penalties, which can range from a written warning for a first violation to monetary fines and water service shutoff for continued non-compliance.

***Prohibited uses of water.*** The City's Emergency Water Conservation Plan (Conservation Ordinance), Ordinance Nos. 181288, 183608, and 184250, prohibits uses of water, sets certain water conservation requirements, and contains phases of conservation depending on the severity of water shortages. The Conservation Ordinance, last updated in May 2016, was developed for the City to implement water demand management measures in case of a water supply shortage and to respond to the ongoing dry conditions. Some of the prohibited uses in effect at all times (Phase I) include<sup>3</sup>:

- Outdoor irrigation between the hours of 9 a.m. to 4 p.m.

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<sup>2</sup> *Id.* at ES-2.

<sup>3</sup> *Id.* at 3-11.



- Outdoor irrigation during and 48 hours after rain events.

Currently, LADWP is in Phase II of the Conservation Ordinance. All prohibited uses in Phase I apply to Phase II. In addition, prohibited uses in Phase II include:

- Outdoor irrigation is restricted to three days a week with different watering days assigned to odd-numbered and even-numbered street addresses.

For a full list of Conservation Ordinance Phases and prohibited uses, please refer to LADWP's 2015 UWMP.

On January 17, 2014, with California facing water shortfalls in the driest year in recorded state history, Governor Brown proclaimed a Drought State of Emergency. Responding to the executive order, in 2015, SWRCB imposed mandatory cutbacks ranging from four percent to 36 percent. LADWP was required to reduce its water use by 16 percent compared to the 2013 levels. LADWP met the state mandated reduction goal and saved 16.1 percent between June 2015 and May 2016.

On October 14, 2014, Mayor Garcetti issued the Executive Directive No. 5 (ED5) to set accelerated short-term conservation targets for the City to address the dry conditions including per capita water use reduction goal of 20 percent by 2017. On January 1, 2017, the City was able to meet the short-term target of 20 percent reduction through dry period response measures that reduced per capita water use to 104 gallons per day. By April 7, 2017, Governor Brown issued Executive Order B-40-17 formally ending the emergency. While this extraordinary achievement will have lasting effects on the City's water use efficiency, LADWP continues to work together with residents and businesses to achieve additional permanent conservation savings and further reduce per capita water use.

***Extending outreach efforts.*** Over the last several years, LADWP has expanded conservation outreach and educational efforts. Some activities to promote conservation include: increased communication with ratepayers through Twitter, Facebook, newspapers, radio, television, bus benches/shelters, and movie theaters, among other types of media; outreach to Homeowner Associations and Neighborhood Councils; distribution of hotel towel door hangers and restaurant table tent cards; and ramping up marketing of expanded water conservation incentive and rebate programs.

On April 9, 2015, the "Save the Drop" Water Conservation Outreach Campaign was launched. This campaign is a partnership between LADWP and the Mayor's Office. Outreach materials include public service announcements, radio spots, event handouts, and signage on the sides of LASAN trucks. The campaign has partnered with celebrities for public service announcements airing on television, cinema, and radio.

## **Long-Term Local Supply Strategies**

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On May 31, 2018, Governor Brown signed two long-term water-use efficiency bills: Assembly Bill 1668 and Senate Bill 606. These bills are designed to help the State better prepare for dry periods and climate change. They require that until January 1, 2025, the indoor residential use will reduce to 55 gpcd, 52.5 gpcd from January 1, 2025 to January 1, 2030, and 50 gpcd beginning January 1, 2030. The California State Water Resources Control Board (Water Board) and Department of Water Resources (DWR) may provide a recommendation to change these standards by 2021.

While the State has these set goals, LADWP has and continues to implement various long-term strategies to develop and provide resilient and sustainable local water supplies for the City.

### **1.0 Increase Water Conservation Through Reduction of Outdoor Water Use and New Technology**

#### Goal

Increase water conservation savings to improve water supply reliability while reducing costs, by cutting back on outdoor water use, expanding rebates and incentives, improving water use efficiency at public facilities, and enhancing savings through review of new developments.

#### Action Plan

***Conservation Rebates and Incentives.*** LADWP is continuing to expand rebates and incentives for homeowners and business owners to encourage them to purchase water-efficient technology. Rebate and incentive programs include the following: Commercial Rebate Program, Residential Rebate Program, Direct Install Partnership Program, and Technical Assistance Program. For a full list of LADWP's rebate programs, please refer to [www.ladwp.com](http://www.ladwp.com).

Some highlights from the list of LADWP's numerous water conservation accomplishments are:

- LADWP's Water Conservation Program has achieved a total cumulative hardware water savings of over 150,000 AFY as of FYE 2020, through installation of water efficient devices subsidized by rebates and incentives.



- Water conservation achievements have helped keep water usage lower than the 1970s average water usage despite a population increase of over one million people.
- Turf Removal – Since FYE 2010, LADWP has rebated over 50 million square feet of turf replacements, saving over 2.3 billion gallons of water per year.

**Enhancing Conservation through New Developments.** LADWP continues to work with the City's Green Building Team to pursue desired changes in local codes and standards to promote water efficiency in new construction projects and major building renovations. The most updated revisions to local codes are 2020 Los Angeles Plumbing Code and 2020 Los Angeles Green Building Code, effective January 1, 2020.

On April 8, 2015, the California Energy Commission adopted new efficiency standards for toilets, faucets and other appliances effective January 1, 2016. Also, on July 15, 2015, in response to Governor Brown's Executive Order B-29-15, the California Water Commission approved the revised Model Water Efficient Landscape Ordinance, which reduces the maximum amount of water allowed from the 2009 version of the ordinance. Also, Ordinance No. 184248, *Green Building Codes Revision, Use of Greywater Systems, Water Conservation Measures*, became effective June 6, 2016, and mandates a number of new fixture requirements and methods of construction for plumbing and irrigation systems. California Plumbing Code, Los Angeles City Plumbing Code and amending ordinances apply to all newly constructed buildings, additions and alterations whenever new fixtures are installed in existing buildings. California Building Code, the LA Green Building Code and the amending ordinances also apply to new construction projects, but are limited to additions and alterations that exceed the Building Code's valuation or increase the building's conditioned volume.

In addition, the City adopted Ordinance No. 181899, also known as the "Low Impact Development" Ordinance, and Ordinance No. 183833, entitled "Stormwater and Urban Runoff Pollution Control." The purpose of these Ordinances includes rainwater harvesting and stormwater runoff management, water conservation, and recycled water reuse and grey water use. Ordinance No. 181899 was effective as of November 14, 2011, and Ordinance No. 183833 was effective October 3, 2015.

**Future Programs<sup>4</sup>.** In December 2014, LADWP started its Home Water Use Report Pilot Study, which provided 73,000 single family residential customers with bi-monthly home water use reports on their water usage, statistics on how they compare to similar households, customized water saving tips and rebate recommendations. In addition to the bimonthly home water reports, the recipients also have access to online historical water use, water use disaggregation estimates, and leak detection modules. LADWP plans to expand the availability of home water use reports to the entire single-family residential sector by mid-2021.

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<sup>4</sup> *Id.* at 3-33.

LADWP soft launched the Turf Replacement Design Service in March 2021 to provide customers interested in seeking a turf replacement rebate with free customized landscape design plans for a sustainable, low water use garden. Additionally, LADWP intends to resume Hands on Workshops throughout the service area in Fall 2021. Attendees participate in a landscape transformation at a residential home, learn how to remove turf, sheet mulch, grade for rainwater capture and install water efficient irrigation.

***LADWP Water Conservation Potential Study***<sup>5</sup>. In Fall 2017, LADWP completed the Water Conservation Potential Study (WCPS), which is one of the most comprehensive assessments of the potential for future water conservation ever taken by a municipal water utility. The WCPS conducted detailed single-family and multifamily surveys, completed comprehensive onsite audits of City-owned facilities, and developed a sophisticated water conservation model to project future conservation potential. The WCPS determined that approximately 140,000 AFY in additional water conservation potential is achievable by FYE 2035, and meeting the City's aggressive 2025 and 2035 conservation goals will require tapping into most of the remaining conservation potential in the City.

Going forward, LADWP will use the WCPS findings and conservation model to develop a balanced conservation plan that achieves the City's long-term conservation goals. Meeting the goals will require a combination of increased funding for LADWP's conservation and water use efficiency programs and continued commitment from LADWP customers to make conservation a way of life for Los Angeles. The WCPS findings show that a large portion of the remaining conservation potential will come from passive water savings through customers' actions to comply with all City conservation codes and ordinances and finding additional opportunities to improve water efficiency for their residential or commercial properties.

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<sup>5</sup> *Id.* at 3-34.



## 2.0 Water Recycling

LADWP's 2015 UWMP set a target of delivering 75,400 AFY of recycled water by 2040 to off-set imported water.<sup>6</sup> Some of the examples of the steps the City is taking in order to achieve this goal are listed below. There are other projects not listed below that will also contribute to recycled water use in the City's service area.

**Recycled Water Master Planning (RWMP).** In 2012, LADWP completed a three-year RWMP. RWMP documents guide near-term recycled water planning through 2035, as well as long-term recycled water planning for up to 50 years beyond the 2035 horizon. RWMP documents include an evaluation of recycling alternatives that integrate two strategies to increase recycling: Groundwater Replenishment (GWR), and non-potable reuse (NPR). The RWMP set goals for the GWR Project to replenish San Fernando Basin (SFB) with up to 30,000 AFY of recycled water, and for NPR projects to increase NPR recycled water use to 45,400 AFY by 2040.

**GWR Project.** The GWR Project is in the Planning phase. The Environmental Impact Report was certified in December 2016 by the Board of Water and Power Commissioners. The GWR Project is transitioning to a phased approach. The Initial Phase of the project will deliver up to 3,500 AFY of recycled water for indirect potable reuse in the San Fernando Valley by the end of 2021.

**The Machado Lake Pipeline Project (MLPP).** MLPP is a part of a joint agency project between LASAN, Los Angeles Bureau of Engineering, and LADWP to serve the Los Angeles Harbor area customers up to an additional 6 million gallons per day of advanced treated recycled water from an expanded Terminal Island Treatment Plant (TITP). The MLPP will construct 8,800 linear feet of 24-inch ductile iron pipeline that connects two segments of existing pipeline infrastructure, thus creating a looped pipeline service system within the Los Angeles Harbor Area. The project is split into two construction phases. Construction of Phase I was completed in late 2020 and Phase II is estimated to be completed by the end of 2021.

**Second Gap Connection Pipeline Project.** This pipeline project is to supply the LA County Dominguez Gap Seawater Intrusion Barrier (DGB) with a second supply line of advanced treated recycled water from the LASAN Terminal Island Water Reclamation Plant, and will increase service capacity to the DGB from 6 million gallons per day (mgd) up to 9.5 mgd. The pipeline is approximately 3000 linear feet of 24-inch diameter ductile iron pipe. LADWP and the Water Replenishment District of Southern California (WRD) negotiated an agreement that was executed in fall 2020 to construct this service pipeline as a joint agency project. Construction is anticipated to start in mid-2021 with an estimated completion in 2023.

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<sup>6</sup> *Id.* at 4-27.

**Harbor Recycled Water System Potable Backup Project.** The purpose of this project is to maximize the reuse of water from the Terminal Island Water Reclamation Plant by increasing the reliability of the Harbor Recycled Water System. This project will provide the Harbor Recycled Water System with a potable water backup supply capacity of 14.4 million gallon per day by constructing a 250 foot, 24-inch connection between a 36-inch steel pipe in LADWP's 320-foot potable Service Zone and a 24-inch ductile iron pipe in the Harbor Recycled Water System. LADWP and WRD negotiated an agreement that was executed in fall 2020 to construct this project as a joint agency project. Design is anticipated to start in early 2021 and construction is scheduled to start in early 2022. The estimated in-service date is in late 2024.

For more information on LADWP's existing and planned recycled water pipelines and projects, please see Recycled Water Annual Report available at the following link: [www.ladwp.com/recycledwaterreport](http://www.ladwp.com/recycledwaterreport).

### 3.0 Enhancing Stormwater Capture

Stormwater runoff from urban areas is an underutilized resource. Within the City, the majority of stormwater runoff is directed to storm drains and ultimately channeled into the ocean. Unused stormwater reaching the ocean carries with it many pollutants that are harmful to marine life. In addition, local groundwater aquifers that should be replenished by stormwater are receiving less recharge than in the past due to increased urbanization. Urbanization has increased the City's hardscape, which has resulted in less infiltration of stormwater and a decline in groundwater elevations.

LADWP's Stormwater Capture Master Plan (SCMP), which was completed in August 2015, comprehensively evaluated stormwater capture potential within the City. The goals of the SCMP are to quantify stormwater capture potential and identify new projects, programs, and policies to significantly increase stormwater capture for water supply within the 20-year planning period. Achieving these goals, will help LADWP achieve its long-term strategy of enhancing local water supply through stormwater capture.

Through intensive implementation of both centralized projects and distributed programs, SCMP provides a strategy to achieve an annual average capture of 132,000 to 178,000 AFY by 2035, which includes the 2015 UWMP baseline capture of 64,000 AFY. These projects include stormwater captured through infiltration type projects and programs that recharge aquifers as well as direct use programs that offset potable water demands, though the bulk of the capture is achieved through infiltration.

LADWP's 2015 UWMP projects that there will be a minimum of 15,000 AFY of increased groundwater pumping in SFB due to water supply augmentation through centralized stormwater infiltration by year 2040. Anticipating that stored groundwater will rebound in response to enhanced groundwater replenishment, LADWP will work with



the Upper Los Angeles River Area Watermaster to continue observing actual water levels and re-evaluate basin safe yield to allow additional increases in groundwater production over time as SFB elevations rebound.<sup>7</sup>

The San Fernando Valley spreading facilities are effective at capturing stormwater flowing down the tributaries; however, they are incapable of capturing significant portions of flow during wet years. Weather patterns in Los Angeles are highly variable, with many periods of dry years and wet years. Some climate studies predict that these patterns may become extreme in the future.

LADWP is currently partnering with other government and non-governmental agencies in various stormwater capture projects that include the following:

### **Completed Distributed Projects**

LADWP's already implemented distributed projects that have increased the amount of stormwater captured by 557 AFY during an average rainfall year. The following distributed projects were implemented within the last 5 years:

- Ben and Victory Green Stormwater Infrastructure
- Bradley Green Alley Project
- Great Street – Van Nuys Boulevard Project
- Laurel Canyon Green Street
- LAUSD Conserving for Our Kids Program
- Sun Valley Economic Development Administration Public Improvement Project

### **Future Centralized Projects**

By 2024, the following centralized projects are expected to be implemented that will provide an estimated 16,300 AFY of increased stormwater capture annually during an average rainfall year:

- Bull Creek Pipeline
- Pacoima Spreading Grounds Upgrade
- Tujunga Spreading Grounds Upgrade

### **Current/Future Distributed Projects**

The following distributed projects are expected to be implemented in the next three years that will provide an estimated 540 AFY of increased stormwater capture annually during an average rainfall year:

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<sup>7</sup> *City of Los Angeles Department of Water and Power 2015 Urban Water Management Plan, at 7-29.*

- Agnes and Vanowen Stormwater Capture Project
- Burbank Boulevard BMP Capture Project
- Ben and Victory Stormwater Capture Project
- Glenoaks and Filmore Stormwater Capture Project
- Glenoaks-Nettleton Stormwater Infiltration Project
- Great Street – Lankershim Boulevard Project
- Victory and Goodland Stormwater Capture Project

LADWP's current effort also includes the Stormwater Capture Parks Program. By 2026, the following projects are expected to be implemented that will provide an estimated 3,090 AFY of increased stormwater capture annually during an average rainfall year:

- Alexandria Park Stormwater Capture Project
- David M. Gonzales Recreation Center Stormwater Capture Project
- Fernangeles Park Stormwater Capture Project
- North Hollywood Park Stormwater Capture Project
- Strathern Park North Stormwater Capture Project
- Valley Plaza Park North Stormwater Capture Project
- Valley Plaza Park South Stormwater Capture Project
- Valley Village Park Stormwater Capture Project
- Whitsett Fields Park North Stormwater Capture Project

Additional information regarding stormwater capture projects can be found in LADWP's Stormwater Capture Master Plan (2015) and Urban Water Management Plan (2015).

#### **4.0 Accelerating Clean-Up of SFB**

The SFB is an aquifer that can provide sufficient drinking water to over 800,000 residents within the City. However, LADWP groundwater production wells in SFB have been impacted by contamination caused by improper handling and disposal of hazardous chemicals from the aircraft manufacturing industry and other, commercial activities dating back to the 1940s. Resolving the contamination problems and restoring the beneficial use of the SFB will help protect public health and the environment, and to recover LADWP's historical groundwater supply and valuable local water resource.

Since the 1980 discovery of volatile organic compound (VOC) contamination of groundwater in SFB, LADWP has been working with government agencies to contain and remediate man-made contaminants in SFB. Chlorinated solvents such as trichloroethylene (TCE), perchloroethylene (PCE) and carbon tetrachloride account for the majority of this groundwater contamination.



From 2009 to 2015<sup>8</sup>, LADWP completed an \$11.5 million, six-year study and development of a comprehensive remediation and cleanup strategy for all groundwater basin contamination in SFB.

### ***Development of State-of-the-Art Groundwater Basin Remediation Facilities***

- Based on the available groundwater quality information, a groundwater basin remediation program consisting of centralized as well as localized/well-head remediation facilities will be needed for public and environmental benefits as well as to prevent further losses to the beneficial use of groundwater.
- Design and construction of the groundwater basin remediation facilities is estimated to cost approximately \$600 million, and operation and maintenance is estimated to cost an additional \$50 million per year.

### **Groundwater and Treatment System Monitoring**

- In order to fully characterize SFB groundwater quality as required by SWRCB Board's Division of Drinking Water guidelines and policies, LADWP has drilled 26 new monitoring wells in SFB to fill in data gaps and utilized a network of over 70 existing monitoring and production wells.
- Cost to install the monitoring wells is approximately \$22 million.

With completion of SFB groundwater characterization, LADWP is proceeding with the necessary environmental reviews, design, permitting, construction, and start-up of the groundwater basin remediation program to effectively clean and remove contaminants from SFB.

The current groundwater remediation facilities in operation are:

- ***NHOU***: The NHOU began operations in the 1980s to treat 4.5 cfs of contaminated groundwater; however, changing groundwater conditions limited the ability of the remedy to contain the VOC plume. Implementation of a Second Interim Remedy is currently in progress to contain concentrated areas of the plume, but will not address contamination that has migrated to other well fields.
- ***Liquid-Phase GAC Pilot Treatment Plant at Tujunga Wellfield***: The Liquid-Phase GAC Pilot Treatment Plant removes VOCs from two of the twelve production wells in the Tujunga Wellfield at 8,000 gpm, and treats the extracted groundwater for potable use. This pilot facility is a joint project with MWD to demonstrate the effectiveness of utilizing certain liquid phase GAC media for removal of VOCs from the groundwater.

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<sup>8</sup> *Id.* at 6-9.

- ***Pollock Wells Treatment Plant:*** The plant provides four liquid-phase GAC vessels to remove VOC contamination from two groundwater wellheads. However, LADWP has recently identified 1,4-dioxane and hexavalent chromium as emerging contaminants that may impair the operation of the Pollock Wells Treatment Plant.

These facilities will work with the new remediation facilities to clean up the majority of contaminants impacting LADWP's highest producing wellfields, including TCE, PCE, and 1,4-dioxane. The proposed centralized and localized facilities are:

- North Hollywood West Wellhead Treatment – Operation expected by 2022
- North Hollywood Central Treatment – Operation expected by 2023
- Tujunga Central Treatment – Operation expected by 2023

The overall purpose of the San Fernando Groundwater Basin Remediation Project is to restore and protect the full beneficial use of the San Fernando Groundwater Basin as a source of water consistent with LADWP's long-term water rights and historic groundwater use.

More information about LADWP's SFB Groundwater Remediation program can be found at [www.ladwp.com/remediation](http://www.ladwp.com/remediation)



## Water Supplies

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The Los Angeles Aqueducts (LAA), local groundwater, purchased water from MWD, and recycled water are the primary sources of water supplies for the City. Table III shows LADWP water supplies from FYE 2016 to FYE 2020 from these sources.

**TABLE III**  
**LADWP Water Supply**

FYE	Los Angeles Aqueducts	Local Groundwater	MWD	Recycled Water	Transfer, Spread, Spills, and Storage	Total
2016	57,853	79,056	339,975	9,913	-3,509	490,306
2017	224,724	50,439	216,299	8,032	9,350	490,144
2018	307,671	21,760	182,706	9,778	-200	522,116
2019	312,456	32,233	137,775	7,512	1,710	488,266
2020	292,095	34,363	152,647	9,641	1,155	487,591

Note: Units are in AF.

### 1.0 Los Angeles Aqueducts

Snowmelt runoff from the Eastern Sierra Nevada Mountains is collected and conveyed to the City via Los Angeles Aqueducts (LAA). LAA supplies come primarily from snowmelt and secondarily from groundwater pumping and can fluctuate annually due to the varying hydrologic conditions. Since 1991, LAA supplies have been less than the historical average due to environmental obligations in Mono and Inyo Counties.

Within the Owens Valley, the primary framework that governs LADWP environmental operations is the Long Term Water Agreement (LTWA). The LTWA is a stipulated court order between Inyo County and LADWP, issued in 1991, which established an overall goal for managing groundwater resources within Inyo County. The intent is "to avoid certain described decreases and changes in vegetation, and to cause no significant effect on the environment which cannot be acceptably mitigated, while providing a reliable supply of water for export to Los Angeles and for uses in Inyo County." The LTWA does not impact LADWP's surface water rights, but manages LADWP's groundwater pumping, and groundwater use within Inyo County. The LTWA also requires LADWP to implement and maintain a variety of "Enhancement/Mitigation Projects." Prior to implementation of the LTWA, average water uses and losses in Owens Valley totaled 216,000 AFY. After implementation, these uses and losses increased to 287,000 AFY.

In the Mono Basin, LADWP historically diverted water from four tributary streams of Mono Lake. Between 1971 and 1988, LADWP averaged 83,400 AFY from the Mono Basin. Beginning in 1989, with the issuance of a landmark California Supreme Court

case, LADWP began to reduce exports to comply with legal requirements. In 1994, the State Water Resources Control Board (SWRCB) entered Decision 1631, which amended City water right licenses 10191 and 10192 to establish fishery protection flows for streams tributary to Mono Lake, and to protect public trust resources at Mono Lake and in the Mono Basin. Decision 1631 also set limits on LADWP water exports from the Mono Basin, which were set to a range of 0 to 16,000 AFY.

The City's water rights in the Eastern Sierra Nevada are comprised of riparian rights, pre-1914 appropriations, and post-1914 appropriation licenses held on various streams in the Mono Basin and Owens Valley. Riparian rights are for stream flow used on land adjacent to the stream. Appropriations by the City based on post-1914 water rights are made pursuant to licenses issued by the SWRCB. The majority of the City's water rights are pre-1914 water rights established prior to enactment of the State Water Commission Act. The most significant basis for export of surface water from the Eastern Sierra Nevada is an appropriation claim in 1905 to divert up to 50,000 miner's inches (1,250 cfs) from the Owens River at a location approximately 15 miles north of the town of Independence into the LAA for transport to Los Angeles. The City files supplemental statements (for riparian and pre-1914 water rights) and licensee reports (for post-1914 water rights) of water diversion and use with the SWRCB for its diversions during each calendar year.

The City's water right licenses in the Mono Basin were amended by the SWRCB in 1994 through the Mono Lake Basin Water Right Decision 1631. As of Runoff Year (RY) 2019/20, the Mono Lake water level was above the Water Right Decision 1631 trigger elevation of 6,380 feet; therefore, the amount of water now available for export from Mono Basin is 16,000 AF.

The primary groundwater right through which Los Angeles has developed groundwater resources in the Owens Valley is based on ownership of a majority of the land (approximately 252,000 acres) and associated water rights in the Owens Valley. Management of the groundwater supply in the Owens Valley is according to the LTWA. Groundwater Pumping is regulated under the LTWA by using vegetation water demand and available soil moisture to determine whether groundwater wells can be pumped. Groundwater is pumped from nine Owens Valley wellfields and began in 1970 after completion of the Second LAA.

Annual LAA deliveries to Los Angeles are dependent on snowfall in the Eastern Sierra Nevada. Years with abundant snowpack result in larger water deliveries from the LAA, and typically reduced purchases of supplemental water from MWD. Conversely, low LAA deliveries in dry years increase the demand for supplemental water from MWD. The impact to LAA water supplies due to varying hydrology in the Mono Basin and Owens Valley is amplified by the requirements to release supply water for environmental enhancement efforts in the Eastern Sierra Nevada.



Average deliveries from LAA system have been approximately 238,960 AF annually from Fiscal Year (FY) 2015/16 to 2019/20. This average delivery includes two of the five dry years that began in FY 2012/2013 and ended in FY 2016/2017. Since imported supplies vary from year to year depending on the hydrology, LADWP plans to increase resiliency to address hydrologic variability and natural disasters by developing sustainable local water supplies.

## 2.0 Groundwater

LADWP pumps from three adjudicated basins within the City. SFB and Sylmar Basin are subject to the judgment in the City of Los Angeles vs. City of San Fernando, et al. Groundwater pumping by LADWP and other parties is tracked and reported to the court-appointed Upper Los Angeles River Area (ULARA) Watermaster. The Central Basin is also subject to court judgment. Pumping is reported to WRD, the administrative member of the Central Basin Water Rights Panel.

The SFB is the largest of four basins within ULARA. The basin consists of 112,000-acres of land and comprises 91.2 percent of ULARA valley fill area. The City has accumulated 591,460 AF of stored water credits in the San Fernando Basin as of October 1, 2018. A portion of this water is available for the City to withdraw during normal and dry years, or in an emergency, in addition to the City's approximate 87,000 AF annual entitlement. With SFB remediation facilities estimated to be operational by 2023, the groundwater storage credits may be used to optimize pumping beyond the City's annual entitlement.

While the majority of the City's groundwater is extracted from the SFB, the Sylmar Basin also provides local groundwater supply. Sylmar is located in the northern part of ULARA, consists of 5,600 acres, and comprises 4.6 percent of ULARA valley fill area. The City's current annual entitlement per latest Sylmar Safe Yield is 3,570 AF. As of October 1, 2019, the City has accumulated 9,014 AF of stored water credits in the Sylmar Basin. Sylmar Basin production is anticipated to increase to 4,170 AFY from FYE 2021 to FYE 2036 to utilize groundwater the City has accumulated into storage and then return to the entitlement of 3,570 AFY in FYE 2037.<sup>9</sup>

The ULARA Judgment was adopted through court adjudication on January 26, 1979, dictating the water rights within the basins of ULARA. Enclosed with the assessment are copies of those pages from the judgment showing the entitlements (see Appendix D). Further information about ULARA is detailed in the annual ULARA Watermaster Report. Both the Watermaster Reports and Judgment are available for review at the office of the ULARA Watermaster or on-line at [www.ularawatermaster.com](http://www.ularawatermaster.com).

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<sup>9</sup> *Id.* at 11-4.

The City also has adjudicated groundwater extraction rights in the Central Basin. LADWP's annual entitlement is 17,236 AF. As of July 1, 2020, LADWP has accumulated 22,943 AF of stored water in the Central Basin, and pumping can be temporarily increased until stored water credits have been expended.<sup>10</sup> See Appendix D for copies of relevant portions of Central Basin third amended judgment. Judgment is available for review on the WRD Web site at <http://wrwater.org/>.

The City plans to continue to develop production from its groundwater basins in the coming years to offset reductions in imported supplies. Groundwater produced by the City from the San Fernando, Sylmar, and Central Basins for the last available five years are shown on Table IV. See LADWP 2015 UWMP Exhibit 6I for the projected groundwater production through FYE 2040.

**TABLE IV**  
**Local Groundwater Basin Supply**

Fiscal Year (July-June)	San Fernando	Sylmar	Central
2015-2016	75,958	683	8,395
2016-2017	55,116	0	3,005
2017-2018	22,259	0	0.77
2018-2019	36,871	1	5
2019-2020	35,948	2	10

Notes: Units are in AF. Historical data are from the Upper Los Angeles River Area Watermaster Monthly Reports, July 2014 to June 2019.

Per the Agreement for Interim Water System Connection and Water Delivery between the cities of Los Angeles and Burbank, the City has been receiving water from Burbank Water and Power via the LA-Burbank Interim Interconnection starting August 2019. This water is groundwater from SFB treated at the Burbank Operable Unit (BOU), blended with MWD treated surface water. The agreement also allows the City to be able to utilize its SFB entitlements and increase its local water supplies. The agreement will remain in effect until June 30, 2025, or earlier if terminated earlier by either party.

During the 2012-2016 dry period, California was challenged with several statewide water shortage issues, including over pumping which results in land subsidence and dry well issues. The State Legislature enacted the Sustainable Groundwater Management Act (SGMA), effective January 1, 2015, in order to equip and empower local agencies with tools to manage local groundwater basins in a sustainable manner. Actions necessary to achieve sustainability will vary with each basin, but SGMA generally requires local agencies to form Groundwater Sustainability Agencies (GSA) by January 30, 2017, develop and implement Groundwater Sustainability Plans (GSP), and

<sup>10</sup> *Id.* at 6-24.



monitor and report status of groundwater conditions of high- and medium-priority basins. GSPs for critically over drafted high- and medium-priority basins were due to DWR by January 31, 2020. GSPs for the remaining high- and medium-priority basins are due to DWR by January 31, 2022. SGMA will mitigate and prevent the occurrence of adverse effects caused by unreasonable use of groundwater, such as groundwater storage depletion, land subsidence, seawater intrusion, water quality degradation, critical overdraft basin conditions, and surface water depletions.

The City overlies both adjudicated and unadjudicated basins. LADWP is working with its regional partners towards compliance with the SGMA for the unadjudicated basins, such as the Santa Monica Basin (SMB). In September 2017, DWR approved the formation of the SMBGSA as the exclusive GSA in the SMB. The five member agencies include LADWP, the City of Beverly Hills, the City of Santa Monica, the City of Culver City, and the County of Los Angeles. In November 2019, the SMBGSA initiated the development of a GSP for the SMB. The final GSP will be submitted to DWR by January 31, 2022. Another unadjudicated basin within the City boundary is the Hollywood Basin, but it was classified as low priority and not mandated to develop a GSA/GSP. Similarly, areas associated with adjudicated basins, like the northern area of Central Basin, were eventually characterized as lower priority and exempt by DWR's compliance with SGMA.

### **3.0 Metropolitan Water District of Southern California**

MWD is the largest water wholesaler for domestic and municipal uses in Southern California. As one of the 26 member agencies, LADWP purchases supplemental water from MWD in addition to the supplies from local groundwater, recycled water and LAA. MWD imports a portion of its water supplies from Northern California through the State Water Project's (SWP) California Aqueduct and from the Colorado River through MWD's own Colorado River Aqueduct (CRA). LADWP will continue to rely on MWD to meet its current and future water needs.

In ongoing efforts to evaluate MWD's import reliability, an assessment was done to address changes in demand and supply conditions, and to provide additional resource reserves to mitigate against uncertainties in demand projections and risks in implementing supply programs. These efforts contributed to MWD's 2015 UWMP. [http://www.mwdh2o.com/PDF\\_About\\_Your\\_Water/2.4.2\\_Regional\\_Urban\\_Water\\_Management\\_Plan.pdf](http://www.mwdh2o.com/PDF_About_Your_Water/2.4.2_Regional_Urban_Water_Management_Plan.pdf). Preparation of the 2020 UWMP by MWD is underway and is scheduled for adoption in May 2021.

All 26 member agencies have preferential rights to purchase water from MWD. Pursuant to Section 135 of MWD Act, "Each member public agency shall have a preferential right to purchase from the district for distribution by such agency, or any public utility therein empowered by such agency for the purpose, for domestic and municipal uses within the agency a portion of the water served by the district which shall, from time to time, bear the same ratio to all of the water supply of the district as

the total accumulation of amounts paid by such agency to the district on tax assessments and otherwise, excepting purchase of water, toward the capital cost and operating expense of the district's works shall bear to the total payments received by the district on account of tax assessments and otherwise, excepting purchase of water, toward such capital cost and operating expense." This is known as preferential rights. As of June 30, 2020, LADWP has a preferential right to purchase 18.12 percent of MWD's total water supply.

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

The record dry and hot conditions of 2014 significantly impacted the water resources of both the State of California and MWD. DWR's SWP Table A allocation was limited to only five percent. MWD was able to meet demands in 2014 by relying heavily on storage reserves to make up for the historically low allocation on SWP. MWD's dry-year storage reserves ended 2014 at approximately 1.2 million AF.

On April 14, 2015, to support Governor Brown's Executive Order B-29-15, and to reduce withdrawals from MWD's dry-year storage reserves, MWD implemented WSAP at a Level 3 Regional Shortage Level, effective July 1, 2015, through June 30, 2016. MWD's dry-year storage reserves ended 2015 at approximately 0.87 million AF.

On May 10, 2016, citing the improved water supply conditions and reduced water use due to conservation, MWD voted to rescind the WSAP Regional Shortage Level 3 and declared a Condition 2 Water Supply Alert for allocation year 2016/17. MWD, however, called for member agencies to continue with conservation efforts to safeguard against future dry years. On May 9, 2017, citing the improved water supply conditions, the actions taken by the Governor and the projected storage reserves, MWD voted to declare a Condition 1 Water Supply Watch.

LADWP plans to reduce purchases of MWD water supplies by increasing conservation and recycled water production, and by enhancing groundwater pumping through stormwater capture and groundwater replenishment. This would allow LADWP to further reduce dependence on purchased imported water from MWD and maintain a resilient and sustainable water supply for the City.

### **State Water Project**

The SWP is owned by the State of California and operated by DWR, delivering water to two-thirds of the population of California and 750,000 acres of farmland. The SWP facilities include 30 dams, 20 reservoirs, 29 pumping and generating plants, and approximately 700 miles of aqueducts and pipelines. The water stored and delivered by the SWP originates from Northern California's watersheds, where most of the State's precipitation occurs. SWP facilities originate in Northern California at Lake Oroville on



the Feather River and is pumped from the Bay-Delta region to contractors in areas north and south of the San Francisco Bay and south of the Bay-Delta.

MWD receives SWP water at three locations: Castaic Lake in Los Angeles County at the terminus of SWP West Branch, Devil Canyon Afterbay in San Bernardino County at the terminus of SWP East Branch Extension, and Box Springs Turnout at Lake Perris in Riverside County at the terminus of SWP East Branch.

MWD began receiving water from the SWP in 1972. MWD is the largest of the 29 SWP contractors, holding a contract for 1.912 MAF per year, or 46 percent of the total contracted amount of the 4.173 MAF ultimate delivery capacity of the project. Variable hydrology, environmental issues, and regulatory restrictions in the San Francisco Bay/Sacramento-San Joaquin River Delta (Bay-Delta) have periodically reduced the quantity of water that the SWP delivers to MWD.

Contract allocations for SWP contractors are provided by DWR in "Table A," based on the original projected SWP maximum yield of 4.173 MAF. DWR annually approves the amount of contract allocations SWP contractors will receive. The contract allocation amount received by contractors varies based on contractor demands and projected available water supplies. Variables impacting projected water supplies include snowpack in the Sierra Nevada, capacity available in reservoirs, operational constraints, and demands of other water users.

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

### **Endangered Species Act Considerations**

DWR has altered the SWP's operations to accommodate certain species that are threatened or endangered, which impact SWP deliveries to MWD. On December 15, 2008, the United States Fish and Wildlife Service (USFWS) released a biological opinion on the impacts of the State Water Project and the federal Central Valley Project on Delta smelt. Based on the biological opinion's findings, the USFWS provided recommended actions to protect the Delta smelt. On June 4, 2009, the National Marine Fisheries Service (NMFS) released a biological opinion for salmonid species. The water supply restrictions imposed by these biological opinions on Delta smelt and salmonid species have a range of impacts on Metropolitan's deliveries from the SWP that are dependent on hydrologic conditions. The impact on total SWP deliveries to State Water Contractors attributable to the Delta smelt and salmonid species biological opinions combined is estimated to be one million AF in an average year, reducing total State Water Project deliveries to State Water Contractors from approximately 3.3 million AF to approximately 2.3 million AF during a year below average hydrology.

On October 22, 2019, USFWS and NMFS released new biological opinions. The Bureau of Reclamation completed its environmental review of the proposed action covered by the new biological opinions on February 19, 2020. The new opinions replace the existing federal permits for the Central Valley Project.

On March 31, 2020, the California Department of Fish and Wildlife (CDFW) issued an Incidental Take Permit (ITP) to DWR for long-term operations of the SWP. In April 2020, MWD, with the MWD Board approval, joined the State Water Contractors in their litigation against DWR and CDFW over the ITP. The impacts to MWD from the ongoing negotiation of Voluntary Agreements on the new biological opinions and incidental take permit, as well as litigation challenging them, remain unknown.

### **New Bay-Delta Conveyance Facility**

In 2006, multiple state and federal resource agencies, water agencies, and other stakeholder groups entered into a planning agreement for the Bay-Delta Conservation Plan (BDCP). The BDCP included alternatives for new water conveyance infrastructure and extensive habitat restoration in the Bay-Delta. In 2015, during the administration of the Governor Brown, the state and federal lead agencies proposed an alternative implementation strategy and new alternatives to the BDCP to provide for the protection of water supplies conveyed through the Bay-Delta and the restoration of the ecosystem of the Bay-Delta, termed "California WaterFix" and "California EcoRestore," respectively.

In July 2017, DWR certified a final EIR and approved the California WaterFix as an improvement to the State Water Project. As originally approved by DWR, the California WaterFix would provide new conveyance facilities for the transportation of State Water Project and Central Valley Project water from the north Delta, through two 30-mile long tunnels running under the Delta, to the existing aqueduct systems in the south Delta.

On April 29, 2019, Governor Newsom issued an executive order directing state agencies to develop a comprehensive statewide strategy to build a climate-resilient water system that included consideration of a single-tunnel conveyance facility instead of the approved two-tunnel WaterFix project. DWR began pursuing a new environmental review and planning process for the single tunnel "Delta Conveyance Project". The formal environmental review process commenced with the issuance by DWR of a Notice of Preparation under CEQA on January 15, 2020. In August 2020, the U.S. Army Corps of Engineers issued a Notice of Intent for the development of a new Environmental Impact Statement.

### **Colorado River**

MWD owns and operates the CRA, which since 1942 has delivered water from the Colorado River to Southern California. The Colorado River currently supplies approximately 17 percent of Southern California's water needs, and on average makes



up about 15 percent of LADWP's purchases from MWD. This source of supply has been secured to MWD through long-standing legal entitlements. However, extended dry conditions and increased demands by other users have recently impacted its reliability.

The Colorado River supplies come from watersheds of the Upper Colorado River Basin in the states of Colorado, Utah, and Wyoming. Due to the way that Colorado River supplies are apportioned, snowpack and runoff levels do not impact MWD water supplies in the current year. Instead, snowpack and runoff impact storage levels at Lake Powell and Lake Mead, which would then affect the likelihood of surplus or shortage conditions in the future.

Because MWD has two principal sources of supply that draw from two different watersheds, MWD is able to utilize supplies from the Colorado River to offset potential reductions in SWP supplies and buffer impacts during dry periods. MWD plans to use CRA deliveries, storage reserves, and supplemental water transfers and purchases to meet regional demands.

Under a permanent service contract with the U.S. Secretary of the Interior, MWD is entitled to receive water from the Colorado River and its tributaries. This water is also available to other users in California, as well as users in the states of Arizona, Colorado, Nevada, New Mexico, Utah, and Wyoming. Under a 1944 treaty, Mexico is allotted 1.5 million AF annually, except in extraordinary circumstances. There is long history of competition among users, but current conditions necessitate increased cooperation.

California is apportioned 4.4 million AFY, 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. Since 2003, due to increased consumption, there has been no such unused, apportioned water available to California. Of the California apportionment, MWD holds the fourth priority right to 550,000 AFY under the 1931 priority system governing allotments to California. This is the last priority within California's basic apportionment of 4.4 million AF. Beyond the basic apportionment, MWD holds the fifth priority right to 662,000 AF of water. See Appendix F for more details.

MWD has historically been able to claim most of its legal entitlement of Colorado River water and could divert over 1.2 million AF in any year, but persistent dry conditions since 1999 have contributed to a decrease in these claims. The recent 16-year dry period was so severe that it resulted in major reductions in water deliveries from the Colorado River. In response, the federal government, as well as state, urban, and agricultural water districts that depend on the Colorado River worked together toward a solution.

The Secretary of the Interior adopted the Interim Surplus Guidelines in 2001 to identify surplus Colorado River water available for use in California, Arizona, and Nevada (Lower Basin States) through 2016. In 2007, the Secretary of the Interior issued the

Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead through a Record of Decision. The Record of Decision provide water release criteria from Lake Powell and water storage and water release criteria from Lake Mead during shortage and surplus conditions in the Lower Basin, provided a mechanism for the storage and delivery of conserved system and non-system water in Lake Mead and extend the Interim Surplus Guidelines through 2026. The guidelines also created the Intentionally Created Surplus (ICS) program, which allows the Lower Basin States to store conserved water in Lake Mead. ICS water (water that has been conserved through an extraordinary conservation measure, such as land fallowing) is eligible for storage in Lake Mead by MWD.

Since the 2007 Lower Basin shortage guidelines were issued for the coordinated operations of Lake Powell and Lake Mead, the Colorado River has continued to experience dry conditions. In order to reduce the risk of Lake Powell and Lake Mead declining below critical elevations, the federal government, states and urban and agricultural water districts that depend on the Colorado River worked together to adopt and enact the Drought Contingency Plan in 2019. The Drought Contingency Plan is a collection of agreements within and among the seven western states in the Colorado River Basin to boost storage levels in Lake Mead and Lake Powell and prevent the reservoirs from reaching critically low levels.

The Lower Basin Drought Contingency Plan Agreement requires California, Arizona and Nevada to store defined volumes of water in Lake Mead at specified lake levels. California would begin making contributions if Lake Mead's elevation is projected to be at or below 1,045 feet above sea level on January 1. As of January 1, 2021, Lake Mead's elevation measured approximately 1,084 feet.

### **Reliability Efforts for Southern California**

MWD has been developing plans and making efforts to provide additional water supply reliability for the entire Southern California region. LADWP coordinates closely with MWD to ensure implementation of these water resource development plans. MWD's long-term plans to meet its member agencies' growing reliability needs include SWP improvements as outlined in the EcoRestore plans, conjunctive management efforts on the Colorado River, water transfer programs, outdoor conservation measures, and development of additional local resources such as recycling, brackish water desalination, and seawater desalination. These plans are contained in MWD's 2015 IRP and 2015 UWMP, which can be found at the following links:

- MWD 2015 IRP:  
[http://mwdh2o.com/PDF\\_About\\_Your\\_Water/2015%20IRP%20Update%20Report%20\(web\).pdf](http://mwdh2o.com/PDF_About_Your_Water/2015%20IRP%20Update%20Report%20(web).pdf)
- MWD 2015 UWMP:  
[http://www.mwdh2o.com/PDF\\_About\\_Your\\_Water/2.4.2\\_Regional\\_Urban\\_Water\\_Management\\_Plan.pdf](http://www.mwdh2o.com/PDF_About_Your_Water/2.4.2_Regional_Urban_Water_Management_Plan.pdf)



Additionally, MWD has more than 5.0 million AF of storage capacity available in reservoirs and banking/transfer programs. MWD has approximately 3.2 million AF of water in Water Surplus Drought Management storage and an additional 750,000 AF in emergency storage as of January 1, 2021. Continued efficiency in the region kept demands low in 2020, resulting in available water supplies far exceeding demands. With the implementation of new and modified storage programs to manage the available surplus supplies, MWD has been able to maintain historically high storage levels.

MWD's 2015 IRP was built upon the strong foundation of diversification and adaptation developed in previous IRPs. The 2015 IRP reinforced MWD commitment to meeting the region's water supply needs through an evolving long-term strategy that called for maintaining and stabilizing existing resources along with developing more conservation and new local supplies. Development for the 2020 IRP is currently underway with a tentative adoption in September 2021.

MWD's 2015 UWMP reports on water reliability and identifies projected supplies to meet the long-term demand within MWD's service area. Table V summarizes MWD's reliability in five-year increments extending to 2040 and is based on information contained in MWD's 2015 UWMP. As reported, MWD has supply capabilities that would be sufficient to meet expected demands from 2020 through 2040 under average year, single dry-year and multiple dry-year hydrologic conditions. An in-depth discussion on MWD is attached in Appendix F.

**Table V**  
**MWD System Forecast Supplies and Demands**  
**Average Year (1922 - 2012 Hydrology)**

Forecast year	Supply (Thousands of AF per Year)				
	2020	2025	2030	2035	2040
<i>Current Programs</i>					
In-Region Supplies and Programs	693	774	852	956	992
State Water Project <sup>1</sup>	1,555	1,576	1,606	1,632	1,632
Colorado River Aqueduct					
Colorado River Aqueduct Supply <sup>2</sup>	1,468	1,488	1,484	1,471	1,460
Aqueduct Capacity Limit <sup>3</sup>	1,200	1,200	1,200	1,200	1,200
Colorado Aqueduct Capability	1,200	1,200	1,200	1,200	1,200
<b>Capability of Current Programs</b>	<b>3,448</b>	<b>3,550</b>	<b>3,658</b>	<b>3,788</b>	<b>3,824</b>
<i>Demands</i>					
Total Demands on MWD	1,586	1,636	1,677	1,726	1,765
Imperial Irrigation District - San Diego County Water Authority Transfers and Canal Linings <sup>4</sup>	274	282	282	282	282
<b>Total Demands on MWD</b>	<b>1,860</b>	<b>1,918</b>	<b>1,959</b>	<b>2,008</b>	<b>2,047</b>
<b>Surplus</b>	<b>1,588</b>	<b>1,632</b>	<b>1,699</b>	<b>1,780</b>	<b>1,777</b>
<i>Programs Under Development</i>					
In-Region Supplies and Programs	43	80	118	160	200
State Water Project	20	20	268	268	268
Colorado River Aqueduct					
Colorado River Aqueduct Supply	5	25	25	25	25
Aqueduct Capacity Limit <sup>2</sup>	0	0	0	0	0
Colorado River Aqueduct Capability	0	0	0	0	0
<b>Capability of Programs Under Development</b>	<b>63</b>	<b>100</b>	<b>386</b>	<b>428</b>	<b>468</b>
<b>Maximum MWD Supply Capability</b>	<b>3,511</b>	<b>3,650</b>	<b>4,044</b>	<b>4,216</b>	<b>4,292</b>
<b>Potential Surplus</b>	<b>1,651</b>	<b>1,732</b>	<b>2,085</b>	<b>2,208</b>	<b>2,245</b>

1. Includes water transfers and groundwater banking associated with SWP.

2. Includes 296 TAF of non-MWD supplies conveyed in CRA for Imperial Irrigation District - San Diego County Water Authority Transfers and Canal Linings.

3. CRA has a capacity constraint of 1.20 MAF per year.

4. Does not include 16 TAF subject to satisfaction of conditions specified in agreement among MWD, the US, and the San Luis Rey Settlement.



#### **4.0 Secondary Sources and Other Considerations**

Stormwater capture, water conservation, and recycling will play an increasing role in meeting future water demands. LADWP has implemented stormwater capture, conservation, and recycling programs with efforts under way to further promote and increase the level of these programs. LADWP is committed to supply a higher percentage of the City's water demand through local water supply development.

LADWP works closely with MWD, LASAN, other regional water providers, and various stakeholders to develop and implement programs that reduce overall water use. One example of such collaboration is an integrated resources planning process.

#### **5.0 Summary of Water Demand and Supply Projections for 20 years**

Table VI tabulates the service reliability assessment for average weather year. Existing water conservation has been subtracted already from projected demands, but new water conservation is included as a supply source.

**Table VI**  
**Service Area Reliability Assessment for Average Weather Year**

Demand and Supply Projections (in acre-feet)	Average Weather Conditions (FY 1961/62 to 2010/11) Fiscal Year Ending on June 30				
	2020	2025	2030	2035	2040
<b>Total Water Demand<sup>1</sup></b>	<b>611,800</b>	<b>644,700</b>	<b>652,900</b>	<b>661,800</b>	<b>675,700</b>
<b>pLAn Water Demand Target</b>	<b>485,600</b>	<b>533,000</b>	<b>540,100</b>	<b>551,100</b>	<b>565,600</b>
<b>Existing / Planned Supplies</b>					
Conservation (Additional Active <sup>2</sup> and Passive <sup>3</sup> after FY14/15)	125,800	110,900	111,600	109,100	108,100
Los Angeles Aqueduct <sup>4</sup>	275,700	293,400	291,000	288,600	286,200
Groundwater <sup>5</sup> (Net)	112,670	110,670	106,670	114,670	114,070
Recycled Water					
- Irrigation and Industrial Use	19,800	29,000	39,000	42,200	45,400
- Groundwater Replenishment	0	30,000	30,000	30,000	30,000
Stormwater Capture					
- Stormwater Reuse (Harvesting)	400	800	1,200	1,600	2,000
- Stormwater Recharge (Increased Pumping)	<u>2,000</u>	<u>4,000</u>	<u>8,000</u>	<u>15,000</u>	<u>15,000</u>
Subtotal	536,370	578,770	587,470	601,170	600,770
<b>MWD Water Purchases</b>					
With Existing/Planned Supplies	75,430	65,930	65,430	60,630	74,930
<b>Total Supplies</b>	<b>611,800</b>	<b>644,700</b>	<b>652,900</b>	<b>661,800</b>	<b>675,700</b>
<b>Potential Supplies</b>					
Water Transfers <sup>6</sup>	<u>40,000</u>	<u>40,000</u>	<u>40,000</u>	<u>40,000</u>	<u>40,000</u>
Subtotal	40,000	40,000	40,000	40,000	40,000
<b>MWD Water Purchases</b>					
With Existing/Planned/Potential Supplies	35,430	25,930	25,430	20,630	34,930
<b>Total Supplies</b>	<b>611,800</b>	<b>644,700</b>	<b>652,900</b>	<b>661,800</b>	<b>675,700</b>

<sup>1</sup> Total Demand with existing passive conservation

<sup>2</sup> Cumulative hardware savings since late 1980s reached 118,034 AFY by 2014-15.

<sup>3</sup> Additional non-hardware conservation required to meet water use reduction goals set in the Sustainable City pLAn.

<sup>4</sup> LADWP anticipates conserving 20,000 AFY of water usage for dust mitigation on Owens Lake after the Master Project is implemented in FY 2023-24. Los Angeles Aqueduct supply is estimated to decrease 0.1652% per year due to climate change impact.

<sup>5</sup> Net GW excludes Stormwater Recharge and Groundwater Replenishment supplies that contribute to increased pumping. The LADWP Groundwater Remediation project in the San Fernando Basin is expected in operation in 2021-22. Storage credit of 5,000 AFY will be used to maximize pumping in 2019-20 and thereafter. Sylmar Basin production will increase to 4,170 AFY from 2015-16 to 2038-39 to avoid the expiration of stored water credits, then go back to its entitlement of 3,570 AFY in 2039-40.

<sup>6</sup> Potential water transfer occurs in dry years with stored water acquired in average and wet years.

Service area reliability assessments for single-dry year and multiple-dry year conditions are shown in LADWP 2015 UWMP Exhibits 11F through 11H. Demands are met by the available supplies under all scenarios.

## **Water System Financing Program**

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Capital costs to finance facilities for the delivery of water supply to LADWP's service area are supported through customer-billed water rates. The Board sets rates subject to approval of City Council by ordinance. The Board is obligated by City Charter to establish water rates and collect charges in an amount sufficient to service the water system indebtedness and to meet its expenses for operation and maintenance.

On March 15, 2016, City Council approved the new water rates and rate structure. New water rates, which became effective April 15, 2016, through Ordinance 184130 provide for modest rate increases each year over a five-year period for infrastructure improvements, meeting regulatory water quality requirements, Owens Valley mitigation measures, and expanding the local water supply, which includes recycled water, stormwater capture, conservation, and groundwater remediation. New water rate structure increases the number of tiers from two to four for single-family residential customers. Goal is to incentivize conservation while recovering the higher costs of providing water to high volume users. In keeping with cost of service principles, the incremental pricing for the tiers is based on the cost of water supply.

Another method to finance projects and help achieve LADWP's commitment to developing sustainable local water supplies is through grants and loans. Critical funding from Proposition 1 (Prop 1) – the Water Quality, Supply, and Infrastructure Improvement Act of 2014 was passed on November 4, 2014 to support groundwater cleanup, stormwater capture, recycled water, water conservation, regional water management, and Los Angeles River revitalization projects. Prop 1 is a bond measure that provides \$7.545 billion to fund investments in water projects and programs as part of a statewide, comprehensive water plan for California. As of FYE 2020, LADWP has been awarded \$327.9 million in grants and \$3 million in zero-interest loans.



## **Conclusion**

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The Project is estimated to increase the total water demand within the site by 92 AF annually. This additional water demand for the Project site has been accounted for in the City's overall total demand projections in the LADWP 2015 UWMP using a service area-wide approach that does not rely on individual development demand. The LADWP 2015 UWMP utilized SCAG's RTP data that provide for more reliable water demand forecasts, considering changes in population, housing units, and employment.

Based on the Planning Department's determination that the Project is consistent with the demographic forecasts for the City from the 2012 SCAG RTP, LADWP finds that the Project water demand is included in the City's LADWP 2015 UWMP. Furthermore, the LADWP 2015 UWMP forecasts adequate water supplies to meet all projected water demands in the City through the year 2040. LADWP therefore concludes that the projected 92 AFY increase in the total water demand for this Project is accounted for in the 2015 UWMP's 25-year water demand projections. LADWP finds it will be able to meet the proposed water demand of the Project as well as existing and planned future water demands of its service area.

## Appendix A

City of Los Angeles Department of City Planning  
Request for Water Supply Assessment,  
and Scope Confirmation e-mail

DEPARTMENT OF  
CITY PLANNING

COMMISSION OFFICE  
(213) 978-1300

CITY PLANNING COMMISSION

SAMANTHA MILLMAN  
PRESIDENT

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CAROLINE CHOE

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DEPUTY DIRECTOR

LISA M. WEBBER, AICP  
DEPUTY DIRECTOR

VACANT  
DEPUTY DIRECTOR

November 20, 2020

Mr. Richard F. Harasick

Senior Assistant General Manager for Water Systems

Water Resources Development Group

City of Los Angeles Department of Water and Power

111 North Hope Street, Room 1455

Los Angeles, CA 90012

**RE: REQUEST FOR WATER SUPPLY ASSESSMENT FOR THE DTLA SOUTH PARK PROPERTIES SITE 3  
PROJECT LOCATED AT 1100-1130 SOUTH OLIVE STREET, LOS ANGELES, CA 90015**

Dear Mr. Harasick,

California Senate Bill (SB) 610, effective January 1, 2002, states that a water supply assessment must be provided to local governments for inclusion in any environmental documentation for certain projects subject to the California Environmental Quality Act (CEQA). Specifically, SB 610 requires that for certain projects, the CEQA lead agency must identify any public water system that may supply water to a proposed project and request the public water system to determine the water demand associated with the project and whether such demand was included as part of the most recently adopted Urban Water Management Plan (UWMP). Per Section 10912 of the California Water Code (CWC), a project which is subject to the requirements of SB 610 includes, but is not limited to: (1) a proposed residential development of more than 500 dwelling units; (2) a proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space; (3) a proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space; (4) a proposed hotel or motel, or both, having more than 500 rooms; (5) a proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area; (6) a mixed-use project that includes one or more of the projects specified in this subdivision; or (7)



a project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling-unit project.

The City of Los Angeles Department of City Planning (the City) is preparing a Sustainable Communities Environmental Assessment (SCEA) in accordance with CEQA for two projects known as the Downtown Los Angeles (DTLA) South Park Properties Site 2 and Site 3 (Projects). These two Projects are separated by Olive Street in downtown Los Angeles. While both developments will be evaluated in one SCEA document for the purposes of CEQA, the Applicants have filed separate applications for each site and the City is considering requested entitlements separately. As such, two separate WSAs are being requested. This request is for the development at Site 3 proposed by DTLA South Park Properties Propco II, LLC (Project). The request for Site 2 is being submitted separately.

The proposed Project constitutes a "project" as defined in Section 10912(a) of the CWC and thus, is subject to the provisions for determining water availability as outlined in Sections 10910-10915 of the CWC. As such, the Department of City Planning requests your assistance in preparing a Water Supply Assessment (WSA) pursuant to the requirements of SB 610 to determine the Los Angeles Department of Water and Power's (LADWP) ability to meet the water demands of the proposed Project. Provided below is a brief description of the Project and an estimate of potential water demand.

#### **Project Location**

As described above, while the Projects consist of two separate sites, this request is for the development located at Site 3. Site 3 occupies the southeast corner of the intersection of 11th Street and S Olive Street in downtown Los Angeles. The current addresses associated with Site 3 are 218, 220, 222, 224, 226, 228 W 11th Street and 1100, 1114, 1118, 1120, 1124, 1126, 1128, 1130 South Olive Street, Los Angeles, CA 90015 (see Attachment A Location Map).

#### **Existing Conditions**

Site 3 is approximately 46,807 square feet and consists of Assessor's Parcel Numbers (APNs) 5139-019-040, 5139-019-015 and 5139-019-011. Site 3 is bounded by 11th Street to the north, an alley to the east, an office tower to the south and Olive Street to the west. The site is currently occupied by active surface parking facilities. There are four street trees adjacent to the Project Site along Olive Street. Otherwise, the site is paved with impervious surfaces and do not contain any vegetation or landscaping. The site is designated for Regional Center Commercial General Plan Land Uses by the Central City Community Plan and zoned C2-4D-O. The Project does not involve a General Plan Amendment or a Zone Change.

## **Proposed Project**

The proposed Project for Site 3 would include a 60-story, mixed use building with a six-level subterranean parking, a ground floor with retail and lobby space and parking spaces, a three-level above-grade parking podium, and a 57-story residential tower (see Attachment B Plot Plan). The building will be approximately 698 feet in height with a total of 608,977 square feet of floor area including 597,700 square feet of residential floor area and 11,277 square feet of retail space consisting of 7,095 square feet of retail space along the 11<sup>th</sup> Street frontage and 4,221 square feet of retail space on Olive Street. The residential component of the proposed mixed-use building would contain 188 studios, 366 one-bedroom units, 156 two-bedroom units, and 3 three-bedroom units for a total of 713 residential units. The building would feature multiple amenity decks on various floors including a 1,469-square-foot outdoor dog run and 897 square feet of lounge space at Level 4 Mezzanine; a 33,448-square-foot amenity deck on Level 5 with a swimming pool, community recreation, lounge, spa and fitness areas; 6,845 square feet of lounge areas and 1,343 square feet of covered deck on Level 6; and a 4,689-square foot roof deck and a 1,977-square-foot sky lounge at Level 59. The Project would provide 764 automobile parking spaces; 31 short-term bicycle racks and 259 long term-bicycle lockers. Pedestrian improvements would be made along the 11th Street and S. Olive Street frontages of the Project. The Project would remove four existing trees in the public right-of-way and plant 128 trees on-site, including 9 trees at the ground level in the public right-of-way, 110 trees at Levels 4 Mezzanine and 5, and 9 trees at Level 59. The Project proposes to provide approximately 12,331 square feet of landscaping (see Attachment C Landscape Plans).

Information about the Project is summarized in the **Table 1, Project Data** below. Estimated fixture count is included in **Table 2, Estimated Fixture Count**. Landscaping information is provided in **Table 3, Landscaping Water Usage Estimate**. A site plan is attached to this letter.

The Project would comply with the requirements in the City's Green Building Code and Title 24, which requires buildings to be designed to include green building measures for energy efficiency, water conservation, recycling, light pollution reduction, electric vehicle charging stations, Energy Star-rated appliances, eco-friendly building materials, non-volatile organic compound paints/adhesives, drought-tolerant planting, high performance building envelopment, etc. to the extent feasible. For cooling purposes, the Site 2 building would include a 1,200-ton capacity cooling tower. The cooling tower would operate 24 hours per day using 100% non-potable water.

For the purposes of analysis, Site 3 is expected to be built by 2027.

**Table 1, Project Data**

General Information	Street Address	1100-1130 S Olive St. & 218-228 W. 11 <sup>th</sup> St.
	APN No's.	5139-019-011, 5139-019-015, & 5139-019-040
	Existing Zoning	C2-4D-O
	Proposed Zoning	C2-4D-O
	General Plan Designation	Regional Center Commercial
	Lot Area	46,807 square feet / 1.07 acres
	Buildable Lot Area (LAMC 14.5.3)	67,679 square feet
	Proposed total floor area	608,977 square feet
	Proposed FAR	9:1 (Based on Buildable Lot Area)
	Building Height	698 feet (60 Stories)
Project Details	Residential Units	713 Units
	Residential Units	713 Units
	Studio	188
	One Bedroom	366
	Two Bedrooms	156
	Three Bedrooms	3
	Residential Amenities (Covered)	
	Dog Lounge	897 square feet
	Fitness Room	4,494 square feet
	Co-Working Space	4,269 square feet
	Movie Lounge	575 square feet
	Sky Lounge	1,977 square feet
	Game Lounge	2,001 square feet
	Club Room	4,643 square feet
	Residential Amenities (Uncovered)	
	Outdoor Dog Run	1,469 square feet
	Outdoor Terraces	29,000 square feet
	Residential Balconies	26,100 square feet
	Total Amenity Space	75,425 square feet
	Commercial	11,277 square feet
	Parking	
	Total Automobile Parking	764 (Required & Provided)
	Total Bicycle Parking	290 (Required & Provided)
Total Covered Parking Area	409,486 square feet	

Table 2, Estimated Fixture Count

	Residential Dwelling Units	Residential Common Area	Restaurant /Bar	Retail/ Commercial	Office	Hotel Rooms	Hotel Common Facility
Water Closets	N/A	15	11	0	0	N/A	0
Urinals	N/A	3	2	0	0	N/A	0
Lavatory Faucets	N/A	14	8	0	0	N/A	0
Kitchen Faucets	N/A	7	2	0	0	N/A	0
Commercial Kitchen Pre-Rinse Spray Faucets	N/A	0	2	0	0	N/A	0
Showerheads	N/A	7	0	0	0	N/A	0
Clothes Washer (Residential)	713	0	0	0	0	0	0
Clothes Washer (Commercial)	0	0	0	0	0	0	0
Dishwasher (Residential)	713	2	0	0	0	0	0
Dishwasher (Commercial)	0	0	2	0	0	0	0

**Table 3, Landscaping Water Usage Estimate**

Hydrozone	Plant Factor (PF)	Irrigation Method	Irrigation Efficiency (IE)	ETAF (PF/IE)	Landscape Area	ETAF x Area	Estimated Water Use (gallons per year)
Ground Level	0.3	Drip	0.81	0.37	960.00	355.56	11,044.27
Podium	0.3	Drip	0.81	0.37	6,233.00	2,308.52	71,707.20
Roof Deck	0.3	Drip	0.81	0.37	1,219.00	451.48	14,023.92
Synthetic turf	0.1	Spray	0.75	0.13	3,201.00	426.80	13,257.26
Pool	0.8	-	1.00	0.80	2,354.00	1,883.20	58,495.96
Spa	0.8	-	1.00	0.80	175.00	140.00	4,348.68
<b>TOTAL:</b>					14,142.00	5,565.56	172,877.29
Source: EPT Design (Project Landscape Architect)							

**Project Conformance with the General Plan and Municipal Code**

The Project site is located within the Central City Community Plan Area and designated for Regional Center Commercial Land Uses. The residential objectives of the Central City Community Plan are:

- Objective 1-1 To promote development of residential units in South Park.
- Objective 1-2 To increase the range of housing choices available to Downtown employees and residents.
- Objective 1-3 To foster residential development which can accommodate a full range of incomes
- Objective 1-4 To facilitate the conversion of historic buildings in the Historic Core to housing, office, art, and cultural uses in order to attract new residents.

- Objective 1-5 To preserve the existing low-income housing stock, including single room occupancy (SRO) units.
- Objective 1-6 To support additions to the housing stock in Little Tokyo.

The Project is generally consistent with these objectives as it develops residential units in South Park without removing any historic buildings or existing housing stock.

Consistent with the Community Plan Land Use Designation, the Project site is zoned C2-4D. The C2 Commercial Zone permits a variety of uses, such as multi-family residential; retail with limited manufacturing; service stations and garages; and office uses, hotels, and hospitals. The Project site is in Height District No. 4, which permits a maximum floor area ratio (FAR) of 13:1, with no limitation for building height. However, the "D" Development Limitation restricts the FAR to 6:1, unless the Project obtains Transfer of Floor Area Rights approval. The development proposed for Site 2 would require the following entitlements from the City:

- Transfer of Floor Area Rights (TFAR) of approximately 328,135 square feet of floor area from the Los Angeles Convention Center (Donor Site) to the Project Site on Site 3 (Receiver Site) pursuant to LAMC Section 14.5.7;
- Zone Variance to allow reduced parking stall dimensions of a minimum 8'-6" wide by 16' deep in lieu of the otherwise required 9'-4" wide by 18' deep parking stall and to allow reduced drive aisle widths of a minimum 25-foot-1-inch in lieu of the otherwise required 27-foot, 4-inch drive aisle, pursuant to LAMC Section 12.27;
- Director's Decision to provide less than one on-site tree per four dwelling units (128 trees in lieu of 178 trees required), pursuant to LAMC Section 12.21 G.3 and Ordinance No. 185,573;
- Site Plan Review, pursuant to LAMC Section 16.05;
- Master Conditional Use Permit for three off-site sale establishments and three on-site sale establishments for alcoholic beverages, pursuant to LAMC Section 12.24.W.1; and
- Vesting Tentative Tract Map No. 82141, pursuant to LAMC Section 17.01 et seq.



### **Project Conformance with the SCAG 2016-2040 RTP/SCS**

The Project is consistent with the general land use designation, density, and building intensity outlined in the SCAG 2016-2040 RTP/SCS. The Project site is within an area designated by the 2016-2040 RTP/SCS as "Urban," a land development category (LDC) with the highest density and intensity of land development. The 2016-2040 RTP/SCS describes the Urban LDC as areas often found within and/or directly adjacent to moderate and high-density urban centers, where virtually all new development would be considered infill or redevelopment. Housing tends to be higher density multi-family and attached single-family (townhome) varieties which, overall, consume less water and energy than detached residences in less urban locations. Urban LDC areas have high levels of mobility, particularly for people who choose not to drive or do not have access to a vehicle, seen through the presence of a variety of regional and local transit services and a development pattern that is conducive to walking. The proposed Project is consistent with the Urban Land Use Development Category.

The proposed Project is located within a highly urbanized area within the City of Los Angeles. The California State Department of Finance (DOF) average household size for the City of Los Angeles at 2.83 persons per household. The current DOF estimated City population as of January 2019 is approximately 4,040,079 people. Therefore, the proposed Project would represent an increase of less than one percent of the City's current population. According to growth estimates from SCAG's 2016-2040 RTP/SCS, the City had an estimated population of 3,845,500 people in 2012 and is projected to have a population of 4,609,400 in 2040. The addition of the Project would be within the SCAG's population forecasts for the City.

### **Existing Water Consumption**

The site is a surface parking lot with no on-site facilities. As such, for purposes of this request, it is assumed that there is no existing water consumption associated with the site.

**Forecasted Water Demand**

The following table presents estimated water demand for the Project as provided by the Applicant.

<b>DTLA Site 4 Estimated Proposed Water Consumption</b>				
<b>Building Use</b>	<b>Water Consumption (GPD)<sup>(a)</sup></b>	<b>Units</b>	<b>Quantity</b>	<b>Total Consumption (GPD)</b>
APT - BACHELOR	90	DU	188	16,920
1 BDR APT	132	DU	366	48,312
2 BDR APT	180	DU	156	28,080
3 BDR APT/PH	228	DU	3	684
RETAIL AREA	30	KGSF	7,056	212
RESTAURANT	36	SEAT	169	6,084
SWIMMING POOL	600	-	1	600
SPA/JACUZZI	600	-	1	600
LANDSCAPING <sup>(c)</sup>				474
<b>Total Estimated Proposed Water Consumption (GPD)</b>				<b>101,966</b>
(a) The average daily flow based on 120% of City of Los Angeles sewerage generation factors. (b) 25 sf / seat is used to determine seat count. (c) See Table 3 above, converted to GPD				

**Contact Information**

- **Lead Agency:**  
 Nuri Cho, City Planner  
 Los Angeles City Planning  
 200 N. Spring St., Room 621  
 Los Angeles, CA 90012  
 nuri.cho@lacity.org  
 (213) 978-1177
  
- **Applicant:**  
 DTLA South Park Properties Propco II LLC  
 Kevin Linqvist, Chief Operating Officer  
 Mack Real Estate Development  
 1150 S. Olive Street, Suite 2250  
 Los Angeles, CA 90015  
 klindquist@mackregroup.com  
 (213) 542-4316

- CEQA Consultant:  
Meridian Consultants  
920 Hampshire Road, Suite A-5  
Westlake Village, California 91361  
[nbaldwin@MeridianConsultantsLLC.com](mailto:nbaldwin@MeridianConsultantsLLC.com)  
(805) 413-4185

Based on the above projections, the Department of City Planning is requesting your assistance in preparing a WSA pursuant to the requirements of SB 610. SB 610 requires a water supply assessment to evaluate whether total projected water supplies will meet the projected water demand for certain development projects that are otherwise subject to CEQA review.

Thank you for your assistance with this request. Your expert evaluation will help ensure that our analysis of the Project's impacts related to water demand is accurate and complete. If you have any questions or comments, please contact Nuri Cho at (213) 978-1177 or [Nuri.Cho@lacity.org](mailto:Nuri.Cho@lacity.org).

Sincerely,

VINCENT P. BERTONI, AICP  
Director of Planning



---

Nuri Cho, City Planner  
Central Project Planning Division  
Department of City Planning  
200 N. Spring Street, Room 621  
Los Angeles, CA 90012

Attachments:  
A – Location Map  
B – Plot Plan  
C – Landscape Plans

Request for Water Supply Assessment

DTLA South Park Properties Site 3

1100-1130 South Olive Street, Los Angeles, CA 90015

Attachment A

Location Map





SITE 3-A

# Site 3 Location

SOURCE: Google Earth - 2020; Meridian Consultants, LLC - February 2020



**Request for Water Supply Assessment**

**DTLA South Park Properties Site 3**

**1100-1130 South Olive Street, Los Angeles, CA 90015**

**Attachment B**

**Plot Plan**





Request for Water Supply Assessment

DTLA South Park Properties Site 3

1100-1130 South Olive Street, Los Angeles, CA 90015

Attachment C

Landscape Plans

DTLA South Park  
Properties Site 3

Issue Tracking Log

Issue ID	Description	Status	Assigned To	Due Date



**Legend**

- ① 11th Street Improvements per MyFig Streetscape Plans; Not in Project Scope
- ② Upgraded Paving within Property Line
- ③ City Standard Concrete within Right of Way
- ④ 18" Wide Brick Band per City Guidelines
- ⑤ 7' x 15' Planter
- ⑥ Entry Drive
- ⑦ Existing Street Light
- ⑧ Proposed Bicycle Parking
- ⑨ Mid-Block Crosswalk

**Proposed Street Tree:**  
London Plane Tree  
(Platanus acerifolia)

**Required Quantity of Trees: 178**  
**Proposed Quantity of Trees: 128**

Ground Level:	9
Level 4 Mezzanine:	0
Amenity Deck:	110
Penthouse:	9

**Common Open Space: 30,469 SF**  
**Planted Open Space Required: 7,617 SF**  
**Planted Open Space Provided: 8,582 SF**

Ground Level:	0
Level 4 Mezzanine:	1,414 SF
Amenity Deck:	5,950 SF
Penthouse:	1,218 SF

SCALE: 1"=10'-0"  
NOT FOR CONSTRUCTION

**DTLA South Park  
Properties Site 3**

Client/Project Address:  
11th Street, 3rd Street, 4th Street, 5th Street, 6th Street, 7th Street, 8th Street, 9th Street, 10th Street, 11th Street, 12th Street, 13th Street, 14th Street, 15th Street, 16th Street, 17th Street

**SITE 3 -  
LANDSCAPE -  
LEVEL 4 MEZZ &  
LEVEL 5**

**L1b.02**

**Legend**

- 1 Frepit and Moveable Seating with Overhead Trellis
- 2 Water Feature
- 3 Raised Planter, Typical
- 4 Low Planter
- 5 Outdoor Gaming Tables
- 6 5' High Glass Pool Enclosure Fence
- 7 Daybeds with Overhead Trellis
- 8 Pool Cabanas
- 9 Chaise Lounges
- 10 Pool Showers
- 11 Screening Hedge
- 12 Lounge and Dining with TV Screens and BBQ Grills
- 13 Outdoor Bar with Overhead Trellis
- 14 Lawn Panel with Outdoor Games
- 15 Dog Park Below with Enclosure Gate
- 16 Sport Court Seating
- 17 Sport Court Fencing and Gate

**Proposed Trees:**

- African Sumac (Rhus lancea)
- Black Locust (Robinia pseudoacacia)
- Fruitless Olive (Olea europaea)
- Strawberry Tree (Arbutus unedo)



SCALE: 1"=15'-0"

NOT FOR CONSTRUCTION

**DTLA South Site 3  
Properties Site 3**

Client/Project Address  
1500 Broadway, Suite 1000  
Berkeley, CA 94701  
Tel: 415.763.2000  
Fax: 415.763.2001  
www.callison-tkl.com

Issue Number/Date  
PROJECT 1500 BROADWAY DEVELOP  
1500 Broadway, Suite 1000  
Berkeley, CA 94701  
Tel: 415.763.2000  
Fax: 415.763.2001  
www.callison-tkl.com

- Legend**
- 1 Bar Top and BBQ Counter
  - 2 Fire Pit and Lounge Seating
  - 3 Water Feature
  - 4 Low Planter
  - 5 Raised Planter
  - 6 Lawn Panel with Moveable Seating
  - 7 Projection Wall
  - 8 Lounge Seating



Scale: 1"=15'-0"  
NOT FOR CONSTRUCTION



**From:** [Nuri Cho](#)  
**To:** [Kim, Theresa](#)  
**Cc:** [Paul Garry](#); [Andrew Dutton](#); [markwareham@warehamconsultingllc.com](mailto:markwareham@warehamconsultingllc.com); [Dana Allen \(Dana.Allen@crtkl.com\)](mailto:Dana.Allen@crtkl.com)  
**Subject:** [EXTERNAL] Re: Updated - WSA for DTLA South Park Properties Site 3- Scope Confirmation  
**Date:** Friday, April 16, 2021 10:05:30 AM

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**EXTERNAL EMAIL!** This email was generated from a non-LADWP address. If any links exist, do not click/open on them unless you are 100% certain of the associated site or source. ALWAYS hover over the link to preview the actual URL/site and confirm its legitimacy.

---

Hi Theresa,

I would like to confirm that the scope of work is accurate in this table, thank you.

On Fri, Apr 16, 2021 at 9:20 AM Kim, Theresa <[Theresa.Kim@ladwp.com](mailto:Theresa.Kim@ladwp.com)> wrote:

Dear Nuri,

We are in the process of completing the Water Supply Assessment (WSA) Board Package for the Downtown Los Angeles South Park Properties Site 3 Project. The LADWP requests that the Department of City Planning confirm, by e-mail, the correct detail scope (shown in the table below) for the Proposed Project. Your scope confirming e-mail will be included as part of the WSA and the confirmed scope is used for calculating the water demand in the WSA.

LADWP received the WSA Request Letter for the Proposed Project on November 20, 2020. The scope considered in LADWP's water demand calculations, as received in the initial WSA Request Letter and subsequent information from the Project Team, is as follows:

Existing Use to be Removed <sup>1</sup>	Quantity	Unit
Surface Parking Lot	46,807	sf
<b>Existing to be Removed Total</b>		
Proposed Use <sup>1</sup>	Quantity	Unit
<b>RESIDENTIAL UNITS</b>		
Residential: Studios	188	du
Residential: 1 bd	366	du
Residential: 2 bd	156	du
Residential: 3 bd	3	du
Base Demand Adjustment (Residential Units) <sup>5</sup>		



Residential Units Total	713	du
<b>RESIDENTIAL AMENITIES AND COMMERCIAL USE</b>		
Dog Spa (lvl 4 mezz)	406	sf
Dog Lounge (lvl 4 mezz)	491	sf
Synthetic Turf Areas (lvl 4 Dog Park, lvl 5 pool and flex deck, lvl 59 roof deck)	3,201	sf
Pool and Spa on Landscape Amenity Deck (lvl 5)	2529	sf
Club Room and Lounge (lvl 5) <sup>2</sup>	51	seats
Fitness and Spin Studio (lvl 5)	5,076	sf
Sky Lounge (lvl 59) <sup>2</sup>	39	seats
Business/Co-Lab/Office (lvl 6)	4,269	sf
Office (lvl 1)	2,586	sf
Restaurant-seating area (lvl 1) <sup>3</sup>	235	seats
	Assume half the space of 7056 SF is used for dining	
Restaurant- kitchen/storage/etc (lvl 1) <sup>3</sup>	3,528	sf
	Assume half the space of 7056 SF is used for kitchen and storage	
Retail (lvl 1)	4,221	sf
<b>Landscaping<sup>7</sup></b>	<b>13,291</b>	<b>sf</b>
<b>Covered Parking<sup>8</sup></b>	<b>325,995</b>	<b>sf</b>
<b>Cooling Tower Total</b>		
Chiller Capacity	1,200	ton
Operating Hours	24 hrs/day, 365 days/year	

### Notes

1. Proposed Uses that do not have a water demand are not shown here.
2. Only Lounge Areas that contain a preparation area with plumbing fixtures were included in the water demand.
3. Restaurant area's water demand was calculated based on 50% dining and 50% kitchen area for water demand

Also, the Proposed Project is consistent with the demographic projections in both the 2012 and 2016 Regional Transportation Plan (RTP) by Southern California Association of Governments (SCAG) for the City of Los Angeles.

**If the above listed project scope information is accurate and consistent with the Proposed Project, please reply to this e-mail to confirm. If not, please edit the scope accordingly and send back to me by e-mail.**

Theresa Vu Kim

Los Angeles Department of Water and Power

111 N. Hope Street, Room 314

Los Angeles, CA 90012

O: (213) 367-1491

-----Confidentiality Notice-----

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**Nuri Cho**

Pronouns: She, Her, Hers

City Planner

**Los Angeles City Planning**

200 N. Spring St., Room 620

Los Angeles, CA 90012

T: (213) 978-1177 | [Planning4LA.org](http://Planning4LA.org)



## Appendix B

Water Conservation Commitment Letter

**DTLA South Park Properties Propco II, LLC**  
1150 S. Olive Street  
Suite 2250  
Los Angeles, CA 90015

February 26, 2021

Richard F. Harasick  
Senior Assistant General Manager for Water Systems  
Los Angeles Department of Water & Power  
111 North Hope Street, Room 1455  
Los Angeles, CA 90012-5701

Re: WATER CONSERVATION COMMITMENTS FOR THE DOWNTOWN LOS ANGELES (DTLA) SOUTH PARK PROPERTY AT SITE 3 PROJECT  
1100-1130 S. Olive Street  
City Planning Department Case No. VTT-82141, CPC-2018-2599 TDR-MCUP-ZV-DD-SPR

Dear Mr. Harasick:

DTLA South Park Properties Propco II, LLC proposes to develop the DTLA South Park Property at Site 3 Project (Project) within the Central City Community Plan Area of the City of Los Angeles. The Project site, which encompasses approximately 1.07 acres, is generally bounded by 11<sup>th</sup> Street to the north, Olive Street to the west, an office tower to the south, and an alley to the east. The proposed project would develop approximately 11,277 square feet of retail/restaurant space and 713 residential units. The Project would also include approximately 325,995 square feet of covered parking and 13,291 square feet of landscaping. As part of the project, an existing surface parking lot would be removed.

The Applicant understands the City of Los Angeles' policy that future water needs shall be met by expanding water recycling and conservation. In order to reduce the Project's water demand, the Applicant has committed to implement the following water conservation measures that are in addition to those required by codes and ordinances for the entire Project:

- Fixtures
  - Showerheads with a flow rate of "1.75" gallons per minute, or less.
- Landscape and irrigation
  - Artificial Turf
  - California Friendly® plants or native plants
  - Drip/ Subsurface Irrigation (Micro-Irrigation)
  - Micro-Spray
  - Proper Hydro-zoning/Zoned Irrigation—(groups plants with similar water requirements together).
- Pool
  - Install a sub-meter on the pool make-up line so water use can be monitored and leaks can be identified and repaired
  - Leak Detection System for swimming pools and Jacuzzi
  - Pool splash troughs around the perimeter that drain back into the pool

- Pool/Spa recirculating filtration equipment
- Water-Saving Pool Filter.
  
- Cooling Plant
  - Ownership shall provide an approved Los Angeles County Health Department /Los Angeles Department of Building and Safety Gray Water System for 100% of Cooling Tower Make up Water.
  
- Utilities
  - Individual metering and billing for water use for every commercial unit.
  - Leak detector at main building water boiler system.

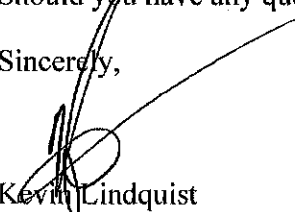
The Applicant has also committed to comply with the City of Los Angeles Low Impact Development Ordinances (City Ordinance No. 181899 and No. 183833) and to implement Best Management Practices that have stormwater recharge or reuse benefits for the entire Project as applicable:

(Note: BMPs listed based on hierarchy established by City of Los Angeles Low Impact Development Handbook)

- Pretreatment BMPs – As appropriate, a combination of the following:
  - Catch Basin Insert – a device that can be inserted into an existing catch basin to provide some level of runoff contaminant removal.
  - Downspout Filter – a device that can be inserted into a downspout pipe to provide some level of runoff contaminant removal.
  - Hydrodynamic Separator – a prefabricated in-line chamber which removes debris and pollutants through screening and settlement of influent stormwater.
  - Pre-settling Chamber – a prefabricated in-line chamber which removes debris and pollutants through settlement and controlled discharge.
- Infiltration BMPs – As feasible for the Project
  - Drywell(s) – a vertical system which allows for stormwater infiltration deep beneath proposed foundations/surfaces.
- Capture and Re-use BMPs – If infiltration is considered infeasible
  - Cistern – captures stormwater runoff as it comes down through the roof gutter system to offset domestic water demand.

Should you have any questions, please do not hesitate to call at 213-542-4316.

Sincerely,

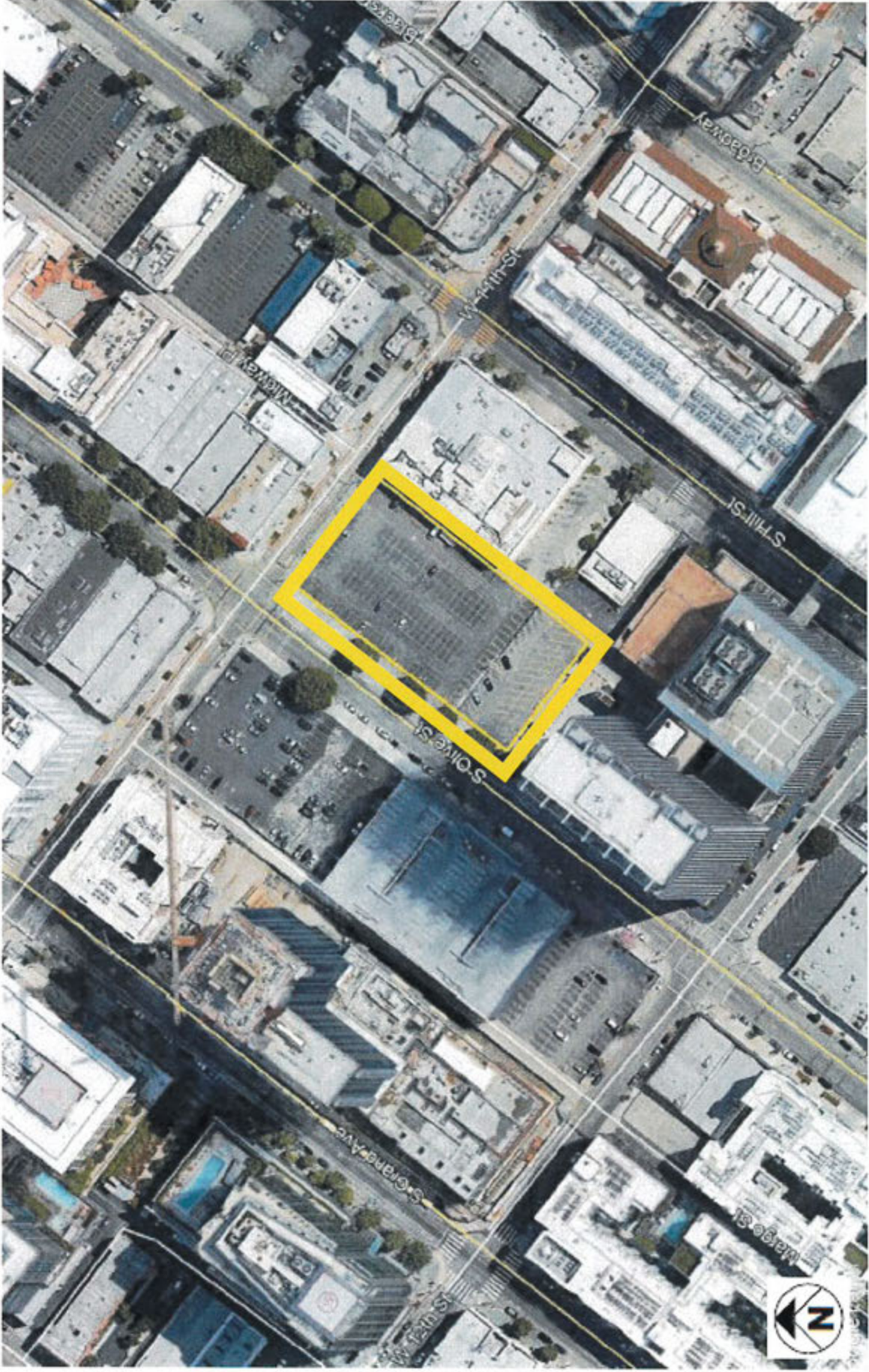


Kevin Lindquist  
 Authorized Signatory  
 DTLA South Park Properties Propco II, LLC

## Appendix C

### Project Location Map





SOURCE: Google Earth - 2020; Meridian Consultants, LLC - February 2020



Site 3 Location

## Appendix D

### Adjudicated Groundwater Basin Judgments

- San Fernando Basin – Judgment No. 650079
- Sylmar Basin – Judgment No. 650079
- Central Basin – Judgment No, 786656

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SUPERIOR COURT OF THE STATE OF CALIFORNIA  
FOR THE COUNTY OF LOS ANGELES

THE CITY OF LOS ANGELES,

Plaintiff,

vs.

CITY OF SAN FERNANDO, ET AL.

Defendants.

No. 650079

JUDGMENT

There follows by consecutive paging Recitals (page 1), Definitions and List of Attachments (pages 1 to 6), Designation of Parties (page 6), Declaration re Geology and Hydrology (pages 6 to 12), Declaration of Rights (pages 12 to 21), Injunctious (pages 21 to 22), Continuing Jurisdiction (page 23), Watermaster (pages 23 to 29), Physical Solution (pages 29 to 34), and Miscellaneous Provisions (pages 34 to 35), and Attachments (pages 36 to 46). Each and all of said several parts constitute a single integrated Judgment herein.

1           4.2.3 Separate Ground Water Basins. The physical and geologic characteristics of each  
 2 of the ground water basins, Eagle rock, Sylmar, Verdugo and San Fernando, cause impediments  
 3 to inter-basin ground water flow whereby there is created separate underground reservoirs. Each  
 4 of said basins contains a common source of water supply to parties extracting ground water from  
 5 each of said basins. The amount of underflow from Sylmar Basin, Verdugo Basin and Eagle  
 6 Rock Basin to San Fernando Basin is relatively small, and on the average has been  
 7 approximately 540 acre feet per year from the Sylmar Basin; 80 acre feet per year from Verdugo  
 8 Basin; and 50 acre feet per year from Eagle Rock Basin. Each has physiographic, geologic and  
 9 hydrologic differences; one from the other, and each meets the hydrologic definition of "basin".  
 10 The extractions of water in the respective basins affect the other water users within that basin but  
 11 do not significantly or materially affect the ground water levels in any of the other basins. The  
 12 underground reservoirs of Eagle Rock, Verdugo and Sylmar Basins are independent of one  
 13 another and of the San Fernando Basin.

14           4.2.4 Safe Yield and Native Safe Yield. The safe yield and native safe yield, stated in  
 15 acre feet, of the three largest basins for the year 1964-65 was as follows:

<u>Basin</u>	<u>Safe Yield</u>	<u>Native Safe Yield</u>
San Fernando	90,680	43,660
Sylmar	6,210	3,850
Verdugo	7,150	3,590

16  
 17  
 18  
 19  
 20 The safe yield of Eagle Rock Basin is derived from imported water delivered by Los Angeles.  
 21 There is no measurable native safe yield.

22           4.2.5 Separate Basins -- Separate Rights. The rights of the parties to extract ground  
 23 water within ULARA are separate and distinct as within each of the several ground water basins  
 24 within said watershed.

25           4.2.6 Hydrologic Condition of Basins. The several basins within ULARA are in varying  
 26 hydrologic conditions, which result in different legal consequences.

27           4.2.6.1 San Fernando Basin. The first full year of overdraft in San Fernando  
 28 Basin was 1954-55. It remained in overdraft continuously until 1968, when an injunction

1 LAGERLOF, SENICAL, DRESCHER & SWIFT  
2 301 North Lake Avenue, 10th Floor  
3 Pasadena, California 91101  
4 (818) 793-9400 or (213) 385-4345  
5  
6  
7

8 SUPERIOR COURT OF THE STATE OF CALIFORNIA  
9 FOR THE COUNTY OF LOS ANGELES  
10

11 CENTRAL AND WEST BASIN WATER ) No. 786,656  
REPLENISHMENT DISTRICT, etc., ) SECOND AMENDED  
12 ) JUDGMENT  
Plaintiff, )  
13 v. ) (Declaring and establishing water rights in  
14 CHARLES E. ADAMS, et al., ) Central Basin and enjoining extractions  
15 ) therefrom in excess of specified quantities.)  
Defendants: )  
16 CITY OF LAKEWOOD, a municipal )  
17 corporation, )  
Cross-Complaint, )  
18 v. )  
19 )  
20 CHARLES E. ADAMS, et al., )  
Cross-Defendants, )  
21 )  
22 )

23 The above-entitled matter duly and regularly came on for trial in Department 73  
24 of the above-entitled Court (having been transferred thereto from Department 75 by order of the  
25 presiding Judge), before the Honorable Edmund M. Moor, specially assigned Judge, on May 17,  
26 1965, at 10:00 a.m. Plaintiff was represented by its attorneys BEWLEY, KNOOP,  
27



1 of the close of the water year ending September 30, 1978 in accordance with the Watermaster  
2 Reports on file with this Court and the records of the Plaintiff. This tabulation does not take into  
3 account additions or subtractions from any Allowed Pumping Allocation of a producer for the  
4 1978-79 water year, nor other adjustments not representing change in fee title to water rights,  
5 such as leases of water rights, nor does it include the names of lessees of landowners where the  
6 lessees are exercising the water rights. The exercise of all water rights is subject, however, to the  
7 provisions of this Judgment is hereinafter contained. All of said rights are of the same legal  
8 force and effect and are without priority with reference to each other. Each party whose name is  
9 hereinafter set forth in the tabulation set forth in Appendix "2" of this judgment, and after whose  
10 name there appears under the column "Total Water Right" the figure "0" owns no rights to  
11 extract any ground water from Central Basin, and has no right to extract any ground water from  
12 Central Basin.

13 (b) Defendant The City of Los Angeles is the owner of the right to extract fifteen  
14 thousand (15,000) acre feet per annum of ground water from Central Basin. Defendant  
15 Department of Water and Power of the City of Los Angeles has no right to extract ground water  
16 from Central Basin except insofar as it has the right, power, duty or obligation on behalf of  
17 defendant The City of Los Angeles to exercise the water rights in Central Basin of defendant The  
18 City of Los Angeles. The exercise of said rights are subject, however, to the provisions of this  
19 judgment hereafter contained, including but not limited to, sharing with other parties in any  
20 subsequent decreases or increases in the quantity of extractions permitted from Central Basin,  
21 pursuant to continuing jurisdiction of the Court, on the basis that fifteen thousand (15,000) acre  
22 feet bears to the Allowed Pumping Allocations of the other parties.

23 (c) No party to this action is the owner of or has any right to extract ground water  
24 from Central Basin except as herein affirmatively determined.

25 2. Parties Enjoined as Regards Quantities of Extractions.  
26  
27



## Appendix E

Water Supply Assessment Provisions  
California Water Code Section 10910-10915

**State of California**

**WATER CODE**

**Section 10910**

---

10910. (a) Any city or county that determines that a project, as defined in Section 10912, is subject to the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) under Section 21080 of the Public Resources Code shall comply with this part.

(b) The city or county, at the time that it determines whether an environmental impact report, a negative declaration, or a mitigated negative declaration is required for any project subject to the California Environmental Quality Act pursuant to Section 21080.1 of the Public Resources Code, shall identify any water system whose service area includes the project site and any water system adjacent to the project site that is, or may become as a result of supplying water to the project identified pursuant to this subdivision, a public water system, as defined in Section 10912, that may supply water for the project. If the city or county is not able to identify any public water system that may supply water for the project, the city or county shall prepare the water assessment required by this part after consulting with any entity serving domestic water supplies whose service area includes the project site, the local agency formation commission, and any public water system adjacent to the project site.

(c) (1) The city or county, at the time it makes the determination required under Section 21080.1 of the Public Resources Code, shall request each public water system identified pursuant to subdivision (b) to determine whether the projected water demand associated with a proposed project was included as part of the most recently adopted urban water management plan adopted pursuant to Part 2.6 (commencing with Section 10610).

(2) If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f), and (g).

(3) If the projected water demand associated with the proposed project was not accounted for in the most recently adopted urban water management plan, or the public water system has no urban water management plan, the water supply assessment for the project shall include a discussion with regard to whether the public water system's total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the public water system's existing and planned future uses, including agricultural and manufacturing uses.

(4) If the city or county is required to comply with this part pursuant to subdivision (b), the water supply assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry, and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses.

(d) (1) The assessment required by this section shall include an identification of any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, and a description of the quantities of water received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts.

(2) An identification of existing water supply entitlements, water rights, or water service contracts held by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall be demonstrated by providing information related to all of the following:

(A) Written contracts or other proof of entitlement to an identified water supply.

(B) Copies of a capital outlay program for financing the delivery of a water supply that has been adopted by the public water system.

(C) Federal, state, and local permits for construction of necessary infrastructure associated with delivering the water supply.

(D) Any necessary regulatory approvals that are required in order to be able to convey or deliver the water supply.

(e) If no water has been received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts, the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall also include in its water supply assessment pursuant to subdivision (c), an identification of the other public water systems or water service contractholders that receive a water supply or have existing water supply entitlements, water rights, or water service contracts, to the same source of water as the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has identified as a source of water supply within its water supply assessments.

(f) If a water supply for a proposed project includes groundwater, the following additional information shall be included in the water supply assessment:

(1) A review of any information contained in the urban water management plan relevant to the identified water supply for the proposed project.

(2) (A) A description of any groundwater basin or basins from which the proposed project will be supplied.

(B) For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the public water system, or the city

or county if either is required to comply with this part pursuant to subdivision (b), has the legal right to pump under the order or decree.

(C) For a basin that has not been adjudicated that is a basin designated as high- or medium-priority pursuant to Section 10722.4, information regarding the following:

(i) Whether the department has identified the basin as being subject to critical conditions of overdraft pursuant to Section 12924.

(ii) If a groundwater sustainability agency has adopted a groundwater sustainability plan or has an approved alternative, a copy of that alternative or plan.

(D) For a basin that has not been adjudicated that is a basin designated as low- or very low priority pursuant to Section 10722.4, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current bulletin of the department that characterizes the condition of the groundwater basin, and a detailed description by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), of the efforts being undertaken in the basin or basins to eliminate the long-term overdraft condition.

(3) A detailed description and analysis of the amount and location of groundwater pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), for the past five years from any groundwater basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(4) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), from any basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(5) An analysis of the sufficiency of the groundwater from the basin or basins from which the proposed project will be supplied to meet the projected water demand associated with the proposed project. A water supply assessment shall not be required to include the information required by this paragraph if the public water system determines, as part of the review required by paragraph (1), that the sufficiency of groundwater necessary to meet the initial and projected water demand associated with the project was addressed in the description and analysis required by paragraph (4) of subdivision (b) of Section 10631.

(g) (1) Subject to paragraph (2), the governing body of each public water system shall submit the assessment to the city or county not later than 90 days from the date on which the request was received. The governing body of each public water system, or the city or county if either is required to comply with this act pursuant to subdivision (b), shall approve the assessment prepared pursuant to this section at a regular or special meeting.

(2) Prior to the expiration of the 90-day period, if the public water system intends to request an extension of time to prepare and adopt the assessment, the public water

system shall meet with the city or county to request an extension of time, which shall not exceed 30 days, to prepare and adopt the assessment.

(3) If the public water system fails to request an extension of time, or fails to submit the assessment notwithstanding the extension of time granted pursuant to paragraph (2), the city or county may seek a writ of mandamus to compel the governing body of the public water system to comply with the requirements of this part relating to the submission of the water supply assessment.

(h) Notwithstanding any other provision of this part, if a project has been the subject of a water supply assessment that complies with the requirements of this part, no additional water supply assessment shall be required for subsequent projects that were part of a larger project for which a water supply assessment was completed and that has complied with the requirements of this part and for which the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has concluded that its water supplies are sufficient to meet the projected water demand associated with the proposed project, in addition to the existing and planned future uses, including, but not limited to, agricultural and industrial uses, unless one or more of the following changes occurs:

(1) Changes in the project that result in a substantial increase in water demand for the project.

(2) Changes in the circumstances or conditions substantially affecting the ability of the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), to provide a sufficient supply of water for the project.

(3) Significant new information becomes available that was not known and could not have been known at the time when the assessment was prepared.

(i) For the purposes of this section, hauled water is not considered as a source of water.

(Amended by Stats. 2016, Ch. 594, Sec. 2. (SB 1262) Effective January 1, 2017.)

**State of California**

**WATER CODE**

**Section 10911**

---

10911. (a) If, as a result of its assessment, the public water system concludes that its water supplies are, or will be, insufficient, the public water system shall provide to the city or county its plans for acquiring additional water supplies, setting forth the measures that are being undertaken to acquire and develop those water supplies. If the city or county, if either is required to comply with this part pursuant to subdivision (b), concludes as a result of its assessment, that water supplies are, or will be, insufficient, the city or county shall include in its water supply assessment its plans for acquiring additional water supplies, setting forth the measures that are being undertaken to acquire and develop those water supplies. Those plans may include, but are not limited to, information concerning all of the following:

(1) The estimated total costs, and the proposed method of financing the costs, associated with acquiring the additional water supplies.

(2) All federal, state, and local permits, approvals, or entitlements that are anticipated to be required in order to acquire and develop the additional water supplies.

(3) Based on the considerations set forth in paragraphs (1) and (2), the estimated timeframes within which the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), expects to be able to acquire additional water supplies.

(b) The city or county shall include the water supply assessment provided pursuant to Section 10910, and any information provided pursuant to subdivision (a), in any environmental document prepared for the project pursuant to Division 13 (commencing with Section 21000) of the Public Resources Code.

(c) The city or county may include in any environmental document an evaluation of any information included in that environmental document provided pursuant to subdivision (b). The city or county shall determine, based on the entire record, whether projected water supplies will be sufficient to satisfy the demands of the project, in addition to existing and planned future uses. If the city or county determines that water supplies will not be sufficient, the city or county shall include that determination in its findings for the project.

(Amended by Stats. 2001, Ch. 643, Sec. 5. Effective January 1, 2002.)



**State of California**

**WATER CODE**

**Section 10912**

---

10912. For the purposes of this part, the following terms have the following meanings:

- (a) "Project" means any of the following:
- (1) A proposed residential development of more than 500 dwelling units.
  - (2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.
  - (3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
  - (4) A proposed hotel or motel, or both, having more than 500 rooms.
  - (5) A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.
  - (6) A mixed-use project that includes one or more of the projects specified in this subdivision.
  - (7) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.
- (b) If a public water system has fewer than 5,000 service connections, then "project" means any proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of the public water system's existing service connections, or a mixed-use project that would demand an amount of water equivalent to, or greater than, the amount of water required by residential development that would represent an increase of 10 percent or more in the number of the public water system's existing service connections.
- (c) "Public water system" means a system for the provision of piped water to the public for human consumption that has 3,000 or more service connections. A public water system includes all of the following:
- (1) Any collection, treatment, storage, and distribution facility under control of the operator of the system that is used primarily in connection with the system.
  - (2) Any collection or pretreatment storage facility not under the control of the operator that is used primarily in connection with the system.
  - (3) Any person who treats water on behalf of one or more public water systems for the purpose of rendering it safe for human consumption.
- (d) This section shall become operative on January 1, 2018.

(Amended (as added by Stats. 2011, Ch. 588, Sec. 2) by Stats. 2016, Ch. 669, Sec. 2. (AB 2561) Effective September 26, 2016. Section operative January 1, 2018, by its own provisions.)

**State of California**

**WATER CODE**

**Section 10914**

---

10914. (a) Nothing in this part is intended to create a right or entitlement to water service or any specific level of water service.

(b) Nothing in this part is intended to either impose, expand, or limit any duty concerning the obligation of a public water system to provide certain service to its existing customers or to any future potential customers.

(c) Nothing in this part is intended to modify or otherwise change existing law with respect to projects which are not subject to this part.

(d) This part applies only to a project for which a notice of preparation is submitted on or after January 1, 1996.

(Added by Stats. 1995, Ch. 881, Sec. 4. Effective January 1, 1996.)

**State of California**

**WATER CODE**

**Section 10915**

---

10915. The County of San Diego is deemed to comply with this part if the Office of Planning and Research determines that all of the following conditions have been met:

(a) Proposition C, as approved by the voters of the County of San Diego in November 1988, requires the development of a regional growth management plan and directs the establishment of a regional planning and growth management review board.

(b) The County of San Diego and the cities in the county, by agreement, designate the San Diego Association of Governments as that review board.

(c) A regional growth management strategy that provides for a comprehensive regional strategy and a coordinated economic development and growth management program has been developed pursuant to Proposition C.

(d) The regional growth management strategy includes a water element to coordinate planning for water that is consistent with the requirements of this part.

(e) The San Diego County Water Authority, by agreement with the San Diego Association of Governments in its capacity as the review board, uses the association's most recent regional growth forecasts for planning purposes and to implement the water element of the strategy.

(f) The procedures established by the review board for the development and approval of the regional growth management strategy, including the water element and any certification process established to ensure that a project is consistent with that element, comply with the requirements of this part.

(g) The environmental documents for a project located in the County of San Diego include information that accomplishes the same purposes as a water supply assessment that is prepared pursuant to Section 10910.

(Amended by Stats. 2001, Ch. 643, Sec. 8. Effective January 1, 2002.)

## Appendix F

Metropolitan Water District of Southern California

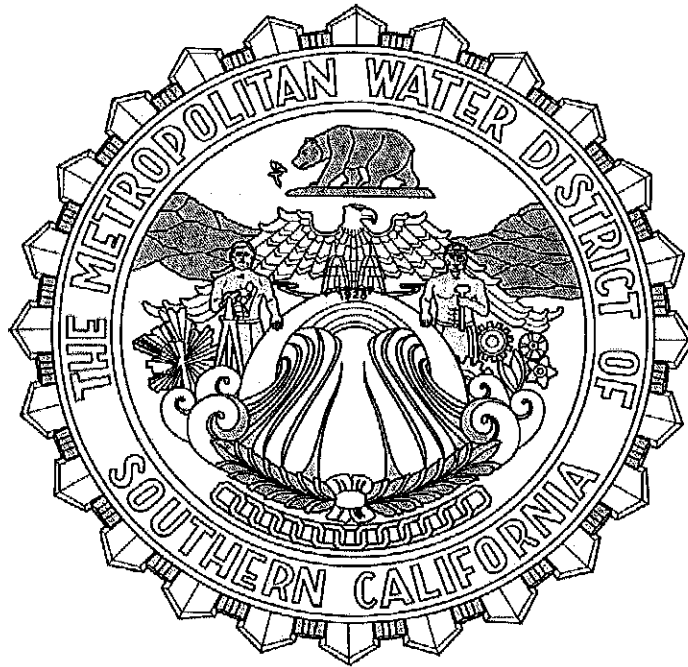
(APPENDIX A)

# APPENDIX A

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## The Metropolitan Water District of Southern California

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## TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION .....	A-1
Formation and Purpose .....	A-1
Member Agencies .....	A-1
Service Area.....	A-2
COVID-19 Pandemic.....	A-3
GOVERNANCE AND MANAGEMENT.....	A-5
Board of Directors.....	A-5
Management.....	A-6
Employee Relations .....	A-8
Risk Management .....	A-8
Cybersecurity .....	A-8
METROPOLITAN’S WATER SUPPLY .....	A-8
General.....	A-8
Current Water Conditions .....	A-9
Integrated Water Resources Plan .....	A-10
State Water Project .....	A-12
Colorado River Aqueduct .....	A-21
Endangered Species Act and Other Environmental Considerations .....	A-27
Water Transfer, Storage and Exchange Programs .....	A-30
Storage Capacity and Water in Storage .....	A-36
CONSERVATION AND WATER SHORTAGE MEASURES .....	A-38
General.....	A-38
Water Surplus and Drought Management Plan.....	A-39
Water Supply Allocation Plan .....	A-39
Increased Drought Resiliency .....	A-39
REGIONAL WATER RESOURCES .....	A-40
Los Angeles Aqueduct.....	A-41
Local Water Supplies.....	A-42
METROPOLITAN’S WATER DELIVERY SYSTEM.....	A-45
Primary Facilities and Method of Delivery.....	A-45
Water Quality and Treatment.....	A-46
Seismic Considerations and Emergency Response Measures .....	A-49
Security Measures.....	A-51
CAPITAL INVESTMENT PLAN.....	A-52
General Description .....	A-52
Projection of Capital Investment Plan Expenditures .....	A-52
Capital Investment Plan Financing .....	A-53
Major Projects of Metropolitan’s Capital Investment Plan.....	A-53
METROPOLITAN REVENUES.....	A-55
General.....	A-55

**TABLE OF CONTENTS**  
**(Continued)**

	<u>Page</u>
Summary of Revenues by Source .....	A-56
Revenue Allocation Policy and Tax Revenues .....	A-56
Water Revenues .....	A-57
Principal Customers .....	A-58
Rate Structure .....	A-58
Member Agency Purchase Orders .....	A-60
Other Charges .....	A-61
Classes of Water Service .....	A-62
Water Rates .....	A-63
Financial Reserve Policy.....	A-64
California Ballot Initiatives.....	A-65
Preferential Rights .....	A-66
Litigation Challenging Rate Structure .....	A-66
Other Revenue Sources.....	A-72
Investment of Moneys in Funds and Accounts.....	A-72
<b>METROPOLITAN EXPENSES.....</b>	<b>A-74</b>
General.....	A-74
Revenue Bond Indebtedness and Other Obligations.....	A-74
Limitations on Additional Revenue Bonds.....	A-75
Variable Rate Exposure Policy .....	A-76
Outstanding Senior Revenue Bonds and Senior Parity Obligations .....	A-77
Outstanding Subordinate Revenue Bonds and Subordinate Parity Obligations .....	A-83
Other Junior Obligations.....	A-86
General Obligation Bonds.....	A-86
State Water Contract Obligations .....	A-87
Power Sources and Costs; Related Long-Term Commitments.....	A-90
Defined Benefit Pension Plan and Other Post-Employment Benefits .....	A-92
<b>HISTORICAL AND PROJECTED REVENUES AND EXPENSES.....</b>	<b>A-97</b>
<b>MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND</b>	
<b>EXPENSES.....</b>	<b>A-101</b>
Water Transactions Projections .....	A-101
Water Revenues .....	A-102
Projected Fiscal Year 2020-21 Results .....	A-102

## INTRODUCTION

*This Appendix A provides general information regarding The Metropolitan Water District of Southern California ("Metropolitan"), including information regarding Metropolitan's operations and finances. Certain statements included or incorporated by reference in this Appendix A constitute "forward-looking statements." Such statements are generally identifiable by the terminology used such as "plan," "project," "expect," "estimate," "budget" or other similar words. Such statements are based on facts and assumptions set forth in Metropolitan's current planning documents including, without limitation, its most recent biennial budget. The achievement of results or other expectations contained in such forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Actual results may differ from Metropolitan's forecasts. Metropolitan is not obligated to issue any updates or revisions to the forward-looking statements in any event.*

*Metropolitan maintains a website that may include information on programs or projects described in this Appendix A; however, none of the information on Metropolitan's website is incorporated by reference or intended to assist investors in making an investment decision or to provide any additional information with respect to the information included in this Appendix A. The information presented on Metropolitan's website is not part of the Official Statement and should not be relied upon in making investment decisions.*

### **Formation and Purpose**

Metropolitan is a metropolitan water district created in 1928 under authority of the Metropolitan Water District Act (California Statutes 1927, Chapter 429, as reenacted in 1969 as Chapter 209, as amended (herein referred to as the "Act")). The Act authorizes Metropolitan to: levy property taxes within its service area; establish water rates; impose charges for water standby and service availability; incur general obligation bonded indebtedness and issue revenue bonds, notes and short-term revenue certificates; execute contracts; and exercise the power of eminent domain for the purpose of acquiring property. In addition, Metropolitan's Board of Directors (the "Board") is authorized to establish terms and conditions under which additional areas may be annexed to Metropolitan's service area.

Metropolitan's primary purpose is to provide a supplemental supply of water for domestic and municipal uses at wholesale rates to its member public agencies. If additional water is available, such water may be sold for other beneficial uses. Metropolitan serves its member agencies as a water wholesaler and has no retail customers.

The mission of Metropolitan, as promulgated by the Board, is to provide its service area with adequate and reliable supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way.

Metropolitan's charges for water transactions and availability are fixed by its Board and are not subject to regulation or approval by the California Public Utilities Commission or any other state or federal agency. Metropolitan imports water from two principal sources: northern California via the Edmund G. Brown California Aqueduct (the "California Aqueduct") of the State Water Project owned by the State of California (the "State" or "California") and the Colorado River via the Colorado River Aqueduct ("CRA") owned by Metropolitan.

### **Member Agencies**

Metropolitan is comprised of 26-member public agencies, including 14 cities, 11 municipal water districts, and one county water authority, which collectively serve the residents and businesses of more than 300 cities and numerous unincorporated communities. Member agencies request water from Metropolitan at

various delivery points within Metropolitan's system and pay for such water at uniform rates established by the Board for each class of water service. Metropolitan's water is a supplemental supply for its member agencies, most of whom have other sources of water. See "METROPOLITAN REVENUES-Principal Customers" in this Appendix A for a listing of the ten-member agencies representing the highest level of water transactions and revenues of Metropolitan during the fiscal year ended June 30, 2020. Metropolitan's member agencies may, from time to time, develop additional sources of water. See also "REGIONAL WATER RESOURCES." No member is required to purchase water from Metropolitan, but all member agencies are required to pay readiness-to-serve charges whether or not they purchase water from Metropolitan. See "METROPOLITAN REVENUES-Rate Structure," "-Member Agency Purchase Orders" and "-Other Charges" in this Appendix A.

The following table lists the 26-member agencies of Metropolitan.

Municipal Water Districts		Cities		County Water Authority
Calleguas	Las Virgenes	Anaheim	Los Angeles	San Diego <sup>(1)</sup>
Central Basin	Orange County	Beverly Hills	Pasadena	
Eastern	Three Valleys	Burbank	San Fernando	
Foothill	West Basin	Compton	San Marino	
Inland Empire Utilities Agency		Fullerton	Santa Ana	
Upper San Gabriel Valley		Glendale	Santa Monica	
Western of Riverside County		Long Beach	Torrance	

<sup>(1)</sup> The San Diego County Water Authority, currently Metropolitan's largest customer based on water transactions, is a plaintiff in litigation challenging the allocation of costs to certain rates adopted by the Board and asserting other claims. See "METROPOLITAN REVENUES-Litigation Challenging Rate Structure" in this Appendix A.

### Service Area

Metropolitan's service area comprises approximately 5,200 square miles and includes all or portions of the six counties of Los Angeles, Orange, Riverside, San Bernardino, San Diego and Ventura. When Metropolitan began delivering water in 1941, its service area consisted of approximately 625 square miles. Its service area has increased by 4,575 square miles since that time. The expansion was primarily the result of annexation of the service areas of additional member agencies.

Metropolitan estimates that approximately 19 million people lived in Metropolitan's service area in 2019, based on official estimates from the California Department of Finance and on population distribution estimates from the Southern California Association of Governments ("SCAG") and the San Diego Association of Governments ("SANDAG"). Population projections prepared by SCAG in 2012 and SANDAG in 2013, as part of their planning process to update regional transportation and land use plans, and used as base data for Metropolitan's 2015 Integrated Water Resources Plan update and subsequent water transactions forecasts, show expected population growth of about 18 percent in Metropolitan's service area between 2010 and 2035, with the estimated population in the service area in 2020 then projected at approximately 19.35 million. The economy of Metropolitan's service area is exceptionally diverse. In 2019, the economy of the six counties which contain Metropolitan's service area had a gross domestic product larger than all but twelve nations of the world. Metropolitan has historically provided between 40 and 60 percent of the water used annually within its service area. For additional economic and demographic information concerning the six-county area containing Metropolitan's service area, see Appendix E-"SELECTED DEMOGRAPHIC AND ECONOMIC INFORMATION FOR METROPOLITAN'S SERVICE AREA."

The climate in Metropolitan's service area ranges from moderate temperatures throughout the year in the coastal areas to hot and dry summers in the inland areas. Since 2000, annual rainfall has ranged from

approximately 4 to 27 inches along the coastal area, 6 to 38 inches in foothill areas, and 5 to 20 inches in inland areas.

### **COVID-19 Pandemic**

The spread of the novel strain of coronavirus and the disease it causes (now known as "COVID-19") is having significant adverse health and financial impacts throughout the world, including in Southern California. The World Health Organization declared the COVID-19 outbreak to be a pandemic, and states of emergency have been declared in the United States (the "U.S."), the State of California, and numerous counties throughout the State, including in the six counties all or portions of which comprise the service area of Metropolitan. On March 17, 2020, Metropolitan's General Manager declared a state of emergency at Metropolitan. The purposes behind these declarations were to initiate emergency response protocols, coordinate and formalize emergency actions across federal, state and local governmental agencies, and to proactively prepare for and react to the anticipated wider spread of the virus.

In response to the COVID-19 outbreak, State and local governments implemented "stay-at-home" (or "safer-at-home") orders for citizens to remain at home except for certain essential purposes, imposing restrictions on mass gatherings and resulting in the widespread temporary closure of businesses, universities and schools (including within the jurisdiction of Metropolitan and its member agencies). As a result, economic activity slowed considerably throughout the U.S. and the region. Employment data released since the imposition of the restrictions have shown a dramatic increase in unemployment rates. In addition, stock markets in the U.S. and globally experienced sharp declines in market value following the onset of the outbreak that were attributed to COVID-19 concerns, and although rebounds in the markets have since occurred, increased volatility in the financial markets continues.

The Governor of the State of California has taken a variety of actions and issued a number of executive orders addressing issues relating to the pandemic response. On May 4, 2020, the Governor issued an executive order informing local health jurisdictions and industry sectors that they could gradually re-open under modifications and guidance provided by the State. On August 28, 2020, the Governor announced a new, four-tiered color-coded statewide system (or "blueprint") with revised criteria for loosening and tightening restrictions on activities based upon the prevalence of COVID-19 in each county and the extent of community spread. A phased re-opening of various sectors has been underway in accordance with the Governor's four-tiered plan. Pursuant to the re-opening plan, some of the restrictions on activities have been eased; however, restrictions have been re-imposed in various jurisdictions (including in the six counties all or portions of which comprise the service area of Metropolitan) as local conditions warrant. Such restrictions may be modified, lifted, or reinstated, from time to time, as the COVID-19 pandemic continues. It is widely expected that global, national, and local economies will continue to be negatively affected by the pandemic, at least for some period of time.

Metropolitan has taken, and is taking, a number of steps to protect the health of its employees, maintain continuity of its critical and essential business functions and avoid widespread impacts to its workforce from the COVID-19 outbreak. Metropolitan's Pandemic Action Plan is in effect. The following actions have been undertaken and are underway. A COVID-19 Task Force is meeting regularly to review and update plans, prepare and implement action plans and coordinate Metropolitan's overall response activities. Metropolitan's Emergency Operations Center Duty Officer is monitoring the status of COVID-19 and its effects in Metropolitan's service area, and updating the Business Transition Team and COVID-19 Task Force regularly. The Duty Officer and Emergency Management staff are maintaining regular communications with State and county emergency operations centers and public health agencies to monitor the status of COVID-19. Metropolitan's water system is in a federally designated critical infrastructure sector with exemptions under Governor Newsom's Statewide "stay-at-home" order as needed to maintain continuity of operations. Personnel necessary to the operation and delivery of water supplies remain on-site, with staffing strategies being utilized to promote "social distancing." Enhanced facility cleaning and disinfection practices have also been put in place to promote a safe and healthful workplace for these

employees. Telecommuting arrangements or paid administrative leave is being implemented for employees performing other functions, and non-essential business travel has been limited.

COVID-19 is not believed to present a threat to the safety of Metropolitan's treated water supplies. Metropolitan has also taken steps to ensure it has the necessary backup equipment, supplies and treatment chemicals in the event of disruptions to the supply chain for these items. To date, Metropolitan's ability to treat and deliver water has not been impaired.

Metropolitan continues to assess the effects the ongoing COVID-19 pandemic has had, and will have, on Metropolitan and its business and operations, as well as in the region, including the adverse financial impacts likely to be experienced by its member agencies. Metropolitan has experienced an increase in certain costs, primarily expenses for personal protective equipment, enhancing cleaning, technology costs to accommodate teleworking and other related expenditures. However, such increased expenses have been modest and are generally offset by reductions in travel and other office expenses. The COVID-19 pandemic has caused disruptions in certain supply chains and some construction activities. While Metropolitan initially paused certain construction work on non-essential capital projects at the onset of the COVID-19 outbreak, such activity has resumed and Metropolitan continues to advance a variety of infrastructure and system reliability projects. See also "CAPITAL INVESTMENT PLAN." More broadly, press reports and analyses have suggested that water service providers serving residential, commercial and industrial end-use customers (referred to herein as "retail water service providers"), which includes some Metropolitan member agencies and agencies that purchase water from them, anticipate their customers are likely to be adversely impacted financially. As a measure to help mitigate such financial impacts and assure access to water service, on April 2, 2020, Governor Newsom issued an executive order which, among other things, orders the restoration of water service to residential customers in occupied residences whose service was discontinued for nonpayment during the state of emergency, and suspends the authority of retail water service providers to discontinue water service to residential and qualifying small business customers for non-payment. Voluntary measures may also be taken by retail water service providers in the State to assist their customers facing financial hardship as a result of the COVID-19 outbreak. The financial impacts to retail water customers and measures taken to assist them may result in more non-payment of utility bills than normal and forecasted, which is likely to further create financial stress on retail water service providers, including some Metropolitan member agencies.

In recognition of the changed circumstances and the uncertainties created by the ongoing COVID-19 outbreak, in the weeks following the declaration of a pandemic by the World Health Organization on March 11, 2020, Metropolitan reviewed its preliminary biennial budget initially presented to the Board in February 2020, and modified certain assumptions previously made in the proposed budget. The biennial budget for fiscal years 2020-21 and 2021-22, and water rates and charges for calendar years 2021 and 2022 adopted by the Board on April 14, 2020, reflected these adjustments, which included (i) a reduction in the overall rate increases for calendar years 2021 and 2022 from those previously proposed; (ii) a reduction in capital expenditures for fiscal year 2020-21 in recognition of likely delays in scheduling of construction work as a result of COVID-19; (iii) a reduction in the internal funding objective for the funding of capital program expenditures from current revenues for fiscal year 2020-21; and (iv) to review the adopted budget and rates no later than September 2020 to consider further impacts resulting from the COVID-19 crisis. See "METROPOLITAN'S REVENUES—Water Rates" and "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES."

As contemplated by the Board's April 14, 2020 action, Metropolitan reviewed the impacts of the COVID-19 pandemic on Metropolitan's biennial budget for fiscal years 2020-21 and 2021-22, and water rates and charges for calendar years 2021 and 2022 at its September 15, 2020 Board meeting. The Board determined to maintain the previously adopted rates and charges for calendar years 2021 and 2022 and approved certain cost containment measures, estimated to reduce Metropolitan expenditures by approximately \$10.7 million in fiscal year 2020-21, and by approximately \$1.0 million in fiscal year



2021-22. The Board also directed staff to develop a payment deferral program for member agencies that record and report significant customer payment delinquencies and likewise grant deferrals to their customers; evaluate potential new revenue-generating programs; and place a moratorium on non-emergency unbudgeted spending.

At its December 8, 2020 meeting, Metropolitan's Board adopted the COVID-19 Member Agency Payment Deferment Program. Under the approved program, Metropolitan will provide up to a six-month deferral of a portion of a requesting member agency's payment obligations due to Metropolitan for water transactions equal to the percentage of the member agency's own customers' delinquency rates, but not to exceed 10 percent of each monthly obligation. Additionally, under the program, late payments, penalties, and interest will be waived to the deferred amount over a period of up to 12 months. The program is available to all member agencies that meet Board-approved eligibility criteria and will apply to invoices for water transactions occurring only from January 1, 2021 to June 30, 2021. All amounts deferred under the program will be due and payable no later than December 29, 2021. To the extent that member agencies participate in the program, the COVID-19 Member Agency Payment Deferment Program is expected to result in a shift of some revenue collections from fiscal year 2020-21 to fiscal year 2021-22.

The COVID-19 outbreak is ongoing and developments will continue. The degree of impact to Metropolitan's finances and operations is difficult to predict due to the evolving nature of the COVID-19 pandemic, including uncertainties relating thereto. The extent of the fiscal impacts on Metropolitan will depend on, among other things, (i) the duration of the outbreak and the imposed restrictions on activities; (ii) the extent of the disruption to or decline in the local and global economies and financial markets; (iii) the degree to which business closures, increased unemployment, housing foreclosures and/or other economic consequences may reduce water demands in the region and Metropolitan's water transactions, or negatively affect future property values in Metropolitan's service area and/or Metropolitan's property tax levy receipts, and reduce Metropolitan's revenues; (iv) the extent to which a protracted disruption in the manufacturing or construction industry may affect supply chains or delay construction schedules for, or the implementation of, Metropolitan's capital improvement programs and projects, or the costs of such programs or projects or Metropolitan's water system operations; and (v) the ramifications of future actions that may be taken or required by governmental authorities to contain and respond to the outbreak. If the COVID-19 pandemic and/or the economic recovery is prolonged, the likelihood or magnitude of potential adverse impacts to Metropolitan's finances or operations from the factors discussed herein or from other factors, could be increased. As a result, Metropolitan's finances and operations may be adversely impacted by COVID-19. To date, Metropolitan does not believe the impacts of the COVID-19 pandemic will have a material adverse impact on its ability to pay debt service on its bonds or other debt obligations.

## **GOVERNANCE AND MANAGEMENT**

### **Board of Directors**

Metropolitan is governed by a 38-member Board of Directors, made up of representatives from all of Metropolitan's member agencies. Each member public agency is entitled to have at least one representative on the Board, plus an additional representative for each full five percent of the total assessed valuation of property in Metropolitan's service area that is within the member public agency. Changes in relative assessed valuation do not terminate any director's term. In 2019, California Assembly Bill 1220 (Garcia) amended the Act to provide that "A member public agency shall not have fewer than the number of representatives the member public agency had as of January 1, 2019." Accordingly, the Board may, from time to time, have more than 38 directors.

The Board includes business, professional and civic leaders. Directors are appointed by member agencies in accordance with those agencies' processes and the Act. They serve on the Board without compensation from Metropolitan. Voting is based on assessed valuation, with each member agency being entitled to cast one vote for each \$10 million or major fractional part of \$10 million of assessed valuation of

property within the member agency, as shown by the assessment records of the county in which the member agency is located. The Board administers its policies through the Metropolitan Water District Administrative Code (the "Administrative Code"), which was adopted by the Board in 1977. The Administrative Code is periodically amended to reflect new policies or changes to existing policies that occur from time to time.

## **Management**

Metropolitan's day-to-day management is under the direction of its General Manager, who serves at the pleasure of the Board, as do Metropolitan's General Counsel, General Auditor and Ethics Officer. Following is a biographical summary of Metropolitan's principal executive officers.

*Jeffrey Kightlinger, General Manager* – Mr. Kightlinger was appointed as General Manager in February 2006, leaving the position of General Counsel, which he had held since February 2002. Before becoming General Counsel, Mr. Kightlinger was a Deputy General Counsel and then Assistant General Counsel, representing Metropolitan primarily on Colorado River matters, environmental issues, water rights and a number of Metropolitan's water transfer and storage programs. Prior to joining Metropolitan in 1995, Mr. Kightlinger worked in private practice representing numerous public agencies including municipalities, redevelopment agencies and special districts. Mr. Kightlinger earned his bachelor's degree in history from the University of California, Berkeley, and his law degree from Santa Clara University. At the March 2020 Board meeting, Mr. Kightlinger announced his plans to step down as General Manager. Metropolitan's Board will conduct a recruitment process for a successor General Manager with the intention of making a selection (subject to such delays in schedule as may result from prolonged limitations due to COVID-19 response actions) prior to Mr. Kightlinger's departure. It is anticipated that Mr. Kightlinger will continue in his position while Metropolitan's recruitment process is ongoing until a successor is named.

*Marcia Scully, General Counsel* – Ms. Scully assumed the position of General Counsel in March 2012. She previously served as Metropolitan's Interim General Counsel from March 2011 to March 2012. Ms. Scully joined Metropolitan in 1995, after a decade of private law practice, providing legal representation to Metropolitan on construction, employment, Colorado River and significant litigation matters. From 1981 to 1985 she was assistant city attorney for the City of Inglewood. Ms. Scully served as president of University of Michigan's Alumnae Club of Los Angeles and is a recipient of the 1996 State Bar of California, District 7 President's Pro Bono Service Award and the Southern California Association of Non-Profit Housing Advocate of the Year Award. She is also a member of the League of Women Voters for Whittier and was appointed for two terms on the City of Whittier's Planning Commission, three years of which were served as chair. Ms. Scully earned a bachelor's degree in liberal arts from the University of Michigan, a master's degree in urban planning from Wayne State University and her law degree from Loyola Law School.

*Gerald C. Riss, General Auditor* – Mr. Riss was appointed as Metropolitan's General Auditor in July 2002. As General Auditor, he is responsible for the independent evaluation of the policies, procedures and systems of control throughout Metropolitan. Mr. Riss is a certified fraud examiner, certified financial services auditor and certified risk professional with more than 25 years of experience in accounting, audit and risk management. Prior to joining Metropolitan, Mr. Riss was Vice President and Assistant Division Head of Risk Management Administration at United California Bank/Bank of the West. He also served as Senior Vice President, Director of Risk Management and General Auditor of Tokai Bank of California from 1988 until its reorganization as United California Bank in 2001. He earned a bachelor's degree in accounting and a master's degree in business administration from Wayne State University.

*Abel Salinas, Ethics Officer* – Mr. Salinas was appointed as Metropolitan's Ethics Officer in July 2019. He is responsible for making recommendations regarding rules and policies related to lobbying, conflicts of interest, contracts, campaign contributions and internal disclosures, while providing education and advice about these rules. Prior to joining Metropolitan, Mr. Salinas worked as the Special Agent in Charge in the U.S. Department of Labor's Office of Inspector General. Before joining that agency, he served

for three years in the U.S. Office of Personnel Management. Mr. Salinas holds a bachelor's degree in criminal justice from University of Texas -- Pan American and a master's degree in policy management from Georgetown University.

*Katano Kasaine, Assistant General Manager/Chief Financial Officer* – Ms. Kasaine has been serving as the Assistant General Manager/Chief Financial Officer since August 2019. She is responsible for directing Metropolitan's financial activities, including accounting and financial reporting, debt issuance and management, financial planning and strategy, managing Metropolitan's investment portfolio, budget administration, financial analysis, financial systems, and developing rates and charges. In addition, she is responsible for risk management and business continuity activities. Prior to joining Metropolitan, Ms. Kasaine worked for the City of Oakland for nearly 25 years in various roles, including Finance Director/Treasurer. She holds a bachelor's degree in business administration from Dominican University in San Rafael, California and a master's degree in public health from Loma Linda University.

*Deven Upadhyay, Assistant General Manager/Chief Operating Officer* – Mr. Upadhyay was appointed to his current position in November 2017. In this capacity, he oversees the management of Metropolitan's Water System Operations, Engineering Services and Water Resource Management. In addition, following the retirement of Metropolitan's Assistant General Manager/Strategic Water Initiatives at the end of 2020, Mr. Upadhyay has assumed oversight responsibility for Metropolitan's Bay-Delta initiatives. Mr. Upadhyay has over 25 years of experience in the water industry. He joined Metropolitan in 1995, beginning as a Resource Specialist and then left Metropolitan in 2005 to work at the Municipal Water District of Orange County. In 2008, he returned to Metropolitan as a Budget and Financial Planning Section Manager and became a Water Resource Management Group Manager in 2010. Mr. Upadhyay has a Bachelor of Arts degree in economics from the California State University, Fullerton and a master's degree in public administration from the University of La Verne.

*Shane Chapman, Assistant General Manager/Chief Administrative Officer* – Mr. Chapman was appointed to his current position in January 2018 and is responsible for the strategic direction and management of Metropolitan's administrative functions. His primary responsibilities include managing human resources, information technology, real property, environmental planning, and administrative services. Mr. Chapman joined Metropolitan as a Resource Specialist in 1991, progressing to the level of Program Manager in 2001. He became the Revenue, Rates and Budget Manager in 2003 and Assistant Group Manager in Water System Operations in 2006. Mr. Chapman served as General Manager of the Upper San Gabriel Valley Municipal Water District for seven years. Mr. Chapman has a Bachelor of Arts degree in economics from Claremont McKenna College and a master's degree in public administration from the University of Southern California.

*Dee Zinke, Assistant General Manager/Chief External Affairs Officer* – Ms. Zinke was appointed to her current position in January 2016. She is responsible for Metropolitan's communications, business outreach, education and legislative matters. She joined Metropolitan in 2009 as Manager of the Legislative Services Section. Before coming to Metropolitan, Ms. Zinke was the Manager of Governmental and Legislative Affairs at the Calleguas Municipal Water District for nearly 10 years, where she received recognition for her significant contributions to the Association of California Water Agencies, the Ventura County Special Districts Association and the Association of Water Agencies of Ventura County. During her tenure at Calleguas, she was named Chair of the Ventura County Watersheds Coalition and appointed by then-Secretary of Resources Mike Chrisman to the State Watershed Advisory Committee. Prior to her public service, she worked in the private sector as the Executive Officer and Senior Legislative Advocate for the Building Industry Association of Greater Los Angeles and Ventura Counties and as Director of Communications for E-Systems, a defense contractor specializing in communication, surveillance and navigation systems in Washington, D.C. Ms. Zinke holds a Bachelor of Arts degree in communication and psychology from Virginia Polytechnic Institute and State University.

## **Employee Relations**

The total number of budgeted regular full-time Metropolitan employees on November 1, 2020 was 1,907 with 1,806 positions filled, and the remaining positions under recruitment or vacant. Of the filled positions, 1,249 were represented by AFSCME Local 1902, 94 by the Supervisors Association, 304 by the Management and Professional Employees Association and 127 by the Association of Confidential Employees. The remaining 32 employees are unrepresented. The four bargaining units represent 98 percent of Metropolitan's employees. The Memorandum of Understanding ("MOU") with each of AFSCME Local 1902, the Supervisors Association, the Management and Professional Employees Association and the Association of Confidential Employees were updated through negotiations and cover the period January 1, 2017 through December 31, 2021.

## **Risk Management**

Metropolitan is exposed to various risks of loss related to, among other things, the design and construction of facilities, and the treatment and delivery of water. With the assistance of third party claims administrators, Metropolitan is self-insured for property losses, liability, and workers' compensation. Metropolitan self-insures the first \$25 million per liability occurrence, with commercial general liability coverage of \$75 million in excess of the self-insured retention. The \$25 million self-insured retention is maintained as a separate restricted reserve. Metropolitan is also self-insured for loss or damage to its property, with the \$25 million self-insured retention also being accessible for emergency repairs and Metropolitan property losses. In addition, Metropolitan obtains other excess and specialty insurance coverages such as directors' and officers' liability, fiduciary liability and aircraft hull and liability coverage.

Metropolitan self-insures the first \$5 million for workers' compensation with statutory excess coverage. The self-insurance retentions and reserve levels currently maintained by Metropolitan may be modified by the Board at its sole discretion.

## **Cybersecurity**

Metropolitan has adopted and maintains an active Cybersecurity Program ("CSP") that includes policies reviewed by Metropolitan's Office of Enterprise Cybersecurity, Audit department and independent third-party auditors and consultants. Metropolitan has appointed an Information Security Officer who is responsible for overseeing the annual review of the CSP and its alignment with Metropolitan's Strategic Plan. Metropolitan's policies and procedures on information governance, risk management, and compliance are consistent with the U.S. Commerce Department's National Institute of Standards and Technology Cybersecurity Framework and are consistent with the requirements prescribed by the America's Water Infrastructure Act (AWIA) for risk assessment and emergency response. Metropolitan's Cybersecurity Team is responsible for identifying cybersecurity risks to Metropolitan, preventing, investigating, and responding to any cybersecurity incidents, and providing guidance and education on the implementation of new technologies at Metropolitan. All persons or entities authorized to use Metropolitan's computer resources are required to participate in Metropolitan's Cybersecurity Awareness Training.

## **METROPOLITAN'S WATER SUPPLY**

### **General**

Metropolitan's principal sources of water supplies are the State Water Project and the Colorado River. Metropolitan receives water delivered from the State Water Project under State Water Contract provisions, including contracted supplies, use of carryover storage in San Luis Reservoir, and surplus supplies. Metropolitan holds rights to a basic apportionment of Colorado River water and has priority rights to an additional amount depending on availability of surplus supplies. Water management programs supplement these Colorado River supplies. To secure additional supplies, Metropolitan also has groundwater banking partnerships and water transfer and storage arrangements within and outside its service area.

Metropolitan's principal water supply sources, and other supply arrangements and water management are more fully described herein.

Metropolitan faces a number of challenges in providing adequate, reliable and high-quality supplemental water supplies for Southern California. These include, among others: (1) population growth within the service area; (2) increased competition for low-cost water supplies; (3) variable weather conditions; (4) increased environmental regulations; and (5) climate change. Metropolitan's resources and strategies for meeting these long-term challenges are set forth in its Integrated Water Resources Plan, as updated from time to time. See "Integrated Water Resources Plan." In addition, Metropolitan manages water supplies in response to the prevailing hydrologic conditions by implementing its Water Surplus and Drought Management ("WSDM") Plan, and in times of prolonged or severe shortages, the Water Supply Allocation Plan (the "Water Supply Allocation Plan"). See "CONSERVATION AND WATER SHORTAGE MEASURES—Water Surplus and Drought Management Plan" and "Water Supply Allocation Plan" in this Appendix A.

Hydrologic conditions can have a significant impact on Metropolitan's imported water supply sources. For Metropolitan's State Water Project supplies, precipitation in California's northern Sierra Nevada during the fall and winter helps replenish storage levels in Lake Oroville, a key State Water Project facility. The subsequent runoff from the spring snowmelt helps satisfy regulatory requirements in the San Francisco Bay/Sacramento-San Joaquin River Delta ("Bay-Delta") bolstering water supply reliability in the same year. See "State Water Project – Bay-Delta Proceedings Affecting State Water Project." The source of Metropolitan's Colorado River supplies is primarily the watersheds of the Upper Colorado River Basin in the states of Colorado, Utah, and Wyoming. Although precipitation is primarily observed in the winter and spring, summer storms are common and can affect water supply conditions.

Uncertainties from potential future temperature and precipitation changes in a climate driven by increased concentrations of atmospheric carbon dioxide also present challenges. Areas of concern to California water planners identified by researchers include: reduction in Sierra Nevada and Colorado Basin snowpack; increased intensity and frequency of extreme weather events; and rising sea levels resulting in increased risk of damage from storms, high-tide events, and the erosion of levees and potential cutbacks of deliveries of imported water. While potential impacts from climate change remain subject to study and debate, climate change is among the uncertainties that Metropolitan seeks to address through its planning processes.

**Current Water Conditions**

As of January 11, 2021, the northern Sierra precipitation was 41 percent of the 50-year average for the time of year, and northern Sierra snowpack measured at 60 percent of average for such time of year. On December 1, 2020, the California Department of Water Resources ("DWR") notified State Water Contractors (defined below) that its initial calendar year 2021 allocation estimate of State Water Project water is 10 percent, or 191,150 acre-feet for Metropolitan. (An acre-foot is the amount of water that will cover one acre to a depth of one foot and equals approximately 325,851 gallons, which represents the needs of three average families in and around the home for one year within Metropolitan's service area.) Changes to the 2021 allocation may occur and are dependent on the developing hydrologic conditions. See "State Water Project."

As of January 11, 2021, the Upper Colorado River Basin snowpack accumulation measured 70 percent of the 30-year average as of this date and the total system storage in the Colorado River Basin was 46 percent of capacity, a decrease of six percent or 3.8 million acre-feet from the same time the prior year. Because of the current storage level, no shortage will be declared in Colorado River water supply availability conditions for calendar year 2021, resulting in projected available supply of Colorado River water in calendar year 2021 of 1,007,700 acre-feet for Metropolitan. See "Colorado River Aqueduct."

See also “–Storage Capacity and Water in Storage.”

### **Integrated Water Resources Plan**

**Overview.** The Integrated Water Resources Plan (hereafter, “IRP”) is Metropolitan’s principal water resources planning document. Metropolitan, its member agencies, subagencies and groundwater basin managers developed their first IRP as a long-term planning guideline for resources and capital investments. The purpose of the IRP was the development of a portfolio of preferred resources to meet the water supply reliability and water quality needs for the region in a cost-effective and environmentally sound manner. The first IRP was adopted by the Board in January 1996 and has been subsequently updated in 2004, 2010 and 2015. As noted below, the 2020 IRP Update is under development. See “–2020 IRP Update.”

The last completed IRP update in 2015 (the “2015 IRP Update”) was adopted by Metropolitan’s Board on January 12, 2016, as a strategy to set goals and a framework for water resources development. This strategy enables Metropolitan and its member agencies to manage future challenges and changes in California’s water conditions and to balance investments with water reliability benefits. The 2015 IRP Update provides an adaptive management approach to address future uncertainty, including uncertainty from climate change. It was formulated with input from member agencies, retail water agencies, and other stakeholders including water and wastewater managers, environmental and business interests and the community.

The 2015 IRP Update seeks to provide regional reliability through 2040 by stabilizing Metropolitan’s traditional imported water supplies and continuing to develop additional conservation programs and local resources, with an increased emphasis on regional collaboration. It also advances long-term planning for potential future contingency resources, such as storm water capture and seawater desalination. The 2015 IRP Update and associated materials are available on Metropolitan’s website at: <http://www.mwdh2o.com/AboutYourWater/Planning/Planning-Documents/Pages/default.aspx>. The materials and other information set forth on Metropolitan’s website is not incorporated by reference.

Specific projects developed by Metropolitan in connection with the implementation of its IRP are subject to Board consideration and approval, as well as environmental and regulatory documentation and compliance.

**An Adaptive Management Strategy.** Adaptive water management, as opposed to a rigid set of planned actions over the coming decades, is the most nimble and cost-effective manner for Metropolitan and local water districts throughout Southern California to effectively prepare for the future. An adaptive management approach began to evolve with Metropolitan’s first IRP in 1996, after drought-related shortages in 1991 prompted a rethinking of Southern California’s long-term water strategy. Reliance on imported supplies to meet future water needs has decreased steadily over time, replaced by plans for local actions to meet new demands. The 2015 IRP Update continues to build a robust portfolio approach to water management.

The following paragraphs describe the goals, approaches and targets for each of the resource areas that are needed to ensure reliability under planned conditions.

**State Water Project.** The State Water Project is one of Metropolitan’s two major sources of water. The goal for State Water Project supplies is to adaptively manage flow and export regulations in the near term and to achieve a long-term Bay-Delta solution that addresses ecosystem and water supply reliability challenges. In furtherance of this goal, Metropolitan continues to participate and seek successful outcomes for a potential Bay-Delta conveyance project and the California EcoRestore efforts. See “–State Water Project” and “REGIONAL WATER RESOURCES–Local Water Supplies” in this Appendix A. The stated goal of the IRP is to manage State Water Project supplies in compliance with regulatory restrictions in the near-term for an average of 980,000 acre-feet of annual supplies, and to pursue an outcome for a potential



Bay-Delta conveyance project and California EcoRestore efforts aimed towards achieving long-term average supplies of approximately 1.2 million acre-feet annually from this resource. See “–State Water Project –Bay-Delta Proceedings Affecting State Water Project.”

Colorado River Aqueduct. The CRA delivers water from the Colorado River, Metropolitan’s original source of supply. Metropolitan has helped to fund and implement agricultural conservation programs, improvements to river operation facilities, land management programs and water transfers and exchanges through agreements with agricultural water districts in Southern California, entities in Arizona and Nevada that use Colorado River water, and the Bureau of Reclamation. See “–Colorado River Aqueduct” and “–Water Transfer, Storage and Exchange Programs – Colorado River Aqueduct Agreements and Programs.” The stated goal of the IRP for the CRA supplies is to maintain current levels of water supplies from existing programs, while also developing flexibility through dry-year programs and storage to ensure that a minimum of 900,000 acre-feet of CRA deliveries are available when needed, with a target of 1.2 million acre-feet in dry years.

Water Transfers and Exchanges. Under voluntary water transfer or exchange agreements, agricultural communities using irrigation water may periodically sell or conserve some of their water allotments for use in urban areas. The water may be delivered through existing State Water Project or CRA facilities or may be exchanged for water that is delivered through such facilities. Metropolitan’s policy toward potential transfers states that the transfers will be designed to protect and, where feasible, enhance environmental resources and avoid the mining of local groundwater supplies. See “–Water Transfer, Storage and Exchange Programs.” The stated goal of the IRP is to pursue transfers and exchanges to hedge against shorter-term water demand and supply imbalances while long-term water supply solutions are developed and implemented.

Water Conservation. Conservation and other water use efficiencies are integral components of Metropolitan’s IRP. Metropolitan has invested in conservation programs since the 1980s. Historically, most of the investments have been in water efficient fixtures in the residential sector. With outdoor water use comprising at least 50 percent of residential water demand, in more recent years, Metropolitan has increased its conservation efforts to target outdoor water use reduction in its service area. See “CONSERVATION AND WATER SHORTAGE MEASURES” in this Appendix A. The stated goal of the IRP is to pursue further water conservation savings of 485,000 acre-feet annually by 2040 through continued increased emphasis on outdoor water-use efficiency using incentives, outreach/education and other programs. The conservation program is regularly reviewed and revised in order to meet the stated goal of the IRP.

Local Water Supplies. Local supplies are a significant and growing component of the region’s diverse water portfolio. While the extent to which each member agency’s water supply is provided by imported water purchased from Metropolitan varies, in the aggregate, local supplies can provide over half of the region’s water in a given year, and the maintenance of these supplies remain an integral part of the IRP. Similar to water conservation, local supplies serve the important function of reducing demands for imported water supplies and thereby making regional water system capacity and storage available and accessible to meet the needs of the region. Local water supply projects may include, among other things, recycled water, groundwater recovery, conjunctive use, stormwater, and seawater desalination. Metropolitan offers financial incentives to member agencies to help fund the development of a number of these types of local supply projects. The stated goal of the IRP is to seek to develop 227,000 acre-feet of additional local supplies produced by existing and future projects, with the region reaching a target of 2.4 million acre-feet of total dependable local supplies by 2040. Additionally, in 2018, an interim Local Resources Program target was adopted to spur development of additional local supplies in furtherance of the stated goal of the IRP. See “REGIONAL WATER RESOURCES–Local Water Supplies” in this Appendix A.

**2020 IRP Update.** Development of Metropolitan’s 2020 IRP is underway. The year 2020 marks the conclusion of the 25-year planning cycle envisioned by the inaugural 1996 IRP. The 2020 IRP is anticipated

to build upon Metropolitan's adaptive management strategy utilizing a scenario planning approach. This approach will evaluate a variety of potential scenarios and therefore prepare the region for a wider range of potential outcomes by identifying solutions and policies that are robust across a variety of possible future conditions.

Metropolitan initiated the 2020 IRP process in February 2020. Crucial to scenario development for the 2020 IRP is determining how to describe and measure impacts of scenario drivers of change (that is, specific factors whose future values and outcomes are uncertain, but significantly impact future water supply reliability) on water resources and demands. Metropolitan developed an extensive array of drivers affecting water supply and demand by incorporating feedback from the Board, member agencies, retail agencies, and other stakeholders through multiple workshops hosted by Metropolitan as well as an online survey. A draft assessment was assembled with in-house area experts to establish and evaluate more than 80 relevant supply and demand links that covered all identified drivers. As of November 2020, Metropolitan staff was developing parameters and preliminary analyses of draft scenarios for member agency and Board review. A draft of the 2020 IRP Update is expected to be available in 2021.

## **State Water Project**

### **Background**

One of Metropolitan's two major sources of water is the State Water Project, which is owned by the State, and managed and operated by DWR. The State Water Project is the largest state-built, multipurpose, user-financed water project in the country. It was designed and built primarily to deliver water, but also provides flood control, generates power for pumping, is used for recreation, and enhances habitat for fish and wildlife. The State Water Project provides irrigation water to 750,000 acres of farmland, mostly in the San Joaquin Valley, and provides municipal and industrial water to approximately 27 million of California's estimated 39.9 million residents, including the population within the service area of Metropolitan.

The State Water Project's watershed encompasses the mountains and waterways around the Feather River, the principal tributary of the Sacramento River, in the Sacramento Valley of Northern California. Through the State Water Project, Feather River water stored in and released from Oroville Dam (located about 70 miles north of Sacramento, east of the city of Oroville, California) and unregulated flows diverted directly from the Bay-Delta are transported south through the Central Valley of California, over the Tehachapi Mountains and into Southern California, via the California Aqueduct, to four delivery points near the northern and eastern boundaries of Metropolitan's service area. The total length of the California Aqueduct is approximately 444 miles. See "METROPOLITAN'S WATER DELIVERY SYSTEM—Primary Facilities and Method of Delivery—State Water Project" in this Appendix A.

### **State Water Contract**

*Terms of the Contract.* In 1960, Metropolitan signed a water supply contract (as amended, the "State Water Contract") with DWR to receive water from the State Water Project. Metropolitan is one of 29 agencies and districts that have long-term contracts for water service from DWR (known collectively as the "State Water Contractors" and sometimes referred to herein as "Contractors"). Metropolitan is the largest of the State Water Contractors in terms of the number of people it serves (approximately 19 million), the share of State Water Project water that it has contracted to receive (approximately 46 percent), and the percentage of total annual payments made to DWR by agencies with State water supply contracts (approximately 50 percent for fiscal year 2019-20). Metropolitan received its first delivery of State Water Project water in 1972.

Pursuant to the terms of the State water supply contracts, all water-supply related expenditures for capital and operations, maintenance, power, and replacement costs associated with the State Water Project facilities are paid for by the State Water Contractors as components of their annual payment obligations to DWR. In exchange, Contractors have the right to participate in the system, with an entitlement to water

service from the State Water Project and the right to use the portion of the State Water Project conveyance system necessary to deliver water to them. Each year DWR estimates the total State Water Project water available for delivery to the State Water Contractors and allocates the available project water among the State Water Contractors in accordance with the State water supply contracts. Late each year, DWR announces an initial allocation estimate for the upcoming year, but periodically provides subsequent estimates throughout the year if warranted by developing precipitation and water supply conditions. Based upon the updated rainfall and snowpack values, DWR's total water supply availability projections are refined during each calendar year and allocations to the State Water Contractors are adjusted accordingly.

Metropolitan's State Water Contract has been amended a number of times since its original execution and delivery. Several of the amendments, entered into by DWR and various subsets of State Water Contractors, relate to the financing and construction of a variety of State Water Project facilities and improvements and impose certain cost responsibility therefor on the affected Contractors, including Metropolitan. For a description of Metropolitan's financial obligations under its State Water Contract, including with respect to such amendments, see "METROPOLITAN EXPENSES--State Water Contract Obligations" in this Appendix A.

Amendments, approved by Metropolitan's Board in 1995, and since executed by DWR and 27 of the State Water Contractors (collectively known as the "Monterey Amendment"), among other things, made explicit that the Contractors' rights to use the portion of the State Water Project conveyance system necessary to deliver water to them also includes the right to convey non-State Water Project water at no additional cost as long as capacity exists. These amendments also expanded the ability of the State Water Contractors to carry over State Water Project water in State Water Project storage facilities, allowed participating Contractors to borrow water from terminal reservoirs, and allowed Contractors to store water in groundwater storage facilities outside a Contractor's service area for later use. These amendments provided the means for individual Contractors to increase supply reliability through water transfers and storage outside their service area. Metropolitan has subsequently developed and actively manages a portfolio of water supplies to convey through the California Aqueduct pursuant to these contractual rights. See "--Water Transfer, Storage and Exchange Programs." The Monterey Amendment is the subject of ongoing litigation. See "-- Related Litigation--Monterey Amendment" below.

Under its State Water Contract, Metropolitan has a contractual right to its proportionate share of the State Water Project water that DWR determines annually is available for allocation to the Contractors. This determination is made by DWR each year based on existing supplies in storage, forecasted hydrology, and other factors, including water quality and environmental flow obligations and other operational considerations. Available State Water Project water is then allocated to the Contractors in proportion to the amounts set forth in "Table A" of their respective State water supply contract (sometimes referred to herein as "Table A State Water Project water"). Pursuant to Table A of its State Water Contract, Metropolitan is entitled to approximately 46 percent of the total annual allocation made available to State Water Contractors each year. Metropolitan's State Water Contract, under a 100 percent allocation, provides Metropolitan 1,911,500 acre-feet of water. The 100 percent allocation is referred to as the contracted amount.

DWR operates the State Water Project in coordination with the federal Central Valley Project, which is operated by the Bureau of Reclamation. Since 1986, the coordinated operations have been undertaken pursuant to a Coordinated Operations Agreement for the Central Valley Project and State Water Project (the "COA"). The COA defines how the State and federal water projects share water quality and environmental flow obligations imposed by regulatory agencies. The agreement calls for periodic review to determine whether updates are needed in light of changed conditions. After completing a joint review process, DWR and the Bureau of Reclamation agreed to amend the COA to reflect water quality regulations, biological opinions and hydrology updated since the 1986 agreement was signed. On December 13, 2018, DWR and the Bureau of Reclamation executed an Addendum to the COA (the "COA Addendum"). Through the COA Addendum, DWR will adjust current State Water Project operations to modify pumping operations, as well

as project storage withdrawals to meet in-basin uses, pursuant to revised calculations based on water year types. The COA Addendum will shift responsibilities for meeting obligations between the Central Valley Project and the State Water Project, resulting in a shift of approximately 120,000 acre-feet in long-term average annual exports from the State Water Project to the Central Valley Project. In executing the COA Addendum, DWR found the agreement to be exempt from environmental review under the California Environmental Quality Act ("CEQA") as an ongoing project and that the adjustments in operations are within the original scope of the project. On January 16, 2019, commercial fishing groups and a tribe ("petitioners") filed a lawsuit against DWR alleging that entering into the COA Addendum violated CEQA, the Delta Reform Act, and the public trust doctrine. On April 11, 2019, Westlands Water District ("Westlands") filed a motion to intervene, which was not opposed by any parties. The court granted Westlands' motion on June 7, 2019. On October 7, 2019, the North Delta Water Agency filed a motion to intervene. On November 19, 2019, the court granted North Delta Water Agency's motion. The petitioners are still in the process of preparing the administrative record and no date for a hearing on the merits has been set. The effect of this lawsuit on the COA Addendum and State Water Project operations cannot be determined at this time.

From calendar years 2005 through 2019, the amount of water received by Metropolitan from the State Water Project, including water from water transfer, groundwater banking and exchange programs delivered through the California Aqueduct (described under "Water Transfer, Storage and Exchange Programs" below), varied from a low of 593,000 acre-feet in calendar year 2015 to a high of 1,695,000 acre-feet in 2006. In calendar year 2019, DWR's allocation to State Water Contractors was 75 percent of contracted amounts, or 1,433,625 acre-feet, for Metropolitan. In calendar year 2020, DWR's allocation to State Water Contractors was 20 percent of contracted amounts, or 382,300 acre-feet, for Metropolitan.

On December 1, 2020, DWR announced an initial calendar year 2021 allocation of 10 percent. Changes to the 2021 allocation may occur and are dependent on the developing hydrologic conditions.

The term of Metropolitan's State Water Contract currently extends to December 31, 2035 or until all DWR bonds issued to finance construction of project facilities are repaid, whichever is longer. Upon expiration of the State Water Contract term, Metropolitan has the option to continue service under substantially the same terms and conditions. Metropolitan and other State Water Contractors have undertaken negotiations with DWR to extend their State water supply contracts. In June 2014, DWR and the State Water Contractors reached an Agreement in Principle (the "Agreement in Principle") on an amendment to the State water supply contract to extend the contract and to make certain changes related to financial management of the State Water Project in the future. DWR and 25 of the State Water Contractors, including Metropolitan, have signed the Agreement in Principle. Under the Agreement in Principle, the term of the State water supply contract for each Contractor that signs an amendment would be extended until December 31, 2085. The Agreement in Principle served as the "proposed project" for purposes of environmental review under CEQA. In August 2016, DWR released for public comment a draft Environmental Impact Report ("EIR") for the proposed project. The public review period on the draft EIR ended in October 2016. State law requires DWR to make a presentation to the State Legislature at an informational hearing at least 60 days prior to final approval of a State water supply contract extension. That hearing occurred on September 11, 2018. DWR released the final EIR on November 16, 2018 and certified the final EIR and issued a Notice of Determination on December 11, 2018. Concurrently, Metropolitan considered the certified final EIR and approved the water supply contract extension amendment at its December 11, 2018 Board meeting. That same day, DWR filed a lawsuit seeking to validate the contract extension. In January 2019, North Coast Rivers Alliance and others separately filed two petitions for writ of mandate and a complaint for declaratory and injunctive relief challenging DWR's final EIR and approval of the State water supply contract extension amendment under CEQA, the Delta Reform Act, and public trust doctrine. Mandatory CEQA settlement conferences were held on February 22, 2019. On June 18, 2019, the validation and CEQA cases were deemed related, and on August 20, 2019, they were assigned to a single judge. On August 28, 2020, DWR certified the CEQA administrative record. On September 28, 2020, DWR filed answers in the two CEQA

cases. No date for a hearing on the merits has been set and no briefing has occurred in any of the three actions. Any adverse impact of this litigation and rulings on Metropolitan's State Water Project supplies cannot be determined at this time. DWR has yet to execute the contract extension amendment. To date, 22 of the 29 State Water Contractors have executed the amendment, exceeding the DWR established threshold needed for it to be fully executed. DWR is awaiting a decision at the trial court on the validation litigation described above before moving forward with implementation of the amendments with individual State Water Contractors. Unless the contract extension amendment is implemented, the amortization period for any future State Water Project bonds will end in 2035.

In a process separate from the State Water Contract extension amendment described above, Metropolitan and other State Water Contractors undertook negotiations with DWR to amend their State water supply contracts to clarify how costs would be allocated for the California WaterFix project approved by DWR in 2017, as well as to clarify the criteria applicable to certain water management tools including single and multi-year water transfers and exchanges. In 2018, DWR and the State Water Contractors reached an agreement in principle (the "2018 AIP") and DWR subsequently issued a draft EIR. On April 29, 2019, Governor Newsom issued an executive order directing State agencies to develop a comprehensive statewide strategy to build a climate-resilient water system that included consideration of a potential single-tunnel Bay-Delta conveyance facility ("Delta Conveyance Project") instead of the approved California WaterFix project. Following its rescission of all project approvals for the California WaterFix project, DWR removed the California WaterFix cost provisions from the 2018 AIP and, on February 28, 2020, recirculated the draft EIR for only the 2018 AIP's water management provisions. DWR certified a Final EIR for the revised 2018 AIP in August 2020, and finalized the form of the amendment to implement the 2018 AIP in October 2020. The water management provisions would allow for greater flexibility for transfers and exchanges among the State Water Contractors. Specifically, it would confirm existing practices for exchanges, allow more flexibility for non-permanent water transfers, and allow for the transfer and exchange of certain portions of Article 56 carry over water.

In light of the State's change in direction from California WaterFix to a potential single tunnel Delta Conveyance Project, Metropolitan and other State Water Contractors embarked on a third public process to further negotiate proposed amendments to their State water supply contracts related to cost allocation for the potential Delta Conveyance Project. In March of 2020, DWR and the State Water Contractors reached an Agreement in Principle (the "Delta Conveyance AIP") that would be the basis for amendment of the State water supply contracts to provide a mechanism that would allow for the costs related to any Delta Conveyance Project to be allocated for and collected by DWR. The Delta Conveyance AIP also provides for the allocation of benefits for any Delta Conveyance Project in proportion to each State Water Contractor's participation. Contract language for the proposed amendments is under development. Consideration of the amendments for approval by DWR and the State Water Contractors would not occur until after DWR's completion of the Delta Conveyance Project environmental review, which is not expected before 2024. See "Bay-Delta Planning Activities; Delta Conveyance" under "Bay Delta Proceedings Affecting State Water Project," below.

***Related Litigation—Monterey Amendment.*** On May 4, 2010, DWR completed an EIR and concluded a remedial CEQA review for the Monterey Amendment (described under " – Terms of the Contract" above), which reflects the settlement of certain disputes regarding the allocation of State Water Project water. Central Delta Water Agency, South Delta Water Agency, California Water Impact Network, California Sportfishing Protection Alliance, and the Center For Biological Diversity filed a lawsuit against DWR in Sacramento County Superior Court challenging the validity of the EIR under CEQA and the validity of underlying agreements under a reverse validation action (the "Central Delta I" case). In January 2013, the Court ruled that the validation cause of action in Central Delta I was time barred by the statute of limitations. The court also held that DWR must complete a limited scope remedial CEQA review addressing the potential impacts of the Kern Water Bank, a portion of the Monterey Amendment that does not directly affect Metropolitan. The court also ruled that the State Water Project may continue to be operated under the terms of the

Monterey Amendment while the remedial CEQA review is prepared and leaves in place the underlying project approvals while DWR prepares the remedial CEQA review. Plaintiffs appealed. Briefing by the parties was completed, but no date for oral argument has been set.

In September 2016, DWR certified the Final Revised Draft EIR for the Monterey Amendment, recorded a Notice of Determination, and filed papers in the trial demonstrating compliance with the court's order for remedial CEQA review. On October 21, 2016, the petitioner group from Central Delta I and a new lead petitioner, Center for Food Safety, filed litigation against DWR challenging this EIR and named Metropolitan and the other State Water Project contractors as respondent parties. On October 2, 2017, the court denied Center for Food Safety's petition. Plaintiffs appealed. Briefing in this appeal has been completed. No date for oral argument has been set. Any adverse impact of any of the litigation and rulings relating to the Monterey Amendment on Metropolitan's State Water Project supplies cannot be determined at this time.

### **2017 Oroville Dam Spillway Incident**

Oroville Dam, the earthfill embankment dam on the Feather River which impounds Lake Oroville, is operated by DWR as a facility of the State Water Project. On February 7, 2017, the main flood control spillway at Oroville Dam, a gated and concrete lined facility, experienced significant damage as DWR released water to manage higher inflows driven by continued precipitation in the Feather River basin. The damaged main spillway impaired DWR's ability to manage lake levels causing water to flow over the emergency spillway structure, an ungated, 1,730-foot-long concrete barrier located adjacent to and north of the main flood control spillway structure. Use of the emergency spillway structure resulted in erosion that threatened the stability of the emergency spillway structure. This concern prompted the Butte County Sheriff, on February 12, 2017, to issue an evacuation order for approximately 200,000 people living in Oroville and the surrounding communities.

On November 1, 2018, DWR completed reconstruction of the main spillway to its original design capacity of approximately 270,000 cubic feet per second ("cfs"), a capacity almost twice its highest historical outflow. Work on the emergency spillway was substantially completed in April 2019. Mitigation measures such as slope revegetation are expected to be completed in 2021. Although the full extent of the costs of the response and recovery efforts are unknown at this time, DWR has indicated that the total costs of the recovery and restoration project prior to any federal or other reimbursement are estimated to be approximately \$1.2 billion. Cost estimates are based on actual and projected work and may be adjusted further as work continues through completion of the project in 2021. Funding from the Federal Emergency Management Agency ("FEMA") is generally available under FEMA's Public Assistance Program to recover 75 percent of eligible costs to restore facilities damaged as a result of natural disasters to their pre-disaster condition. As of October 1, 2020, DWR estimates that repair costs will total \$1.2 billion and has submitted \$815 million to FEMA as eligible costs for reimbursement. FEMA has provided \$259 million in reimbursement funding through October 1, 2020 as its 75 percent share of eligible costs. FEMA has determined that costs associated with the upper portion of the main spillway are eligible for reimbursement, and has approved, or is expected to authorize approximately \$371 in additional reimbursements for such costs. FEMA denied claims for reimbursement of \$278 million of emergency spillway costs; however, DWR is seeking partial reimbursement of these costs through the FEMA's hazard mitigation grant funding program. FEMA's review of those costs is underway. Any unrecovered costs to be paid for by the State Water Contractors under the State water contracts are expected to be financed long-term with DWR bonds. Metropolitan's potential share of the cost for the unreimbursed work totals about \$243 million. About \$22 million of this amount has already been paid through the State Water Project annual statement of charges.

Various lawsuits have been filed against DWR asserting claims for property damage, economic losses, environmental impacts and civil penalties related to this incident. Neither Metropolitan nor any other State Water Contractor was named as a defendant in any of these lawsuits. These cases, which have been coordinated in Sacramento Superior Court (Case No. JCCP 4974), include a lawsuit filed by the Butte



County District Attorney (“DA”) that seeks up to \$51 billion in civil penalties. This lawsuit asserts a single claim under California Fish and Game Code section 5650, *et seq.*, which makes it unlawful to deposit or place certain substances into the waters of the State, including lime, slag and “any substance or material deleterious to fish, plant life, mammals, or bird life.” Among other things, the statute provides for the assessment of civil penalties of up to \$25,000 a day and \$10 per pound of material deposited in violation of its strictures.

The State water supply contracts provide that Metropolitan and the other State Water Contractors are not liable for any claim of damage of any nature arising out of or connected the control, carriage, handling, use, disposal or distribution of State Water Project water prior to the point where it reaches their turnouts. However, DWR recently has asserted that regardless of legal liability all costs of the State Water Project system must be borne by State Water Contractors. Thus, DWR has indicated that it intends to bill the State Water Contractors for any expenditures related to this litigation (cost of litigation, settlements, damages awards/verdicts).

In light of DWR’s position, Metropolitan, the State Water Contractors, Santa Clara Valley Water District, Mojave Water Agency, and Kern County Water Agency filed a motion to intervene in the Butte County DA case on September 3, 2020, in order to protect their contractual rights and interests in the State Water Project. A hearing on that motion had been scheduled for January 8, 2021.

DWR filed a motion for summary judgment in the Butte County DA case on September 3, 2020. On December 18, 2020, the Sacramento Superior Court issued a ruling granting DWR’s motion. In its ruling, the court determined that, as a matter of law, DWR is not a person subject to the penalty provisions of the California Fish and Game Code section at issue, and therefore the Butte County DA’s complaint failed to state a cause of action. As a result of the granting of the motion, the matter will be dismissed by the trial court. The Butte County DA has 60 days to file an appeal after the court enters the judgment. The judgment was entered on January 11, 2021. At this time, Metropolitan cannot predict the outcome of this litigation or the amount of civil penalties that might be assessed in the event the Butte County DA prevails on an appeal of the decision.

#### **Bay-Delta Proceedings Affecting State Water Project**

**General.** In addition to being a source of water for diversion into the State Water Project, the Bay-Delta is the source of water for local agricultural, municipal and industrial needs, and also supports significant resident and anadromous fish and wildlife resources and important recreational uses of water. Both the State Water Project’s upstream reservoir operations and its Bay-Delta diversions can at times affect these other uses of Bay-Delta water directly, or indirectly, through impacts on Bay-Delta water quality. A variety of proceedings and other activities are ongoing with the participation of various State and federal agencies, as well as California’s environmental, urban and agricultural communities, in an effort to develop long-term, collectively-negotiated solutions to the environmental and water management issues concerning the Bay-Delta, and Metropolitan actively participates in these proceedings. Metropolitan cannot predict the ultimate outcome of any of the litigation or regulatory processes described below but believes that a materially adverse impact on the operation of State Water Project pumps, Metropolitan’s State Water Project deliveries or Metropolitan’s water reserves could result.

**SWRCB Regulatory Activities and Decisions.** The State Water Resources Control Board (the “SWRCB”) is the agency responsible for setting water quality standards and administering water rights throughout California. The SWRCB exercises its regulatory authority over the Bay-Delta by means of public proceedings leading to regulations and decisions that can affect the availability of water to Metropolitan and other users of State Water Project water. These include the Water Quality Control Plan (“WQCP”) for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary, which establishes the water quality objectives and proposed flow regime of the estuary, and water rights decisions, which assign responsibility for

implementing the objectives of the WQCP to users throughout the system by adjusting their respective water rights permits.

Since 2000, SWRCB's Water Rights Decision 1641 ("D-1641") has governed the State Water Project's ability to export water from the Bay-Delta for delivery to Metropolitan and other agencies receiving water from the State Water Project. D-1641 allocated responsibility for meeting flow requirements and salinity and other water quality objectives established earlier by the WQCP.

The WQCP gets reviewed periodically and new standards and allocations of responsibility can be imposed on the State Water Project as a result. The last review was completed in 2006, and the current review has been ongoing since approximately 2010.

The SWRCB's current review and update of the WQCP is being undertaken in phased proceedings. In December 2018, the SWRCB completed Phase 1 of the WQCP proceedings, adopting the plan amendments and environmental documents to support new flow standards for San Joaquin River tributaries and revised southern Delta salinity objectives. Various stakeholders filed suit against the SWRCB challenging these amendments. As part of Phase 2 proceedings, a framework document for the second plan amendment process, focused on the Sacramento River and its tributaries, Delta eastside tributaries, Delta outflows, and interior Delta flows, was released in July 2018. The framework describes changes that will likely be proposed by the SWRCB through formal proposed amendments and supporting environmental documents. The proposed changes include certain unimpaired flow requirements for the Sacramento River and its salmon-bearing tributaries. The SWRCB has also encouraged all stakeholders to work together to reach one or more voluntary agreements for consideration by the SWRCB that could implement the proposed amendments to the WQCP through a variety of tools, while seeking to protect water supply reliability. Metropolitan is participating in the Phase 2 proceedings and voluntary agreement negotiations.

***Bay-Delta Planning Activities; Delta Conveyance.*** In 2000, several State and federal agencies released the CALFED Bay-Delta Programmatic Record of Decision and Environmental Impact Report/Environmental Impact Statement ("EIR/EIS") that outlined and disclosed the environmental impacts of a 30-year plan to improve the Bay-Delta's ecosystem, water supply reliability, water quality, and levee stability. The CALFED Record of Decision remains in effect and many of the State, federal, and local projects begun under CALFED continue.

Building on CALFED and other Bay-Delta planning activities, in 2006 multiple State and federal resource agencies, water agencies, and other stakeholder groups entered into a planning agreement for the Bay-Delta Conservation Plan ("BDCP"). The BDCP was originally conceived as a comprehensive conservation strategy for the Bay-Delta designed to restore and protect ecosystem health, water supply, and water quality within a stable regulatory framework to be implemented over a 50-year time frame with corresponding long-term permit authorizations from fish and wildlife regulatory agencies. The BDCP includes both alternatives for new water conveyance infrastructure and extensive habitat restoration in the Bay-Delta. The existing State Water Project Delta water conveyance system needs to be improved and modernized to address operational constraints on pumping in the south Delta as well as risks to water supplies and water quality from climate change, earthquakes, and flooding. Operational constraints are largely due to biological opinions and incidental take permits to which the State Water Project is subject that substantially limit the way DWR operates the State Water Project.

In 2015, the State and federal lead agencies proposed an alternative implementation strategy and new alternatives to the BDCP to provide for the protection of water supplies conveyed through the Bay-Delta and the restoration of the ecosystem of the Bay-Delta, termed "California WaterFix" and "California EcoRestore," respectively. In this alternative approach, DWR and the Bureau of Reclamation would implement planned water conveyance improvements (California WaterFix) as a stand-alone project with the required habitat restoration limited to that directly related to construction mitigation. The associated costs of

such mitigation would be underwritten by the public water agencies participating in the conveyance project. Ecosystem improvements and habitat restoration more generally (California EcoRestore) would be undertaken under a more phased approach than previously contemplated by the BDCP and would not be linked with the conveyance project or permits.

As part of California EcoRestore, which was initiated in 2015, the State is pursuing more than 30,000 acres of Delta habitat restoration. Work on a number of EcoRestore projects is ongoing. Among other things, EcoRestore was undertaken to implement restoration projects required by the biological opinions to which the State Water Project has been and is subject. EcoRestore is estimated to cost approximately \$500 million in the first five years (which is 2015-2020) for implementation and planning costs. This includes certain amounts being paid by the State Water Contractors, including Metropolitan, for the costs of habitat restoration required to mitigate State and federal water project impacts pursuant to the biological opinions. See also “–Endangered Species Act and Other Environmental Considerations – Endangered Species Act Considerations – State Water Project.”

In July 2017, DWR certified a final EIR and approved the California WaterFix as an improvement to the State Water Project. The California Water Fix, as then approved, would have included new north Bay-Delta water diversion facilities with a total maximum capacity of 9,000 cfs and two tunnels for the transportation of State Water Project and Central Valley Project water from the north Delta.

In July 2018, Metropolitan’s Board approved Metropolitan’s funding in the aggregate of up to 64.6 percent of the overall capital cost of the California WaterFix, including its share as a State Water Contractor and through various forms of additional financial support Metropolitan would contribute to the project.

On February 12, 2019, in his first State of the State address, then recently elected Governor Gavin Newsom announced a conceptual proposal supporting a single-tunnel configuration for new Bay-Delta conveyance instead of the two-tunnel California WaterFix. Subsequently, on April 29, 2019, Governor Newsom issued an executive order directing identified State agencies to develop a comprehensive statewide strategy to build a climate-resilient water system. Among other things, the Governor’s executive order directed the State agencies to inventory and assess the current planning for modernizing conveyance through the Bay-Delta with a new single tunnel project. Following the Governor’s executive order, in May 2019, DWR withdrew approval of the California WaterFix project and decertified the EIR. In August 2019, DWR rescinded the last permit application associated with the project. Between mid-2017 and mid-2019, California WaterFix was subject to several lawsuits primarily related to DWR’s powers to finance and construct the project and various environmental approvals and related matters. The lawsuits, administrative proceedings, and other matters were dismissed as a result of the cancellation of the California WaterFix project.

Consistent with the Governor’s direction, DWR is pursuing a new environmental review and planning process for a proposed single tunnel project to modernize the State Water Project’s Bay-Delta conveyance, commonly referred to as the Delta Conveyance Project. The formal environmental review process for a proposed single tunnel Delta Conveyance Project commenced with the issuance by DWR of a Notice of Preparation under CEQA on January 15, 2020. The new conveyance facilities being reviewed would include intake structures on the Sacramento River, with a total capacity of 6,000 cfs, and a single tunnel to convey water to the existing pumping plants in the south Delta. Planning, environmental review and conceptual design work by DWR is expected to be completed in the 2023-2024 timeframe.

On August 20, 2020, the U.S. Army Corps of Engineers, the lead agency for the Delta Conveyance Project under NEPA, issued a notice of intent of the development of the environmental impact statement for the Delta Conveyance Project. The draft environmental impact statement is currently anticipated to be available for public review and comment in mid-2021.

Metropolitan's Board has previously authorized Metropolitan's participation in two joint powers agencies relating to a Bay-Delta conveyance project (originally formed in connection with California WaterFix): the Delta Conveyance Design and Construction Authority (the "DCA"), formed by the participating water agencies to actively participate with DWR in the design and construction of the conveyance project in coordination with DWR and under the control and supervision of DWR; and the Delta Conveyance Finance Authority (the "Financing JPA"), formed by the participating water agencies to facilitate financing for the conveyance project. The DCA is providing engineering and design activities to support the DWR's planning and environmental analysis for the potential new Delta Conveyance Project.

In August 2020, the DCA released preliminary cost information for the proposed Delta Conveyance Project based on an early cost assessment prepared by the DCA. The DCA's early assessment is based on preliminary engineering, not a full conceptual engineering report, and includes project costs for construction, management, oversight, mitigation, planning, soft costs, and contingencies. Based on these assumptions, the DCA's early assessment estimated a project cost of approximately \$15.9 billion in 2020 non-discounted dollars, which includes a 44 percent overall contingency applied to the preliminary construction costs. The DCA noted that such estimate has been developed at an early stage in the proposed project and will be revised over time.

The preliminary cost assessment information was prepared to inform various public water agencies' decisions on whether to participate in funding the environmental review, planning, preliminary design and engineering, and other pre-construction activities, for the proposed Delta Conveyance Project, and if so, at what level. Approximately \$340.7 million of investment is estimated to be needed over four years (2021 through 2024) to fund these costs. At its December 8, 2020 Board meeting, Metropolitan's Board authorized the General Manager to execute a funding agreement with DWR and commit funding for a Metropolitan participation level of 47.2 percent of such costs of preliminary design, environmental planning and other pre-construction activities to assist in the environmental process for the proposed Delta Conveyance Project. Metropolitan's 47.2 percent share amounts to an estimated funding commitment of \$160.8 million over the next four years. Eighteen other State Water Contractors also have approved funding a share of the planning and pre-construction costs. The funding agreement includes funding environmental and pre-construction activities for DWR and work that is authorized by DWR under the DCA joint exercise of powers agreement. Similar to prior agreements for BDCP and California WaterFix, the funding agreement provides that funds would be reimbursed to Metropolitan if the project is approved and when the first bonds, if any, for the project are issued. In connection with approving the funding agreement, at its December 2020 Board meeting, the Board also authorized the General Manager to execute an amendment to the DCA joint exercise of powers agreement. The amendment was developed to address changes in the anticipated participation structure for the proposed Delta Conveyance Project from that contemplated for California WaterFix. The amendment revises the board composition and voting procedures to align with public water agencies' participation in the environmental review, planning, design and engineering of the proposed Delta Conveyance Project as described above.

Metropolitan's December 8, 2020 action to approve fund planning and pre-construction costs does not commit Metropolitan to participate in the Delta Conveyance Project. Any final decision to commit to the project and incur final design and construction costs would require Board approval following completion of the environmental review for the proposed Delta Conveyance Project, which is not expected to occur until 2024 or later.

On August 6, 2020, DWR adopted certain resolutions to authorize the issuance of bonds to finance costs of Delta Conveyance Project environmental review, planning, design and, if and when such a project is approved, the costs of acquisition and construction thereof. The same day, it filed a complaint in Sacramento County Superior Court seeking to validate its authority to issue the bonds. Fourteen answers have been filed in the validation action, and one related case was filed in the same court alleging that DWR violated CEQA by adopting the bond resolutions before completing environmental review of the Delta Conveyance Project.

Additional lawsuits could be filed in the future with respect to any new Bay-Delta conveyance project and may impact the anticipated timing and costs of any proposed new single tunnel Delta Conveyance Project.

## **Colorado River Aqueduct**

### **Background**

The Colorado River was Metropolitan's original source of water after Metropolitan's establishment in 1928. Metropolitan has a legal entitlement to receive water from the Colorado River under a permanent service contract with the Secretary of the Interior. Water from the Colorado River and its tributaries is also available to other users in California, as well as users in the states of Arizona, Colorado, Nevada, New Mexico, Utah, and Wyoming (collectively, the "Colorado River Basin States"), resulting in both competition and the need for cooperation among these holders of Colorado River entitlements. In addition, under a 1944 treaty, Mexico has right to delivery of 1.5 million acre-feet of Colorado River water annually except as provided under shortage conditions described in Treaty Minute 323. The United States and Mexico agreed to conditions for reduced deliveries of Colorado River water to Mexico in Treaty Minute 323, adopted in 2017. That Minute established the rules under which Mexico agreed to take shortages and create reservoir storage in Lake Mead. Those conditions are in parity with the requirements placed on the Lower Basin States (defined below) in the Lower Basin Drought Contingency Plan (described under "– Colorado River Operations: Surplus and Storage Guidelines – Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead" in this Appendix A). Mexico can also schedule delivery of an additional 200,000 acre-feet of Colorado River water per year if water is available in excess of the requirements in the United States and the 1.5 million acre-feet allotted to Mexico.

Construction of the CRA, which is owned and operated by Metropolitan, was undertaken by Metropolitan to provide for the transportation of its Colorado River water entitlement to its service area. The CRA originates at Lake Havasu on the Colorado River and extends approximately 242 miles through a series of pump stations and reservoirs to its terminus at Lake Mathews in Riverside County. Up to 1.25 million acre-feet of water per year may be conveyed through the CRA to Metropolitan's member agencies, subject to availability of Colorado River water for delivery to Metropolitan as described below. Metropolitan first delivered CRA water to its member agencies in 1941.

### **Colorado River Water Apportionment and Seven-Party Agreement**

Pursuant to the federal Boulder Canyon Project Act of 1928, California is apportioned the use of 4.4 million acre-feet of water from the Colorado River each year plus one-half of any surplus that may be available for use collectively in Arizona, California and Nevada (the "Lower Basin States"). Under an agreement entered into in 1931 among the California entities that expected to receive a portion of California's apportionment of Colorado River water (the "Seven-Party Agreement") and which has formed the basis for the distribution of Colorado River water made available to California, Metropolitan holds the fourth priority right to 550,000 acre-feet per year. This is the last priority within California's basic apportionment. In addition, Metropolitan holds the fifth priority right to 662,000 acre-feet of water, which is in excess of California's basic apportionment. Until 2003, Metropolitan had been able to take full advantage of its fifth priority right as a result of the availability of surplus water and water apportioned to Arizona and Nevada that was not needed by those states. However, during the 1990s Arizona and Nevada increased their use of water from the Colorado River, and by 2002 no unused apportionment was available for California. As a result, California has limited its annual use to 4.4 million acre-feet since 2003, not including supplies made available under water supply programs such as intentionally-created surplus and certain conservation and storage agreements. In addition, a severe drought in the Colorado River Basin from 2000-2004 reduced storage in system reservoirs, ending the availability of surplus deliveries to Metropolitan. Prior to 2003, Metropolitan could divert over 1.25 million acre-feet in any year. Since 2003, Metropolitan's net diversions of Colorado River water have ranged from a low of 537,607 acre-feet in 2019 to a high of approximately 1,179,000 acre-feet in 2015. Average annual net diversions for 2010 through 2019 were nearly 900,291 acre-feet, with annual volumes dependent primarily on programs to augment supplies, including transfers of

conserved water from agriculture. See “– Quantification Settlement Agreement” and “– Colorado River Operations: Surplus and Shortage Guidelines.” See also “–Water Transfer, Storage and Exchange Programs – Colorado River Aqueduct Agreements and Programs.” In 2019, total available Colorado River supply was just over one million acre-feet. A portion of the available supply that was not diverted was stored in Lake Mead for future usage. See also “–Storage Capacity and Water in Storage.”

The following table sets forth the existing priorities of the California users of Colorado River water established under the 1931 Seven-Party Agreement.

**PRIORITIES UNDER THE 1931 CALIFORNIA SEVEN-PARTY AGREEMENT<sup>(1)</sup>**

<b>Priority</b>	<b>Description</b>	<b>Acre-Feet Annually</b>
1	Palo Verde Irrigation District gross area of 104,500 acres of land in the Palo Verde Valley	3,850,000
2	Yuma Project in California not exceeding a gross area of 25,000 acres in California	
3(a)	Imperial Irrigation District and other lands in Imperial and Coachella Valleys <sup>(2)</sup> to be served by All-American Canal	
3(b)	Palo Verde Irrigation District - 16,000 acres of land on the Lower Palo Verde Mesa	
4	Metropolitan Water District of Southern California for use on the coastal plain	550,000
	<b>SUBTOTAL</b>	4,400,000
5(a)	Metropolitan Water District of Southern California for use on the coastal plain	550,000
5(b)	Metropolitan Water District of Southern California for use on the coastal plain <sup>(3)</sup>	112,000
6(a)	Imperial Irrigation District and other lands in Imperial and Coachella Valleys to be served by the All-American Canal	300,000
6(b)	Palo Verde Irrigation District - 16,000 acres of land on the Lower Palo Verde Mesa	
	<b>TOTAL</b>	5,362,000
7	Agricultural use in the Colorado River Basin in California	Remaining surplus

Source: Metropolitan.

- (1) Agreement dated August 18, 1931, among Palo Verde Irrigation District, Imperial Irrigation District, Coachella Valley County Water District, Metropolitan, the City of Los Angeles, the City of San Diego and the County of San Diego. These priorities were memorialized in the agencies’ respective water delivery contracts with the Secretary of the Interior.
- (2) The Coachella Valley Water District serves Coachella Valley.
- (3) In 1946, the City of San Diego, the San Diego County Water Authority, Metropolitan and the Secretary of the Interior entered into a contract that merged and added the City and County of San Diego’s rights to storage and delivery of Colorado River water to the rights of Metropolitan.



### **Quantification Settlement Agreement**

The Quantification Settlement Agreement (“QSA”), executed by the Coachella Valley Water District (“CVWD”), Imperial Irrigation District (“IID”), Metropolitan, and others in October 2003, establishes Colorado River water use limits for IID and CVWD, and provides for specific acquisitions of conserved water and water supply arrangements. The QSA and related agreements provide a framework for Metropolitan to enter into other cooperative Colorado River supply programs and set aside several disputes among California’s Colorado River water agencies.

Specific programs under the QSA and related agreements include lining portions of the All-American and Coachella Canals, which were completed in 2009 and conserve over 98,000 acre-feet annually. Metropolitan receives this water and delivers over 77,000 acre-feet of exchange water annually to San Diego County Water Authority (“SDCWA”), and provides 16,000 acre-feet of water annually by exchange to the United States for use by the La Jolla, Pala, Pauma, Rincon and San Pasqual Bands of Mission Indians, the San Luis Rey River Indian Water Authority, the City of Escondido and the Vista Irrigation District. Water became available for exchange with the United States following a May 17, 2017 notice from the Federal Energy Regulatory Commission (“FERC”) satisfying the last requirement of Section 104 of the San Luis Rey Indian Water Rights Settlement Act (Title I of Public Law 100-675, as amended). The QSA and related agreements also authorized the transfer of conserved water annually by IID to SDCWA (up to a maximum expected amount in 2021 of 205,000 acre-feet, then stabilizing to 200,000 acre-feet per year). Metropolitan also receives this water and delivers an equal amount of exchange water annually to SDCWA. See description under “– Metropolitan and San Diego County Water Authority Exchange Agreement” below; see also “METROPOLITAN REVENUES–Principal Customers” in this Appendix A. Also included under the QSA related agreements is a delivery and exchange agreement between Metropolitan and CVWD that provides for Metropolitan, when requested, to deliver annually up to 35,000 acre-feet of Metropolitan’s State Water Project contractual water to CVWD by exchange with Metropolitan’s available Colorado River supplies.

### **Metropolitan and San Diego County Water Authority Exchange Agreement**

No facilities exist to deliver conserved water acquired by SDCWA from IID and water allocated to SDCWA that has been conserved as a result of the lining of the All-American and Coachella Canals. See “– Quantification Settlement Agreement.” Accordingly, in 2003, Metropolitan and SDCWA entered into an exchange agreement (the “Exchange Agreement”), pursuant to which SDCWA makes available to Metropolitan at its intake at Lake Havasu on the Colorado River the conserved Colorado River water SDCWA receives under the QSA related agreements. Metropolitan delivers an equal volume of water from its own sources of supply through its delivery system to SDCWA. The Exchange Agreement limits the amount of water that Metropolitan delivers to 277,700 acre-feet per year, except that an additional 5,000 acre-feet and an additional 2,500 acre-feet will be exchanged in years 2021 and 2022, respectively. In consideration for the conserved water made available to Metropolitan by SDCWA, SDCWA pays the agreement price for the exchange water delivered by Metropolitan. The price payable by SDCWA is calculated using the charges set by Metropolitan’s Board from time to time to be paid by its member agencies for the conveyance of water through Metropolitan’s facilities. See “METROPOLITAN REVENUES–Litigation Challenging Rate Structure” in this Appendix A for a description of Metropolitan’s charges for the conveyance of water through Metropolitan’s facilities and litigation in which SDCWA is challenging such charges. The term of the Exchange Agreement, as it relates to conserved water transferred by IID to SDCWA, extends through 2047, and as it relates to water allocated to SDCWA that has been conserved as a result of the lining of the All-American and Coachella Canals, extends through 2112; subject, in each case, to the right of SDCWA, upon a minimum of five years’ advance written notice to Metropolitan, to permanently reduce the aggregate quantity of conserved water made available to Metropolitan under the Exchange Agreement to the extent SDCWA decides continually and regularly to transport such conserved water to SDCWA through alternative facilities (which do not presently exist). In 2019, approximately 237,711 acre-feet were delivered to Metropolitan by SDCWA for exchange, consisting of 160,000 acre-feet

of IID conservation plus 77,711 acre-feet of conserved water from the Coachella Canal and All-American Canal lining projects.

### **Colorado River Operations: Surplus and Shortage Guidelines**

**General.** The Secretary of the Interior is vested with the responsibility of managing the mainstream waters of the lower Colorado River pursuant to federal law. Each year, the Secretary of the Interior is required to declare the Colorado River water supply availability conditions for the Lower Basin States in terms of “normal,” “surplus” or “shortage” and has adopted operations criteria in the form of guidelines to determine the availability of surplus or potential shortage allocations among the Lower Basin States and reservoir operations for such conditions.

**Interim Surplus Guidelines.** In January 2001, the Secretary of the Interior adopted guidelines (the “Interim Surplus Guidelines”), initially for use through 2016, in determining the availability and quantity of surplus Colorado River water available for use in California, Arizona and Nevada. The Interim Surplus Guidelines were amended in 2007 and now extend through 2026. The purpose of the Interim Surplus Guidelines was to provide mainstream users of Colorado River water, particularly those in California and Nevada who had been utilizing surplus flows, a greater degree of predictability with respect to the availability and quantity of surplus water. Under the Interim Surplus Guidelines, Metropolitan initially expected to divert up to 1.25 million acre-feet of Colorado River water annually under foreseeable runoff and reservoir storage scenarios from 2004 through 2016. However, an extended drought in the Colorado River Basin reduced these initial expectations, and Metropolitan has not received any surplus water since 2002.

**Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead.** In May 2005, the Secretary of the Interior directed the Bureau of Reclamation to develop additional strategies for improving coordinated management of the reservoirs of the Colorado River system. In November 2007, the Bureau of Reclamation issued a Final EIS regarding new federal guidelines concerning the operation of the Colorado River system reservoirs, particularly during drought and low reservoir conditions. These guidelines provide water release criteria from Lake Powell and water storage and water release criteria from Lake Mead during shortage and surplus conditions in the Lower Basin, provide a mechanism for the storage and delivery of conserved system and non-system water in Lake Mead and extend the Interim Surplus Guidelines through 2026 (as noted above). The Secretary of the Interior issued the final guidelines through a Record of Decision signed in December 2007. The Record of Decision and accompanying agreement among the Colorado River Basin States protect reservoir levels by reducing deliveries during low inflow periods, encourage agencies to develop conservation programs and allow the Colorado River Basin States to develop and store new water supplies. The Colorado River Basin Project Act of 1968 insulates California from shortages in all but the most extreme hydrologic conditions. Consistent with these legal protections, under the guidelines, Arizona and Nevada are first subject to the initial annual shortages identified by the Secretary up to 500,000 acre-feet.

The guidelines also created the Intentionally Created Surplus (“ICS”) program, which allows water contractors in the Lower Basin States to store conserved water in Lake Mead. Under this program, ICS water (water that has been conserved through an extraordinary conservation measure, such as land fallowing) is eligible for storage in Lake Mead by Metropolitan. ICS can be created through 2026 and delivered through 2036. See the table entitled “Metropolitan’s Water Storage Capacity and Water in Storage” under “–Storage Capacity and Water in Storage.” Under the guidelines and the Colorado River Drought Contingency Plan Authorization Act, California is able to create and deliver up to 400,000 acre-feet of extraordinary conservation ICS (“EC ICS”) annually and accumulate up to 1.7 million acre-feet of EC ICS in Lake Mead. In December 2007, California contractors for Colorado River water executed the California Agreement for the Creation and Delivery of Extraordinary Conservation Intentionally Created Surplus (the “California ICS Agreement”), which established terms and conditions for the creation, accumulation, and delivery of EC ICS by California contractors receiving Colorado River water. Under the California ICS Agreement, the State’s EC ICS creation, accumulation, and delivery limits provided to California under the 2007 Interim Surplus

Guidelines are apportioned between IID and Metropolitan. No other California contractors were permitted to create or accumulate ICS. Under the terms of the agreement, IID is allowed to store up to 25,000 acre-feet per year of EC ICS in Lake Mead with a cumulative limit of 50,000 acre-feet. Metropolitan is permitted to use the remaining available EC ICS creation, delivery, and accumulation limits provided to California.

The Secretary of the Interior delivers the stored ICS water to Metropolitan in accordance with the terms of December 13, 2007, January 6, 2010, and November 20, 2012 Delivery Agreements between the United States and Metropolitan. As of January 1, 2021, Metropolitan had an estimated 1,308,000 acre-feet in its ICS accounts. These ICS accounts include water conserved by fallowing in the Palo Verde Valley, projects implemented with IID in its service area, groundwater desalination, the Warren H. Brock Reservoir Project, and international agreements that converted water conserved by Mexico to the United States.

Since the 2007 Lower Basin shortage guidelines were issued for the coordinated operations of Lake Powell and Lake Mead, the Colorado River has continued to experience drought conditions. The seven Colorado River Basin States, the U.S. Department of Interior through the Bureau of Reclamation, and water users in the Colorado River basin, including Metropolitan, began developing Drought Contingency Plans (“DCPs”) to reduce the risk of Lake Powell and Lake Mead declining below critical elevations through 2026.

In April 2019, the President signed legislation directing the Secretary of the Interior to sign and implement four DCP agreements related to the Upper and Lower Basin DCPs without delay. The agreements were executed and the Upper and Lower Basin DCPs became effective on May 20, 2019. The Lower Basin Drought Contingency Plan Agreement requires California, Arizona and Nevada to store defined volumes of water in Lake Mead at specified lake levels. California would begin making contributions if Lake Mead’s elevation is projected to be 1,045 feet above sea level or below on January 1. Lake Mead elevation in January 2020 was 1,090 feet. Depending on the lake’s elevation, California’s contributions would range from 200,000 to 350,000 acre-feet a year (“DCP Contributions”). Pursuant to intrastate implementation agreements, Metropolitan will be responsible for 93 percent of California’s DCP Contributions under the Lower Basin DCP. CVWD will be responsible for 7 percent of California’s required DCP Contributions.

Implementation of the Lower Basin DCP enhances Metropolitan’s ability to store water in Lake Mead and ensures that water in storage can be delivered at a later date. The Lower Basin DCP increases the total volume of water that California may store in Lake Mead by 200,000 acre-feet, which Metropolitan will have the right to use. Water stored as ICS will be available for delivery as long as Lake Mead’s elevation remains above 1,025 feet. Previously, that water would likely have become inaccessible below a Lake Mead elevation of 1,075 feet. DCP Contributions may be made through conversion of existing ICS. These types of DCP Contributions become DCP ICS. DCP Contributions may also be made by leaving water in Lake Mead that there was a legal right to have delivered. This type of DCP Contribution becomes system water and may not be recovered. Rules are set for delivery of DCP ICS through 2026 and between 2027-2057.

The Lower Basin DCP will be effective through 2026. Before the DCP and 2007 Lower Basin shortage guidelines terminate in 2026, the U.S. Department of Interior through the Bureau of Reclamation, the seven Colorado River Basin States, and water users in the Colorado River basin, including Metropolitan, will begin work on the development of new shortage guidelines for the management and operation of the Colorado River.

On April 22, 2019, Metropolitan was served notice of a CEQA lawsuit filed by IID against Metropolitan. In this lawsuit, IID is seeking to vacate Metropolitan’s Board actions taken on December 11, 2018 and March 12, 2019 authorizing Metropolitan’s entering into the agreements implementing the Lower Basin DCP under CEQA and to block Metropolitan from implementing the Lower Basin DCP and any related agreements. The trial for this matter occurred on January 4, 2021. On January 5, 2021, the court issued its final order denying IID’s writ petition. In its ruling, the court held that IID’s petition was barred because IID did not exhaust its administrative remedies. The court further found that Metropolitan provided

adequate public notice of the grounds of its CEQA exemption determination and that substantial evidence supported such determination. IID has 60 days to file an appeal after the court enters the judgment. Metropolitan is unable to assess at this time the likelihood of success of this litigation in the event IID appeals the ruling, or of any future claims, or their potential effect on future implementation of the Lower Basin DCP.

***Related Litigation—Navajo Nation Suit.*** The Navajo Nation filed litigation against the Department of the Interior, specifically the Bureau of Reclamation and the Bureau of Indian Affairs, in 2003, alleging that the Bureau of Reclamation has failed to determine the extent and quantity of the water rights of the Navajo Nation in the Colorado River and that the Bureau of Indian Affairs has failed to otherwise protect the interests of the Navajo Nation. The complaint challenges the adequacy of the environmental review for the Interim Surplus Guidelines (described under “–Colorado River Operations: Surplus and Shortage Guidelines – Interim Surplus Guidelines”) and seeks to prohibit the Department of the Interior from allocating any “surplus” water until such time as a determination of the rights of the Navajo Nation is completed. Metropolitan and other California water agencies filed motions to intervene in this action. In October 2004 the court granted the motions to intervene and stayed the litigation to allow negotiations among the Navajo Nation, federal defendants, Central Arizona Water Conservation District (“CAWCD”), State of Arizona and Arizona Department of Water Resources. After years of negotiations, a tentative settlement was proposed in 2012 that would provide the Navajo Nation with specified rights to water from the Little Colorado River and groundwater basins under the reservation, along with federal funding for development of water supply systems on the tribe’s reservation. The proposed agreement was rejected by tribal councils for both the Navajo and the Hopi, who were seeking to intervene. On May 16, 2013, the stay of proceedings was lifted. On June 3, 2013, the Navajo Nation moved for leave to file a first amended complaint, which the court granted on June 27, 2013. The amended complaint added a legal challenge to the Lower Basin Shortage Guidelines adopted by the Secretary of the Interior in 2007 that allow Metropolitan and other Colorado River water users to store water in Lake Mead (described under “– Colorado River Operations: Surplus and Shortage Guidelines – Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead”). Metropolitan has used these new guidelines to store over 1,000,000 acre-feet of water in Lake Mead, a portion of which has been delivered, and the remainder of which may be delivered at Metropolitan’s request in future years. On July 22, 2014, the district court dismissed the lawsuit in its entirety, ruling that the Navajo Nation lacked standing and that the claim was barred against the federal defendants. The district court denied a motion by the Navajo Nation for leave to amend the complaint further after the dismissal. On September 19, 2014, the Navajo Nation appealed the dismissal of its claims related to the Interim Surplus Guidelines, the Lower Basin Shortage Guidelines, and breach of the federal trust obligation to the tribe. On December 4, 2017, the Ninth Circuit Court of Appeals held that the Navajo Nation lacked standing for its National Environmental Policy Act claims, but that the breach of trust claim was not barred against the federal defendants.

The matter was remanded to the district court in January 2018 to consider the Navajo Nation’s breach of trust claim on its merits. The Navajo Nation sought leave to file an amended complaint on its breach of trust claim twice. On August 23, 2019, the district court issued its order denying the motion to amend, entered judgment against the Navajo Nation, and dismissed the action. On October 18, 2019, the Navajo Nation filed its notice of appeal in the Ninth Circuit. The Navajo Nation filed its opening brief on February 26, 2020. Defendants and Intervenor answering briefs were due April 27, 2020. Metropolitan filed a joint answering brief with several other Defendant-Intervenor, including, among others, the State of Arizona, the State of Nevada, CVWD, and IID. The case was fully briefed as of July 1, 2020. Oral argument was held on October 16, 2020 before the Ninth Circuit. No ruling has yet been issued. Metropolitan is unable to assess at this time the likelihood of success of this litigation or any future claims, or their potential effect on Colorado River water supplies.

## **Endangered Species Act and Other Environmental Considerations**

### **Endangered Species Act Considerations - State Water Project**

*General.* DWR has altered the operations of the State Water Project to accommodate species of fish listed as threatened or endangered under the federal Endangered Species Act (“ESA”) and/or California ESA. Currently, three species (the winter-run and spring-run Chinook salmon and the Delta smelt) are listed under both ESAs. The Central Valley steelhead, the North American green sturgeon and the killer whale are listed under the federal ESA, and the Longfin smelt is listed as a threatened species under the California ESA.

The federal ESA requires that before any federal agency authorizes, funds, or carries out an action that may affect a listed species or designated critical habitat, it must consult with the appropriate federal fishery agency (either the National Marine Fisheries Service (“NMFS”) or the U.S. Fish and Wildlife Service (“USFWS”) depending on the species) to determine whether the action would jeopardize the continued existence of any threatened or endangered species, or adversely modify habitat critical to the species’ needs. The result of the consultation is known as a “biological opinion.” In a biological opinion, a federal fishery agency determines whether the action would cause jeopardy to a threatened or endangered species or adverse modification to critical habitat; and if jeopardy or adverse modification is found, recommends reasonable and prudent alternatives that would allow the action to proceed without causing jeopardy or adverse modification. If no jeopardy or adverse modification is found, the fish agency issues a “no jeopardy opinion.” The biological opinion also includes an “incidental take statement.” The incidental take statement allows the action to go forward even though it will result in some level of “take,” including harming or killing some members of the species, incidental to the agency action, provided that the agency action does not jeopardize the continued existence of any threatened or endangered species and complies with reasonable mitigation and minimization measures recommended by the federal fishery agency or as incorporated into the project description.

The California ESA generally requires an incidental take permit or consistency determination for any action that may cause take of a State-listed species of fish or wildlife. To issue an incidental take permit or consistency determination, the California Department of Fish and Wildlife (“CDFW”) must determine that the impacts of the authorized take will be minimized and fully mitigated and will not cause jeopardy.

On August 2, 2016, DWR and the Bureau of Reclamation requested that USFWS and NMFS reinstate federal ESA consultation on the coordinated operations of the State Water Project and the federal Central Valley Project to update them with the latest best available science and lessons learned operating under the prior 2008 and 2009 biological opinions. In January 2019, the Bureau of Reclamation submitted the initial biological assessment to USFWS and NMFS. The biological assessment contains a description of the Bureau of Reclamation’s and DWR’s proposed long-term coordinated operations plan (the “2019 Long-Term Operations Plan”). On October 22, 2019, USFWS and NMFS issued new federal biological opinions (the “2019 biological opinions”) that provide incidental take coverage for the 2019 Long-Term Operations Plan. On February 18, 2020, the Bureau of Reclamation signed a Record of Decision, pursuant to the National Environmental Policy Act, completing its environmental review and adopting the 2019 Long-Term Operations Plan.

The 2019 Long-Term Operations Plan incorporates and updates many of the requirements contained in the previous 2008 and 2009 biological opinions. It also includes over \$1 billion over a ten-year period in conservation, monitoring and new science, some of which is in the form of commitments carried forward from the previous biological opinions. Those costs are shared by the State Water Project and the federal Central Valley Project. The prior 2008 and 2009 biological opinions resulted in an estimated reduction in State Water Project deliveries of 0.3 million acre-feet during critically dry years to 1.3 million acre-feet in above normal water years as compared to the previous baseline. The 2019 Long-Term Operations Plan and 2019 biological opinions are expected to increase State Water Project deliveries by an annual average of 200,000 acre-feet as compared to the previous biological opinions.

On December 2, 2019, a group of non-governmental organizations, including commercial fishing groups and the Natural Resources Defense Council (the “NGOs”), sued USFWS and NMFS, alleging the 2019 biological opinions were arbitrary and capricious, later amending the lawsuit to include claims under the federal ESA and the National Environmental Policy Act related to decisions made by the Bureau of Reclamation. On February 20, 2020, the California Natural Resources Agency (“Natural Resources”), the California Environmental Protection Agency, and the Attorney General (collectively, the “State Petitioners”) sued the federal agencies, making similar allegations. The State Water Contractors intervened in both cases to defend the 2019 biological opinions. The NGOs filed for a temporary restraining order on April 2, 2020, which the Court overruled. The NGOs and the State Petitioners filed a preliminary injunction seeking a court order imposing interim operations consistent with the prior 2008 and 2009 biological opinions pending rulings on the merits of plaintiffs’ challenges to the two 2019 biological opinions. On May 11, 2020, the court granted, in part, the motions for preliminary injunction, thereby requiring the Central Valley Project to operate to one of the reasonable and prudent alternatives (referred to as the “inflow-to-export ratio”) in the 2009 biological opinion through May 31, 2020. DWR is not a party in this litigation, and other legal requirements governed the operation of the State Water Project during the relevant time period in May, and therefore the State Water Project was not impacted by this order. USFWS and NMFS have produced their respective administrative records. Once the administrative records are finalized, the parties anticipate stipulating to a briefing schedule to resolve the merits of the cases. Metropolitan is unable to predict the outcome of any litigation relating to the federal 2019 biological opinions or any potential effect on Metropolitan’s State Water Project water supplies.

On January 20, 2021, President Joseph R. Biden Jr. issued an Executive Order on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis directing all executive departments and agencies to immediately review, and, as appropriate and consistent with applicable law, take action to address the promulgation of Federal regulations and other actions during the last four years for consistency with the new administration’s policies. Among numerous actions identified for review, the United States Department of Commerce and United States Department of Interior heads were directed to review the 2019 biological opinions. At this point it is unclear if the review will result in any changes to the 2019 biological opinions.

As described above, operations of the State Water Project require both federal ESA and California ESA authorizations. DWR described and analyzed its proposed State Water Project long-term operations plan for purposes of obtaining a new California ESA permit in its November 2019 Draft EIR under CEQA. Its 2019 Draft EIR proposed essentially the same operations plan as for the federal 2019 biological opinions, with the addition of operations for the State-only listed species, Longfin smelt. In December 2019, DWR submitted its application for an incidental take permit under the California ESA to CDFW, with a modified State operations plan that added new outflow and environmental commitments. On March 27, 2020, DWR released its final EIR and Notice of Determination, describing and adopting a State operations plan with additional operational restrictions and additional conservation commitments. On March 31, 2020, CDFW issued an incidental take permit for the State Water Project that included further operational restrictions and outflow. As issued, the incidental take permit reduces State Water Project deliveries by more than 200,000 acre-feet on average annually, and adds another \$218 million over a ten-year period in environmental commitments for the State Water Project.

On April 28, 2020, Metropolitan and Mojave Water Agency (“Mojave”) jointly sued CDFW and DWR, and Natural Resources, alleging that the new California ESA permit and Final EIR violate CEQA and the California ESA. Metropolitan and Mojave also allege that DWR breached the State Water Contract and the implied covenant of good faith and fair dealing by, among other things, accepting an incidental take permit containing mitigation requirements in excess of that required by law. Subsequently, CVWD, San Geronio Pass Water Agency (both State Water Contractors), and Municipal Water District of Orange County (a Metropolitan member agency) joined with Metropolitan and Mojave in a first amended complaint. The State Water Contractors and the Kern County Water Agency also filed CEQA and CESA actions, in



which the Antelope Valley-East Kern Water Agency, Central Coast Water Authority, Dudley Ridge Water District, County of Kings, Oak Flat Water District, Palmdale Water District, Santa Clarita Valley Water Agency, San Gabriel Valley Municipal Water District, and Tulare Lake Basin Water Storage District subsequently joined in a first amended complaint in which the individual water contractors allege causes of action for breach of contract and the implied covenant of good faith and fair dealing. In addition, another State Water Contractor, the San Bernardino Valley Municipal Water District, filed a complaint alleging violations of CEQA and CESA, as well as breach of contract and the implied covenant of good faith and fair dealing, unconstitutional takings, and anticipatory repudiation of contract. Several federal CVP water contractors also filed a CEQA challenge. Four other lawsuits have been filed by certain commercial fishing groups and a tribe, several environmental groups, and two in-Delta water agencies challenging the Final EIR as inadequate under CEQA and alleging violations of the Delta Reform Act, public trust doctrine and, in one of the cases, certain water right statutes. All eight cases have been coordinated in Sacramento County Superior Court, and a stay on discovery was issued until a coordination trial judge is assigned and addresses the stay. The presiding judge in Sacramento has not yet assigned a coordination trial judge. Metropolitan is unable to assess at this time the likelihood of success of any litigation relating to the California ESA permit, including any future litigation or any future claims that may be filed, or any potential effect on Metropolitan's State Water Project water supplies.

#### **Endangered Species Act Considerations - Colorado River**

Federal and state environmental laws protecting fish species and other wildlife species have the potential to affect Colorado River operations. A number of species that are on either "endangered" or "threatened" lists under the ESAs are present in the area of the Lower Colorado River, including among others, the bonytail chub, razorback sucker, southwestern willow flycatcher and Yuma clapper rail. To address this issue, a broad-based state/federal/tribal/private regional partnership that includes water, hydroelectric power and wildlife management agencies in Arizona, California and Nevada have developed a multi-species conservation program for the main stem of the Lower Colorado River (the Lower Colorado River Multi-Species Conservation Program or "MSCP"). The MSCP allows Metropolitan to obtain federal and state permits for any incidental take of protected species resulting from current and future water and power operations of its Colorado River facilities and to minimize any uncertainty from additional listings of endangered species. The MSCP also covers operations of federal dams and power plants on the river that deliver water and hydroelectric power for use by Metropolitan and other agencies. The MSCP covers 27 species and habitat in the Lower Colorado River from Lake Mead to the Mexican border for a term of 50 years (commencing in 2005). Over the 50-year term of the program, the total cost to Metropolitan will be about \$88.5 million (in 2003 dollars), and annual costs will range between \$0.8 million and \$4.7 million (in 2003 dollars).

#### **Invasive Species - Mussel Control Programs**

Zebra and quagga mussels are established in many regions of the United States. Mussels can reproduce quickly and, if left unmanaged, can reduce flows by clogging intakes and raw water conveyance systems, alter or destroy fish habitats, and affect lakes and beaches. Mussel management activities may require changes in water delivery protocols to reduce risks of spreading mussel populations and increase operation and maintenance costs.

In January 2007, quagga mussels were discovered in Lake Mead. All pipelines and facilities that transport raw Colorado River water are considered to be infested with quagga mussels. Metropolitan has a quagga mussel control plan, approved by the CDFW to address the presence of mussels in the CRA system and limit further spread of mussels. Year-round routine monitoring for mussel larvae has been conducted at Lake Havasu, selected locations in the CRA system, and non-infested areas of Metropolitan's system and some southern locations in the State Water Project. Shutdown inspections have demonstrated that control activities effectively limit mussel infestation in the CRA and prevent the further spread of mussels to other

bodies of water and water systems. Metropolitan's costs for controlling quagga mussels in the CRA system over the past 12 years has been approximately \$5 million per year.

Established mussel populations are located within ten miles of the State Water Project. A limited number of mussels have also been detected in State Water Project supplies but there is currently no evidence of established mussel populations, nor have they impacted Metropolitan's State Water Project deliveries. To prevent the introduction and further spread of mussels into the State Water Project, the Bay-Delta, and other uninfested bodies of water and water systems, DWR has also developed quagga mussel control plans and has partnered with other State and federal agencies on a number of related activities. Metropolitan coordinates mussel monitoring and control activities with these agencies.

## **Water Transfer, Storage and Exchange Programs**

### **General**

To supplement its State Water Project and Colorado River water supplies, Metropolitan has developed and actively manages a portfolio of water supply programs, including water transfer, storage and exchange agreements, the supplies created by which are conveyed through the California Aqueduct of the State Water Project, utilizing Metropolitan's rights under its State Water Contract to use the portion of the State Water Project conveyance system necessary to deliver water to it, or through available CRA capacity. Consistent with its IRP, Metropolitan will continue to pursue voluntary water transfer and exchange programs with State, federal, public and private water districts and individuals to help mitigate supply/demand imbalances and provide additional dry-year supply sources. A summary description of certain of Metropolitan's supply programs are set forth below. In addition to the arrangements described below, Metropolitan is entitled to storage and access to stored water in connection with various other storage programs and facilities. See "--Colorado River Aqueduct" above, as well as the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "--Storage Capacity and Water in Storage" below.

### **State Water Project Agreements and Programs**

In addition to the basic State Water Project contract provisions, Metropolitan has other contract rights that accrue to the overall value of the State Water Project. Because each Contractor is paying for physical facilities, they also have the right to use the facilities to move water supplies associated with agreements, water transfers and water exchanges. Metropolitan has entered into agreements and exchanges that provide additional water supplies.

Existing and potential water transfers and exchanges are an important element for improving the water supply reliability within Metropolitan's service area and accomplishing the reliability goal set by Metropolitan's Board. California's agricultural activities consume approximately 34 million acre-feet of water annually, which is approximately 80 percent of the total water used in the State for agricultural and urban uses and 40 percent of the water used for all consumptive uses, including environmental demands. Voluntary water transfers and exchanges with agricultural users can make a portion of this agricultural water supply available to support the State's urban areas. The portfolio of supplemental supplies that Metropolitan has developed to be conveyed through the California Aqueduct extend from north of the Bay-Delta to Southern California. Certain of these arrangements are also described below.

***Castaic Lake and Lake Perris.*** Metropolitan has contractual rights to withdraw up to 65,000 acre-feet of water in Lake Perris (East Branch terminal reservoir) and 153,940 acre-feet of water in Castaic Lake (West Branch terminal reservoir). This storage provides Metropolitan with additional options for managing State Water Project deliveries to maximize yield from the project. Any water used must be returned to the State Water Project within five years or it is deducted from allocated amounts in the sixth year.

**Metropolitan Article 56 Carryover.** Metropolitan has the right to store its allocated contract amount for delivery in subsequent years. Metropolitan can store between 100,000 and 200,000 acre-feet, depending on the final water supply allocation percentage.

**Yuba River Accord.** Metropolitan entered into an agreement with DWR in December 2007 to purchase a portion of the water released by the Yuba County Water Agency ("YCWA"). YCWA was involved in a SWRCB proceeding in which it was required to increase Yuba River fishery flows. Within the framework of agreements known as the Yuba River Accord, DWR entered into an agreement for the long-term purchase of water from YCWA. The agreement permits YCWA to transfer additional supplies at its discretion. Metropolitan, other State Water Contractors, and the San Luis & Delta-Mendota Water Authority entered into separate agreements with DWR for the purchase of portions of the water made available. Metropolitan's agreement allows Metropolitan to purchase, in dry years through 2025, available water supplies which have ranged from approximately 6,555 acre-feet to 67,068 acre-feet per year.

In addition to water made available under the Yuba River Accord, Metropolitan has developed groundwater storage agreements that allow Metropolitan to store available supplies in the Central Valley for return later. See "METROPOLITAN'S WATER DELIVERY SYSTEM--Water Quality and Treatment" in this Appendix A for information regarding recent water quality regulations and developments that impact or may impact certain of Metropolitan's groundwater storage programs.

Metropolitan has also developed other groundwater storage and exchange programs, certain of which are described below.

**Arvin-Edison/Metropolitan Water Management Program.** In December 1997, Metropolitan entered into an agreement with the Arvin-Edison Water Storage District ("Arvin-Edison"), an irrigation agency located southeast of Bakersfield, California. Under the program, Arvin-Edison stores water on behalf of Metropolitan. In January 2008, Metropolitan and Arvin-Edison amended the agreement to enhance the program's capabilities and to increase the delivery of water to the California Aqueduct. To facilitate the program, new wells, spreading basins and a return conveyance facility connecting Arvin-Edison's existing facilities to the California Aqueduct have been constructed. The agreement also provides Metropolitan priority use of Arvin-Edison's facilities to convey high-quality water available on the east side of the San Joaquin Valley to the California Aqueduct. Up to 350,000 acre-feet of Metropolitan's water may be stored and Arvin-Edison is obligated to return up to 75,000 acre-feet of stored water in any year to Metropolitan, upon request. The agreement will terminate in 2035 unless extended. Metropolitan's estimated storage account balance under the Arvin-Edison/Metropolitan Water Management Program as of January 1, 2021 is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "--Storage Capacity and Water in Storage" below. As a result of detecting 1,2,3-trichloropropane ("TCP") in Arvin-Edison wells, Metropolitan has temporarily suspended operation of the program until the water quality concerns can be further evaluated and managed.

**Semitropic/Metropolitan Groundwater Storage and Exchange Program.** In 1994, Metropolitan entered into an agreement with the Semitropic Water Storage District ("Semitropic"), located adjacent to the California Aqueduct north of Bakersfield, to store water in the groundwater basin underlying land within Semitropic. The minimum annual yield available to Metropolitan from the program is 39,700 acre-feet of water and the maximum annual yield is 231,200 acre-feet of water depending on the available unused capacity and the State Water Project allocation. Metropolitan's estimated storage account balance under the Semitropic program as of January 1, 2021 is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "--Storage Capacity and Water in Storage" below.

**Kern Delta Storage Program.** Metropolitan entered into an agreement with Kern Delta Water District ("Kern Delta") in May 2003, for a groundwater banking and exchange transfer program to allow Metropolitan to store up to 250,000 acre-feet of State Water Contract water in wet years and to permit

Metropolitan, at Metropolitan's option, a return of up to 50,000 acre-feet of water annually during hydrologic and regulatory droughts. Metropolitan's estimated storage account balance under this program as of January 1, 2021 is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "–Storage Capacity and Water in Storage" below.

***Mojave Storage Program.*** Metropolitan entered into a groundwater banking and exchange transfer agreement with Mojave Water Agency ("Mojave") in October 2003. The agreement allows for Metropolitan to store water in an exchange account for later return. The agreement allows Metropolitan to annually withdraw Mojave State Water Project contractual amounts, after accounting for local needs. Under a 100 percent allocation, the State Water Contract provides Mojave 82,800 acre-feet of water. This agreement was amended in 2011 to allow for the cumulative storage of up to 390,000 acre-feet. Metropolitan's estimated storage account balance under this program as of January 1, 2021 is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "–Storage Capacity and Water in Storage" below.

***Antelope Valley-East Kern Storage and Exchange Program.*** In 2016, Metropolitan entered into an agreement with the Antelope Valley-East Kern Water Agency ("AVEK"), the third largest State Water Contractor, to both exchange supplies and store water in the Antelope Valley groundwater basin. Under the exchange, AVEK would provide at least 30,000 acre-feet over ten years of its unused Table A State Water Project water to Metropolitan. For every two acre-feet provided to Metropolitan as part of the exchange, AVEK would receive back one acre-foot in the future. For the one acre-foot that is retained by Metropolitan, Metropolitan would pay AVEK under a set price schedule based on the State Water Project allocation at the time. Under this agreement, AVEK also provides Metropolitan up to 30,000 acre-feet of storage. Metropolitan's estimated storage account balance under this program as of January 1, 2021 is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "–Storage Capacity and Water in Storage" below.

***Antelope Valley-East Kern High Desert Water Bank Program.*** In April 2019, Metropolitan's Board authorized the General Manager to enter into an agreement with AVEK for a groundwater banking program referred to as the High Desert Water Bank Program. The estimated costs of construction of the facilities to implement the program is \$131 million. Following completion of construction, which is expected to take approximately five years, Metropolitan would have the right to store up to 70,000 acre-feet per year of its unused Table A State Water Project water or other supplies in the Antelope Valley groundwater basin for later return. The maximum storage capacity for Metropolitan supplies would be 280,000 acre-feet. At Metropolitan's direction, up to 70,000 acre-feet of stored water annually would be available for return by direct pump back into the East Branch of the California Aqueduct. Upon completion, this program would provide additional flexibility to store and recover water for emergency or water supply needs through 2057.

***San Gabriel Valley Municipal Water District and Other Exchange Programs.*** In 2013, Metropolitan entered into an agreement with the San Gabriel Valley Municipal Water District ("SGVMWD"). Under this agreement, Metropolitan delivers treated water to a SGVMWD subagency in exchange for twice as much untreated water in the groundwater basin. Metropolitan's member agencies can then use the groundwater supplies to meet their needs. Metropolitan can exchange and purchase at least 5,000 acre-feet per year. This program has the potential to increase Metropolitan's reliability by providing 115,000 acre-feet through 2035.

Metropolitan has been negotiating, and will continue to pursue, water purchase, storage and exchange programs with other agencies in the Sacramento and San Joaquin Valleys. These programs involve the storage of both State Water Project supplies and water purchased from other sources to enhance Metropolitan's dry-year supplies and the exchange of normal year supplies to enhance Metropolitan's water reliability and water quality, in view of dry conditions and potential impacts from the ESA considerations

discussed above under the heading “–Endangered Species Act and Other Environmental Considerations – Endangered Species Act Considerations - State Water Project.”

The Sites Reservoir is a proposed reservoir project of approximately 1.3 to 1.5 million acre-feet, being analyzed by the Sites Reservoir Authority, to be located in Colusa County. The water stored in the proposed project would be diverted from the Sacramento River. As currently proposed, the Sites Reservoir project would have dedicated water storage and yield that would be used for fishery enhancement, water quality, and other environmental purposes. The proposed project could also provide additional water supply that could be used for dry-year benefits. Metropolitan is a member of the Sites Reservoir Committee, a group of 30 agencies that are participating in certain planning activities in connection with the proposed development of the project, including the development of environmental planning documents, a federal feasibility report and project permitting. In October 2020, Metropolitan’s Board approved \$5.0 million in funding for Metropolitan’s continued participation in such planning activities through then end of 2021. Metropolitan’s agreement to participate in funding of this phase of project development activities does not commit Metropolitan to participate in any actual reservoir project that may be undertaken in the future.

### **Colorado River Aqueduct Agreements and Programs**

Metropolitan has taken steps to augment its share of Colorado River water through agreements with other agencies that have rights to use such water, including through cooperative programs with other water agencies to conserve and develop supplies and through programs to exchange water with other agencies. These supplies are conveyed through the CRA. Metropolitan determines the delivery schedule of these supplies throughout the year based on changes in the availability of State Water Project and Colorado River water. Under certain of these programs, water may be delivered to Metropolitan’s service area in the year made available or in a subsequent year as ICS water from Lake Mead storage. See “–Colorado River Aqueduct –Colorado River Operations: Surplus and Shortage Guidelines – Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead.”

***IID/Metropolitan Conservation Agreement.*** Under a 1988 water conservation agreement, as amended in 2003 and 2007 (the “1988 Conservation Agreement”) between Metropolitan and IID, Metropolitan provided funding for IID to construct and operate a number of conservation projects that have conserved up to 109,460 acre-feet of water per year that has been provided to Metropolitan. As amended, the agreement’s initial term has been extended to at least 2041 or 270 days after the termination of the QSA. In 2019, 105,000 acre-feet of conserved water was made available by IID to Metropolitan. Under the QSA and related agreements, Metropolitan, at the request of CVWD, forgoes up to 20,000 acre-feet of this water each year for diversion by CVWD from the Coachella Canal. In each of 2018 and 2019, CVWD’s requests were for 0 acre-feet, leaving 105,000 acre-feet in 2018 and 2019 for Metropolitan. In December 2019, Metropolitan signed a revised agreement with CVWD in which CVWD will limit its annual request of water from this program to 15,000 acre-feet through 2026. See “–Colorado River Aqueduct –Quantification Settlement Agreement.”

***Palo Verde Land Management, Crop Rotation and Water Supply Program.*** In August 2004, Metropolitan and PVID signed the program agreement for a Land Management, Crop Rotation and Water Supply Program. Under this program, participating landowners in the PVID service area are compensated for reducing water use by not irrigating a portion of their land. This program provides up to 133,000 acre-feet of water to be available to Metropolitan in certain years. The term of the program is 35 years. Following began on January 1, 2005. The following table shows annual volumes of water saved and made available to Metropolitan during the last 10 calendar years under the Land Management, Crop Rotation and Water Supply Program with PVID:

**WATER AVAILABLE FROM PVID LAND MANAGEMENT,  
CROP ROTATION AND WATER SUPPLY PROGRAM**

Calendar Year	Volume (acre-feet)
2010 <sup>(1)</sup>	148,600
2011	122,200
2012	73,700
2013	32,800
2014	43,000
2015	94,500
2016	125,400
2017	111,800
2018	95,800
2019	44,500

*Source: Metropolitan.*

<sup>(1)</sup> Includes water from a supplemental fallowing program entered into with PVID in March 2009 that provided for fallowing of additional acreage in 2009 and 2010 and resulted in an additional 32,300 acre-feet of water in 2010 made available under the program.

***Bard Water District Seasonal Fallowing Program.*** In January 2020, Metropolitan and Bard Water District signed a seven-year agreement for a seasonal fallowing program. Under this program, each year farmers in Bard Water District have the opportunity to be compensated for reducing water use by not irrigating a portion of their land between April 1 and August 1 each year. During this period, farmers typically plant low-value, high water use crops, and this program incentivizes them to fallow the land instead. This program provides up to 6,000 acre-feet of water per year to be available to Metropolitan. The term of the program is through 2026, and during that time the water can either be delivered to Metropolitan or stored in Lake Mead as described below.

***Lake Mead Storage Program.*** As described under “Colorado River Aqueduct – Colorado River Operations: Surplus and Shortage Guidelines – Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead,” Metropolitan has entered into agreements to set forth the guidelines under which ICS water is developed and stored in and delivered from Lake Mead. The amount of water stored in Lake Mead must be created through extraordinary conservation, system efficiency, tributary, imported, or binational conservation methods. Metropolitan has participated in projects to create ICS as described below:

**Drop 2 (Warren H. Brock) Reservoir.** In May 2008, Metropolitan provided \$28.7 million to join the CAWCD and the Southern Nevada Water Authority (“SNWA”) in funding the Bureau of Reclamation’s construction of an 8,000 acre-foot off-stream regulating reservoir near Drop 2 of the All-American Canal in Imperial County (officially named the Warren H. Brock Reservoir). Construction was completed in October 2010 and the Bureau of Reclamation refunded approximately \$3.71 million in unused contingency funds to Metropolitan. The Warren H. Brock Reservoir conserves about 70,000 acre-feet of water per year by capturing and storing water that would otherwise be lost from the system. In return for its funding, Metropolitan received 100,000 acre-feet of water that was stored in Lake Mead for its future use and has the ability to receive up to 25,000 acre-feet of water in any single year. Besides the additional water supply, the addition of the Warren H. Brock reservoir adds to the flexibility of Colorado River operations by storing underutilized Colorado River water orders caused by unexpected canal outages, changes in weather conditions, and high tributary runoff into the Colorado River. As of January 1, 2021, Metropolitan had taken delivery of 35,000 acre-feet of this water and had 65,000 acre-feet remaining in storage.



International Water Treaty Minutes 319 and 323. In November 2012, as part of the implementation of Minute 319, Metropolitan executed agreements in support of a program to augment Metropolitan's Colorado River supply between 2013 through 2017 through an international pilot project in Mexico. Metropolitan's total share of costs was \$5 million for 47,500 acre-feet of project supplies. In December 2013, Metropolitan and IID executed an agreement under which IID has paid half of Metropolitan's program costs, or \$2.5 million, in return for half of the project supplies, or 23,750 acre-feet. As such, 23,750 acre-feet of Intentionally Created Mexican Allocation was converted to Binational ICS and credited to Metropolitan's binational ICS water account in 2017. See "–Colorado River Aqueduct –Colorado River Operations: Surplus and Shortage Guidelines – Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead." In September 2017, as part of the implementation of Minute 323, Metropolitan agreed to fund additional water conservation projects in Mexico that will yield approximately 24,000 acre-feet of additional supply for Metropolitan by 2026 at a cost of approximately \$3.3 million.

***Storage and Interstate Release Agreement with Nevada.*** In May 2002, SNWA and Metropolitan entered into an Agreement Relating to Implementation of Interim Colorado River Surplus Guidelines, in which SNWA and Metropolitan agreed to the allocation of unused apportionment as provided in the Interim Surplus Guidelines and on the priority of SNWA for interstate banking of water in Arizona. SNWA and Metropolitan entered into a storage and interstate release agreement on October 21, 2004. Under this agreement, SNWA can request that Metropolitan store unused Nevada apportionment in California. The amount of water stored through 2014 under this agreement was approximately 205,000 acre-feet. In October 2015, SNWA and Metropolitan executed an additional amendment to the agreement under which Metropolitan paid SNWA approximately \$44.4 million and SNWA stored an additional 150,000 acre-feet with Metropolitan during 2015. Of that amount, 125,000 acre-feet has been added to SNWA's storage account with Metropolitan, increasing the total amount of water stored to approximately 330,000 acre-feet. In subsequent years, SNWA may request recovery of the stored water. When SNWA requests the return of any of the stored 125,000 acre-feet, SNWA will reimburse Metropolitan for an equivalent proportion of the \$44.4 million plus inflation based on the amount of water returned. It is expected that SNWA will not request return of any of the water stored with Metropolitan before 2022.

***California ICS Agreement Intrastate Storage Provisions.*** As described under "–Colorado River Aqueduct –Colorado River Operations: Surplus and Shortage Guidelines – Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead," in 2007, IID, Metropolitan and other Colorado River contractors in California executed the California ICS Agreement, which divided California's ICS storage space in Lake Mead between Metropolitan and IID. It also allowed IID to store up to 50,000 acre-feet of conserved water in Metropolitan's system. In 2015, the California ICS Agreement was amended to allow IID to store additional amounts of water in Metropolitan's system during 2015-2017. Under the 2015 amendment, IID was permitted to store up to 100,000 acre-feet per year of conserved water within Metropolitan's system with a cumulative limit of 200,000 acre-feet, for the three-year term. When requested by IID, Metropolitan has agreed to return to IID the lesser of either 50,000 acre-feet per year, or in a year in which Metropolitan's member agencies are under a shortage allocation, 50 percent of the cumulative amount of water IID has stored with Metropolitan under the 2015 amendment. IID currently has 162,000 acre-feet of water stored with Metropolitan pursuant to the terms of the California ICS Agreement.

In 2018, IID had reached the limit on the amount of water it was able to store in Metropolitan's system under the California ICS Agreement, and entered into discussions with Metropolitan to further amend the Agreement, but no such agreement was reached. On December 4, 2020, IID filed a complaint against Metropolitan alleging that Metropolitan breached the California ICS Agreement, breached the implied covenant of good faith and fair dealing, and that Metropolitan converted IID's intentionally created surplus for its own use. IID's complaint seeks the imposition of a constructive trust over 87,594 acre-feet of water in Lake Mead or Metropolitan's system and a judgment against Metropolitan for \$20,896,640. Metropolitan is unable to assess at this time the likelihood of success of this litigation or any future claims.

## **State Water Project and Colorado River Aqueduct Arrangements**

### ***Metropolitan/CVWD/Desert Water Agency Exchange and Advance Delivery Agreement.***

Metropolitan has agreements with CVWD and the Desert Water Agency (“DWA”) in which Metropolitan exchanges its Colorado River water for those agencies’ State Water Project contractual water and other State Water Project water acquisitions on an annual basis. Because CVWD and DWA do not have a physical connection to the State Water Project, Metropolitan takes delivery of CVWD’s and DWA’s State Water Project supplies and delivers a like amount of Colorado River water to the agencies. In accordance with an advance delivery agreement executed by Metropolitan, CVWD and DWA, Metropolitan may deliver Colorado River water in advance of receiving State Water Project supplies to these agencies for storage in the Upper Coachella Valley groundwater basin. In years when it is necessary to augment available supplies to meet local demands, Metropolitan may meet the exchange delivery obligation through drawdowns of the advance delivery account, rather than deliver Colorado River water in that year. Metropolitan’s estimated storage account under the CVWD/DWA program as of January 1, 2021 is shown in the table entitled “Metropolitan’s Water Storage Capacity and Water in Storage” under “–Storage Capacity and Water in Storage” below. In addition to the storage benefits of the program, Metropolitan receives water quality benefits with increased deliveries of lower salinity water from the State Water Project in lieu of delivering higher saline Colorado River water. In December 2019, the exchange agreements were amended to provide more flexibility and operational certainty for the parties involved. Additionally, under the amended agreements, CVWD and DWA pay a portion of Metropolitan’s water storage management costs in wet years, up to a combined total of \$4 million per year.

### **Storage Capacity and Water in Storage**

Metropolitan’s storage capacity, which includes reservoirs, conjunctive use and other groundwater storage programs within Metropolitan’s service area and groundwater and surface storage accounts delivered through the State Water Project or CRA, is approximately 6.0 million acre-feet. In 2020, approximately 750,000 acre-feet of total stored water in Metropolitan’s reservoirs and other storage resources was emergency storage that was reserved for use in the event of supply interruptions from earthquakes or similar emergencies (see “METROPOLITAN’S WATER DELIVERY SYSTEM–Seismic Considerations and Emergency Response Measures” in this Appendix A), as well as extended drought. Metropolitan’s emergency storage requirement is established periodically to provide a six-month water supply at 75 percent of member agencies’ retail demand under normal hydrologic conditions. Metropolitan’s ability to replenish water storage, both in the local groundwater basins and in surface storage and banking programs, has been limited by Bay-Delta pumping restrictions under the biological opinions issued for listed species. See “–Endangered Species Act and Other Environmental Considerations –Endangered Species Act Considerations – State Water Project – Delta Smelt and Salmon Federal ESAs Biological Opinions and California ESA Consistency Determinations and Incidental Take Permit.” Metropolitan replenishes its storage accounts when available imported supplies exceed demands. Effective storage management is dependent on having sufficient years of excess supplies to store water so that it can be used during times of shortage. See “CONSERVATION AND WATER SHORTAGE MEASURES–Water Supply Allocation Plan” in this Appendix A. Metropolitan’s storage as of January 1, 2021 is estimated to be 3.95 million acre-feet. As a result of a collaborative process with its member agencies, Metropolitan completed an evaluation of its Emergency Storage Objective in 2019 that resulted in the increase the emergency storage from 626,000 acre-feet to 750,000 acre-feet by January 1, 2020. As a result, the portion of the emergency storage in Metropolitan’s reservoirs was increased from 298,000 acre-feet to 369,000 acre-feet. The following table shows three years of Metropolitan’s water in storage as of January 1, including emergency storage.

**METROPOLITAN'S WATER STORAGE CAPACITY AND WATER IN STORAGE<sup>(1)</sup>**  
(in Acre-Feet)

Water Storage Resource	Storage Capacity	Water in Storage January 1, 2021 <sup>(2)</sup>	Water in Storage January 1, 2020	Water in Storage January 1, 2019
<b><u>Colorado River Aqueduct</u></b>				
DWA / CVWD Advance Delivery Account	800,000	330,000	296,000	235,000
Lake Mead ICS	<u>1,739,000</u>	<u>1,308,000</u>	<u>980,000</u>	<u>625,000</u>
<b>Subtotal</b>	<b>2,539,000</b>	<b>1,638,000</b>	<b>1,276,000</b>	<b>860,000</b>
<b><u>State Water Project</u></b>				
Arvin-Edison Storage Program <sup>(3)</sup>	350,000	143,000	143,000	154,000
Semitropic Storage Program	350,000	260,000	265,000	187,000
Kern Delta Storage Program	250,000	177,000	189,000	138,000
Mojave Storage Program	330,000 <sup>(6)</sup>	19,000 <sup>(6)</sup>	19,000 <sup>(6)</sup>	19,000 <sup>(6)</sup>
AVEK Storage Program	30,000	27,000	27,000	9,000
Castaic Lake and Lake Perris <sup>(4)</sup>	219,000	219,000	219,000	219,000
State Water Project Carryover <sup>(5)</sup>	350,000 <sup>(7)</sup>	221,000	331,000	93,000
Emergency Storage	<u>381,000</u>	<u>381,000</u>	<u>381,000</u>	<u>328,000</u>
<b>Subtotal</b>	<b>2,260,000</b>	<b>1,447,000</b>	<b>1,574,000</b>	<b>1,147,000</b>
<b><u>Within Metropolitan's Service Area</u></b>				
Diamond Valley Lake	810,000	703,000	796,000	702,000
Lake Mathews	182,000	82,000	152,000	141,000
Lake Skinner	<u>44,000</u>	<u>37,000</u>	<u>38,000</u>	<u>37,000</u>
<b>Subtotal<sup>(8)</sup></b>	<b>1,036,000</b>	<b>822,000</b>	<b>986,000</b>	<b>880,000</b>
<b><u>Member Agency Storage Programs</u></b>				
Conjunctive Use <sup>(9)</sup>	<u>210,000</u>	<u>40,000</u>	<u>59,000</u>	<u>47,000</u>
<b>Total</b>	<b><u>6,045,000</u></b>	<b><u>3,947,000</u></b>	<b><u>3,895,000</u></b>	<b><u>2,934,000</u></b>

Source: Metropolitan

- (1) Water storage capacity and water in storage are measured based on engineering estimates and are subject to change.
- (2) Preliminary estimated January 1, 2021 storage; subject to change.
- (3) Metropolitan has temporarily suspended operation of the Arvin-Edison storage program. See "METROPOLITAN'S WATER SUPPLY-Water Transfer, Storage and Exchange Programs - Arvin-Edison/Metropolitan Water Management Program" and "METROPOLITAN'S WATER DELIVERY SYSTEM-Water Quality and Treatment" in this Appendix A.
- (4) Flexible storage allocated to Metropolitan under its State Water Contract. Withdrawals must be returned within five years.
- (5) Includes Article 56 Carryover of Metropolitan, Coachella Valley Water District, and Desert Water Agency, prior-year carryover, non-project carryover, and carryover of curtailed deliveries pursuant to Article 14(b) and Article 12(e) of Metropolitan's State Water Contract.
- (6) The Mojave Storage agreement was amended in 2011 to allow for cumulative storage of up to 390,000 acre-feet. Since January 1, 2011, Metropolitan has stored 60,000 acre-feet, resulting in a remaining balance of storage capacity of 330,000 acre-feet. 41,000 acre-feet of the 60,000 acre-feet stored has been returned, leaving a remaining balance in storage of 19,000 acre-feet.
- (7) A capacity of 350,000 acre-feet is estimated to be the practical operational limit for carryover storage considering Metropolitan's capacity to take delivery of carryover supplies before San Luis Reservoir fills.
- (8) Includes 298,000 acre-feet of emergency storage in Metropolitan's reservoirs in 2019, and 369,000 acre-feet of emergency storage in Metropolitan's reservoirs in 2020 and 2021.
- (9) Cyclic Storage water removed from this line item and is now categorized a pre-delivery.

## CONSERVATION AND WATER SHORTAGE MEASURES

### General

The central objective of Metropolitan's water conservation program is to help ensure adequate, reliable and affordable water supplies for Southern California by actively promoting efficient water use. The importance of conservation to the region has increased in recent years because of drought conditions in the State Water Project watershed and court-ordered restrictions on Bay-Delta pumping, as described under "METROPOLITAN'S WATER SUPPLY-State Water Project -Bay-Delta Proceedings Affecting State Water Project" and "-Endangered Species Act and Other Environmental Considerations -Endangered Species Act Considerations-State Water Project - Delta Smelt and Salmon Federal ESAs Biological Opinions and California ESA Consistency Determinations and Incidental Take Permit" in this Appendix A. Conservation reduces the need to import water to deliver to member agencies through Metropolitan's system. Water conservation is an integral component of Metropolitan's IRP, WSDM Plan and Water Supply Allocation Plan.

Metropolitan's conservation program has largely been developed to assist its member agencies in meeting the conservation goals of the 2015 IRP Update. See "METROPOLITAN'S WATER SUPPLY-Integrated Water Resources Plan" in this Appendix A. All users of Metropolitan's system benefit from the reduced infrastructure costs and system capacity made available by investments in demand management programs like the Conservation Credits Program. Under the terms of Metropolitan's Conservation Credits Program, Metropolitan administers regional conservation programs and also co-funds member agency conservation programs designed to achieve greater water use efficiency in residential, commercial, industrial, institutional and landscape uses. Direct spending by Metropolitan on active conservation incentives, including rebates for water-saving plumbing fixtures, appliances and equipment totaled about \$18.9 million in fiscal year 2019-20. The 2015 IRP Update estimates that Metropolitan's conservation efforts will result in 1,197,000 acre-feet of water being conserved annually in Southern California by 2025. See also "METROPOLITAN'S WATER SUPPLY-Integrated Water Resources Plan" in this Appendix A and "-Increased Drought Resiliency" below.

Historically, revenues collected by Metropolitan's Water Stewardship Rate and available grant funds have funded conservation incentives, local resource development incentives, and other water demand management programs. The Water Stewardship Rate was charged on every acre-foot of water conveyed by Metropolitan, except on water delivered to SDCWA pursuant to the Exchange Agreement (see "METROPOLITAN REVENUES-Water Rates" and "-Litigation Challenging Rate Structure" in this Appendix A) in calendar years 2018, 2019, and 2020. The Water Stewardship Rate has not been incorporated into Metropolitan's rates and charges for 2021 and 2022. See "METROPOLITAN REVENUES-Rate Structure -Water Stewardship Rate" in this Appendix A.

In addition to ongoing conservation, Metropolitan has developed a WSDM Plan, which splits resource actions into two major categories: Surplus Actions and Shortage Actions. See "-Water Surplus and Drought Management Plan." Conservation and water efficiency programs are part of Metropolitan's resource management strategy which makes up these Surplus and Shortage actions.

Metropolitan's Water Supply Allocation Plan allocates Metropolitan's water supplies among its member agencies, based on the principles contained in the WSDM Plan, to reduce water use and drawdowns from water storage reserves. See "-Water Supply Allocation Plan." Metropolitan's member agencies and retail water suppliers in Metropolitan's service area also have the ability to implement water conservation and allocation programs, and some of the retail suppliers in Metropolitan's service area have initiated conservation measures. The success of conservation measures in conjunction with the implementation of the Water Supply Allocation Plan in fiscal years 2009-10, 2010-11, 2011-12 and 2015-16 is evidenced as a contributing factor in the lower than budgeted water transactions during such drought periods.

Legislation approved in November 2009 set a statewide conservation target for urban per capita potable water use of 20 percent reductions (from a baseline per capita use determined utilizing one of four State-approved methodologies) by 2020 (with credits for existing conservation) at the retail level, providing an additional catalyst for conservation by member agencies and retail suppliers. Metropolitan's water transactions projections incorporate an estimate of conservation savings that will reduce retail demands. Current projections include an estimate of additional water use efficiency savings that would result from Metropolitan's IRP goals that included the reduction of overall regional per capita water use by 20 percent by 2020 from a baseline of average per capita water use from 1996-2005 in Metropolitan's service area. As of calendar year 2019, per capita water use in Metropolitan's service area had reached the 20 percent reduction by 2020 target.

### **Water Surplus and Drought Management Plan**

In addition to the long-term planning guidelines and strategy provided by its IRP, Metropolitan has developed its WSDM Plan for the on-going management of its resources and water supplies in response to hydrologic conditions. The WSDM Plan, which was adopted by Metropolitan's Board in April 1999, evolved from Metropolitan's experiences during the droughts of 1976-77 and 1987-92. The WSDM Plan is a planning document that Metropolitan uses to guide inter-year and intra-year storage operations, and splits resource actions into two major categories: surplus actions and shortage actions. The surplus actions emphasize storage of surplus water inside the region, followed by storage of surplus water outside the region. The shortage actions emphasize critical storage programs and facilities and conservation programs that make up part of Metropolitan's response to shortages. Implementation of the plan is directed by a WSDM team, made up of Metropolitan staff, that meets regularly throughout the year and more frequently between November and April as hydrologic conditions develop. The WSDM team develops and recommends storage actions to senior management on a regular basis and provides updates to the Board on hydrological conditions, storage levels and planned storage actions through detailed reports.

### **Water Supply Allocation Plan**

In times of prolonged or severe water shortages, Metropolitan manages its water supplies through the implementation of its Water Supply Allocation Plan. The Water Supply Allocation Plan was originally approved by Metropolitan's Board in February 2008, and has been implemented three times since its adoption, including most recently in April 2015. The drought of 2012-2016 was one of the driest periods in the hydrological record since 1931-1934. The Board declared a Water Supply Condition 3 on April 14, 2015, and the implementation of the Water Supply Allocation Plan at a Level 3 Regional Shortage Level, effective July 1, 2015 through June 30, 2016. On May 10, 2016, the Board rescinded the implementation of the Water Supply Allocation Plan due to improved hydrological conditions. The Water Supply Allocation Plan provides a formula for equitable distribution of available water supplies in case of extreme water shortages within Metropolitan's service area and if needed is typically approved in the month of April with implementation beginning in the month of July. In December 2014, the Board approved certain adjustments to the formula for calculating member agency supply allocations during subsequent periods of implementation of the Water Supply Allocation Plan. Although the Act gives each of Metropolitan's member agencies a preferential entitlement to purchase a portion of the water served by Metropolitan (see "METROPOLITAN REVENUES—Preferential Rights" in this Appendix A), historically, these rights have not been used in allocating Metropolitan's water. Metropolitan's member agencies and retail water suppliers in Metropolitan's service area also may implement water conservation and allocation programs within their respective service territories in times of shortage. See also "—Increased Drought Resiliency." Based upon current hydrologic conditions and current DWR State Water Project allocation estimates, implementation of the Water Supply Allocation Plan for fiscal year 2020-21 is not expected.

### **Increased Drought Resiliency**

Metropolitan has worked proactively with its member agencies to conserve water supplies in its service area, and significantly expanded its water conservation and outreach programs and increased funding

for conservation incentive programs. In May 2017, the Alliance for Water Efficiency presented a peer review report of Metropolitan's conservation programs. Program modifications were adopted in April 2018 to reflect the peer review recommendations as well as feedback from member agencies. See "CONSERVATION AND WATER SHORTAGE MEASURES-General." Metropolitan has also taken other actions to improve drought resiliency that include increasing water recycling by providing incentives for on-site recycled water hook-ups, improving return capability of storage programs, and modifying Metropolitan's distribution system to enhance Colorado River water delivery to mitigate limitations in State Water Project supply.

## REGIONAL WATER RESOURCES

The water supply for Metropolitan's service area is provided in part by Metropolitan and in part by non-Metropolitan sources available to members. Non-Metropolitan sources include water imported by the City of Los Angeles (the "City") from the Owens Valley/Mono Basin east of the Sierra Nevada through the City's Los Angeles Aqueduct to serve customers of the City. See "- Los Angeles Aqueduct." The balance of water within the region is produced locally, from sources that include groundwater and surface water production, recycled water and recovery of contaminated or degraded groundwater, and seawater desalination. Programs to develop these local resources include projects funded by Metropolitan's Local Resources Program, as well as local agency funded programs. See "-Local Water Supplies.

Based on a ten-year average from 2010 through 2019, non-Metropolitan sources met about 52 percent of the region's water needs. These non-Metropolitan sources of supply fluctuate in response to variations in rainfall. During prolonged periods of below normal rainfall, local water supplies decrease. Conversely, prolonged periods of above-normal rainfall increase local supplies. Sources of groundwater basin replenishment include local precipitation, runoff from the coastal ranges, and artificial recharge with imported water supplies. In addition to runoff, recycled water provides an increasingly important source of replenishment water for the region.

Metropolitan's member agencies are not required to purchase or use any of the water available from Metropolitan. Some agencies depend on Metropolitan to supply nearly all of their water needs, regardless of the weather. Other agencies, with local surface reservoirs or aqueducts that capture rain or snowfall, rely on Metropolitan more in dry years than in years with heavy rainfall, while others, with ample groundwater supplies, purchase Metropolitan water only to supplement local supplies and to recharge groundwater basins. Consumer demand and locally supplied water vary from year to year, resulting in variability in the volume of Metropolitan's water transactions.

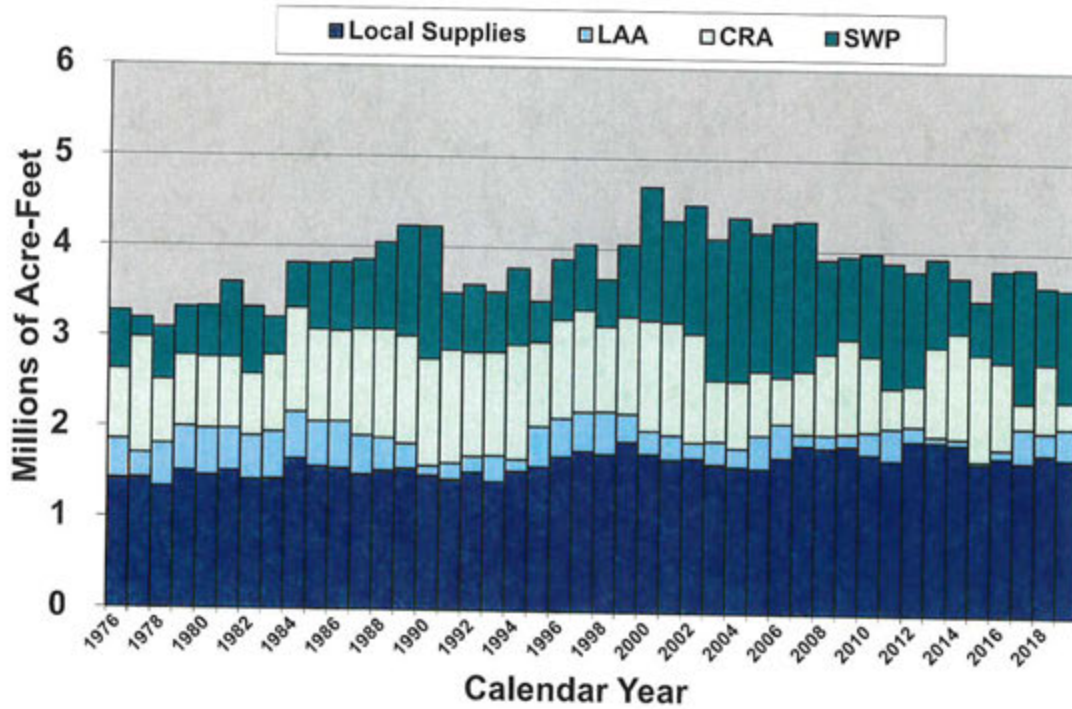
In recent years, supplies and demands have been affected by drought, water use restrictions, economic conditions, weather conditions and environmental laws, regulations and judicial decisions, as described in this Appendix A under "METROPOLITAN'S WATER SUPPLY." The demand for supplemental supplies provided by Metropolitan is dependent on water use at the retail consumer level and the amount of locally supplied and conserved water. See "CONSERVATION AND WATER SHORTAGE MEASURES" in this Appendix A and "-Local Water Supplies" below.

Future reliance on Metropolitan supplies will depend on, among other things, current and future local projects that may be developed and the amount of water that may be derived from sources other than Metropolitan. For information on Metropolitan's water revenues, see "METROPOLITAN REVENUES" and "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A.

The following graph shows a summary of the regional sources of water supply for the years 1976 to 2019.



## Sources of Water Supply in the Metropolitan Service Area (1976-2019)



Source: Metropolitan.

The major sources of water available to some or all of Metropolitan’s member agencies in addition to supplies provided by Metropolitan are described below.

### Los Angeles Aqueduct

The City of Los Angeles, through its Department of Water and Power (“LADWP”), operates its Los Angeles Aqueduct system to import water from the Owens Valley and the Mono Basin on the eastern slopes of the Sierra Nevada in eastern California. Water imported by the City on the Los Angeles Aqueduct system comes primarily from surface water rights of the City in eastern Sierra Nevada watersheds along various streams, creeks and rivers in the Mono Basin, Long Valley and Owens Valley, and groundwater resources in the Owens Valley from the City’s ownership of approximately 330,000 acres of land and associated water rights. This water supply of the City, which serves LADWP’s customers, currently meets about 5.25 percent of the region’s water needs based on a ten-year average from 2010 through 2019.

Surface runoff (snowmelt) is subject to substantial annual variability, which influences the amount of water delivered by the Los Angeles Aqueduct. In addition, the City is subject to several environmental commitments in the Mono Basin and Owens Valley which impact the availability of water to the City for import on the Los Angeles Aqueduct. These include: the SWRCB’s Mono Lake Basin Water Rights Decision 1631, which limits on the City’s water exports from the Mono Basin based on Mono Lake’s surface

elevation; and (ii) the City's legal obligations under a long-term groundwater management plan relating to the City's groundwater resources in the Owens Valley.

Since 1989, Los Angeles Aqueduct water deliveries to the City have varied from as little as 57,716 acre-feet in fiscal year 2014-15 to as much as 467,000 acre-feet of water in fiscal year 1995-96. Average water deliveries to the City from the Los Angeles Aqueduct were approximately 238,960 acre-feet per fiscal year between fiscal years 2015-16 and 2019-20 (approximately 48.0% of the City's annual water supply). However, during fiscal year 2015-16 (one of the worst years of the recent drought), water deliveries to the City from the Los Angeles Aqueduct were only 57,853 acre-feet (approximately 11.8% of the City's water supply for fiscal year 2015-16). Consequently, the amount of water purchased by the City from Metropolitan varies (sometimes substantially) from one year to the next. During the past five fiscal years 2015-16 through 2019-20, the City's water purchases from Metropolitan (billed water transactions) ranged from a low of 141,866 in fiscal year 2018-19 to a high of 332,528 in fiscal year 2015-16.

### **Local Water Supplies**

Local water supplies are made up of groundwater, groundwater recovery, surface runoff, recycled water, and seawater desalination. Metropolitan supports local resources development through its Local Resources Program, which provides financial incentives up to \$340 per acre-foot of water production from local water recycling, groundwater recovery and seawater desalination projects. Metropolitan utilizes conjunctive use of groundwater to encourage storage in groundwater basins. Member agencies and other local agencies have also independently funded and developed additional local supplies, including groundwater clean-up, recycled water and desalination of brackish or high salt content water. See also "METROPOLITAN'S WATER DELIVERY SYSTEM—Water Quality and Treatment" in this Appendix A for information regarding recent water quality regulations and developments that impact or may impact certain local groundwater supplies.

Metropolitan's water transaction projections are based in part on projections of locally-supplied water. Projections of future local supplies are based on estimated yields from sources and projects that are currently producing water or are under construction at the time a water transaction projection is made. Additional reductions in Metropolitan's water transaction projections are made to account for future local supply augmentation projects, based on the IRP Update goals. See "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES—Water Transactions Projections" and "METROPOLITAN'S WATER SUPPLY—Integrated Water Resources Plan" in this Appendix A.

**Groundwater.** Demands for about 1.1 million acre-feet per year, about one-third of the annual water demands for approximately 19 million residents of Metropolitan's service area, are met from groundwater production. Local groundwater supplies are supported by recycled water, which is blended with imported water and recharged into groundwater basins, and also used for creating seawater barriers that protect coastal aquifers from seawater intrusion.

**Member Agency Storage Programs.** Metropolitan has developed a number of local programs to work with its member agencies to increase storage in groundwater basins. Metropolitan has encouraged storage through its cyclic and conjunctive use storage programs. These programs allow Metropolitan to deliver water into a groundwater basin in advance of agency demands. Metropolitan has drawn on dry-year supply from nine contractual conjunctive use storage programs to address shortages from the State Water Project and the CRA.

Cyclic storage agreements allow pre-delivery of imported water for recharge into groundwater basins in excess of an agency's planned and budgeted deliveries making best use of available capacity in conveyance pipelines, use of storm channels for delivery to spreading basins, and use of spreading basins. This water is then purchased at a later time when the agency has a need for groundwater replenishment deliveries.

Conjunctive use agreements provide for storage of imported water that can be called for use by Metropolitan during dry, drought, or emergency conditions. During a dry period, Metropolitan has the option to call water stored in the groundwater basins pursuant to its contractual conjunctive use agreements. At the time of the call, the member agency pays Metropolitan the prevailing rate for that water. Nine conjunctive use projects provide about 210,000 acre-feet of groundwater storage and have a combined extraction capacity of about 70,000 acre-feet per year. See the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "METROPOLITAN'S WATER SUPPLY—Storage Capacity and Water in Storage" in this Appendix A.

**Recovered Groundwater.** Contamination of groundwater supplies is a growing threat to local groundwater production. Metropolitan has been supporting increased groundwater production and improved regional supply reliability by offering financial incentives to agencies for production and treatment of degraded groundwater since 1991. Metropolitan has executed agreements with local agencies to provide financial incentives to 27 projects that recover contaminated groundwater with total contract yields of about 124,000 acre-feet per year. During fiscal year 2019-20, Metropolitan provided incentives for approximately 50,000 acre-feet of recovered water under these agreements. Additionally, 62,000 acre-feet of recovered groundwater was produced by local agencies through other independently funded and developed sources. Total groundwater recovery use under executed agreements with Metropolitan is expected to grow to 58,000 acre-feet in 2021.

**Surface Runoff.** Local surface water resources consist of runoff captured in storage reservoirs and diversions from streams. Since 1980, agencies have used an average of 110,000 acre-feet per calendar year of local surface water. Local surface water supplies are heavily influenced by year to year local weather conditions, varying from a high of 188,000 acre-feet in calendar year 1998 to a low of 37,000 acre-feet in calendar year 2016.

**Recycled Water-Local Agency Projects.** Metropolitan has supported recycled water use to offset water demands and improve regional supply reliability by offering financial incentives to agencies for production and sales of recycled water since 1982. Metropolitan has executed agreements with local agencies to provide financial incentives to 83 recycled water projects with total expected contract yields of about 315,000 acre-feet per year. During fiscal year 2019-20, Metropolitan provided incentives for approximately 71,000 acre-feet of recycled water under these agreements. Additionally, 370,000 acre-feet of recycled water (including wastewater discharged to the Santa Ana River that percolates into downstream groundwater basins) was produced by local agencies through other independently funded and developed sources. Total recycled water use under executed agreements with Metropolitan currently in place is expected to be approximately 56,000 acre-feet annually by 2021. On December 10, 2019, Metropolitan's Board authorized the General Manager to enter into a Local Resources Program agreement with SDCWA and the City of San Diego to provide financial incentives in connection with the first phase of a proposed recycling project (the San Diego Pure Water North City Project Phase 1) being developed by the City of San Diego. Phase 1 of the project, if completed, would provide up to 33,600 acre-feet annually of recycled water for surface water augmentation, and Local Resource Program financial incentives of up to \$285.6 million could be provided by Metropolitan for the project over a 25-year period. As noted above, Local Resources Program agreements provide incentives of up to \$340 per acre-foot of water production (based on actual project unit costs that exceed Metropolitan's water rates) from local water supply projects developed by local and member agencies. Agreement terms are for 25 years and terminate automatically if construction does not commence within two full fiscal years of agreement execution or if recycled water deliveries are not realized within four full fiscal years of agreement execution.

**Recycled Water-Metropolitan Regional Recycled Water Program.** Since 2010, Metropolitan has been evaluating the potential and feasibility of implementing a regional recycled water program (the "RRWP"). Chronic drought conditions have resulted in significant reductions in local surface supplies and groundwater production and have increased the need for recharge supplies to groundwater and surface water

reservoirs to improve their sustainable yields and operating integrity. In 2015, Metropolitan executed an agreement with the Sanitation Districts of Los Angeles County (“LACSD”) to implement a demonstration project and to establish a framework of terms and conditions of the RRWP. The objectives of the RRWP are to enable the potential reuse of up to 150 million gallons per day (“mgd”) of treated effluent from LACSD’s Joint Water Pollution Control Plant (“JWPCP”). Purified water from a new advanced treatment facility could be delivered through pipelines to the region’s groundwater basins, industrial facilities, and two of Metropolitan’s treatment plants. Construction of a 0.5-mgd advanced water treatment demonstration plant was approved in 2017 and was completed in September 2019. Testing and operation of the plant began in October 2019 to confirm treatment costs and provide the basis for regulatory approval of the proposed treatment process. The initial phase of testing is scheduled for completion in 2021 with future testing phases planned that will form the basis for the design, operation, and optimization of, and will inform Metropolitan’s Board decision whether to move forward with, a full-scale advanced water treatment facility. Finally, the RRWP will have the flexibility to be expanded in the future to implement Direct Potable Reuse (“DPR”) through raw water augmentation at two of Metropolitan’s treatment plants. The SWRCB Division of Drinking Water (“DDW”) is in the process of developing regulations for DPR in California, with the current anticipated date for promulgation by the end of 2023. The fiscal year 2020-21 and 2021-22 biennial budget includes \$30 million for the preparation of a programmatic environment impact report for the RRWP. Metropolitan’s financial projections for the fiscal years ending June 30, 2020 through 2024 do not include any future capital costs associated with a potential full-scale RRWP. On November 10, 2020, Metropolitan’s Board voted to begin environmental planning work on the RRWP. In December 2020, Metropolitan and SNWA executed a funding agreement under which SNWA will contribute up to \$6 million for the environmental planning costs for the RRWP. In the event either SNWA or Metropolitan decides not to proceed or participate in the RRWP in the future, SNWA’s financial contribution to the RRWP’s environmental planning would be returned by Metropolitan.

***Seawater Desalination.*** Metropolitan’s IRP embraces seawater desalination as a part of the region’s supply portfolio that could help increase supply reliability in Southern California.

In 2015, Poseidon Resources LLC (“Poseidon”) began operating the 56,000 acre-foot capacity Carlsbad Desalination Project (“Carlsbad Project”) and associated pipeline. The San Diego County Water Authority has a purchase agreement with Poseidon for a minimum of 48,000 acre-feet per year with an option to purchase an additional 8,000 acre-feet per year.

In October 2014, seawater desalination projects became eligible for funding under Metropolitan’s Local Resources Program (LRP). There are three local seawater desalination projects in the permitting stages which could receive LRP incentives. These include South Coast Water District’s proposed 5,000 to 15,000 acre-feet per year Doheny Ocean Desalination project in south Orange County; Orange County Water District’s proposed 56,000 acre-feet per year Huntington Beach Seawater Desalination project in north Orange County; and West Basin Municipal Water District’s proposed 20,000 to 60,000 acre-feet per year project in Los Angeles County. LRP applications for the potential projects could be considered by Metropolitan’s Board after they are permitted, free of litigation, and authorized to proceed by their developing agencies.

Metropolitan had previously maintained Seawater Desalination Program (SDP) agreements with three member agencies for their projects. The agreements were signed in 2006 and included off-ramps triggered by project development milestones. On June 30, 2020, the SDP agreements reached a termination milestone and expired automatically. As a result, the three member agency SDP agreements are no longer in effect.

In 2007, the Board approved Metropolitan’s role as a regional facilitator for seawater desalination. This includes supporting local projects during permitting and providing technical assistance when requested. Metropolitan’s regional facilitation includes active participation in organizations advocating for desalination

and salinity management, including CalDesal within California and the Multi-State Salinity Coalition nationally. Metropolitan also participates in the National Alliance for Water Innovation ("NAWI"). NAWI is a DOE-led, five-year, \$100 million research effort focused on accelerating the commercialization of early-stage desalination technologies. New technologies developed by NAWI could reduce cost and environmental barriers to seawater desalination in California.

## **METROPOLITAN'S WATER DELIVERY SYSTEM**

### **Primary Facilities and Method of Delivery**

Metropolitan's water delivery system is made up of three basic components: the CRA, the California Aqueduct of the State Water Project and Metropolitan's water distribution system. Metropolitan's delivery system is integrated and designed to meet the differing needs of its member agencies. Metropolitan seeks redundancy in its delivery system to assure reliability in the event of an outage. Improvements are designed to increase the flexibility of the system. Since local sources of water are generally used to their maximum each year, growth in the demand for water is partially met by Metropolitan. The operation of Metropolitan's water system is being made more reliable through the rehabilitation of key facilities as needed, improved preventive maintenance programs and the upgrading of Metropolitan's operational control systems. See "CAPITAL INVESTMENT PLAN" in this Appendix A.

*Colorado River Aqueduct.* Work on the CRA commenced in 1933 and water deliveries started in 1941. Additional facilities were completed by 1961 to meet additional requirements of Metropolitan's member agencies. The CRA is 242 miles long, starting at the Lake Havasu intake and ending at the Lake Mathews terminal reservoir. Metropolitan owns all of the components of the CRA, which include five pumping plants, 64 miles of canal, 92 miles of tunnels, 55 miles of concrete conduits, four reservoirs, and 144 underground siphons totaling 29 miles in length. The pumping plants lift the water approximately 1,617 feet over several mountain ranges to Metropolitan's service area. See "METROPOLITAN'S WATER SUPPLY-Colorado River Aqueduct" in this Appendix A.

*State Water Project.* The initial portions of the State Water Project serving Metropolitan were completed in 1973. The State Water Project, managed and operated by DWR, is one of the largest water supply projects undertaken in the history of water development. The State Water Project facilities dedicated to water delivery consist of a complex system of dams, reservoirs, power plants, pumping plants, canals and aqueducts to deliver water. Water from rainfall and snowmelt runoff is captured and stored in State Water Project conservation facilities and then delivered through State Water Project transportation facilities to water agencies and districts located throughout the Upper Feather River, Bay Area, Central Valley, Central Coast, and Southern California. Metropolitan receives water from the State Water Project through the main stem of the aqueduct system, the California Aqueduct, which is 444 miles long and includes 381 miles of canals and siphons, 49 miles of pipelines or tunnels and 13 miles of channels and reservoirs.

As described herein, Metropolitan is the largest (in terms of number of people it serves, share of State Water Project water it has contracted to receive, and percentage of total annual payments made to DWR therefor) of twenty-nine agencies and districts that have entered into contracts with DWR to receive water from the State Water Project. Contractors pay all costs of the facilities in exchange for participation rights in the system. Thus, Contractors also have the right to use the portion of the State Water Project conveyance system necessary to deliver water to them at no additional cost as long as capacity exists. See "METROPOLITAN'S WATER SUPPLY-State Water Project" in this Appendix A.

*Distribution System.* Metropolitan's distribution system is a complex network of facilities which routes water from the CRA and State Water Project to Metropolitan's member agencies. The water distribution system includes components that were built beginning in the 1930s and through the present. Metropolitan owns all of these components, including 16 reservoirs, five regional treatment plants, over 800

miles of transmission pipelines, feeders and canals, and 16 hydroelectric plants with an aggregate capacity of 130 megawatts.

***Diamond Valley Lake.*** Diamond Valley Lake, a man-made reservoir, built, owned and operated by Metropolitan, is located southwest of the city of Hemet, California. It covers approximately 4,410 acres and has capacity to hold approximately 810,000 acre-feet or 265 billion gallons of water. Diamond Valley Lake was constructed to serve approximately 90 percent of Metropolitan's service area by gravity flow. Imported water is delivered to Diamond Valley Lake during surplus periods. The reservoir provides more reliable delivery of imported water from the State Water Project during summer months, droughts and emergencies. In addition, Diamond Valley Lake is capable of providing more than one-third of Southern California's water needs from storage for approximately six months after a major emergency (assuming that there has been no impairment of Metropolitan's internal distribution network). See the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "METROPOLITAN'S WATER SUPPLY-Storage Capacity and Water in Storage" in this Appendix A for the amount of water in storage at Diamond Valley Lake. Excavation at the project site began in May 1995. Diamond Valley Lake was completed in March 2000, at a total cost of \$2 billion, and was in full operation in December 2001.

***Inland Feeder.*** Metropolitan's Inland Feeder is a 44-mile-long conveyance system that connects the State Water Project to Diamond Valley Lake and the CRA. The Inland Feeder provides greater flexibility in managing Metropolitan's major water supplies and allows greater amounts of State Water Project water to be accepted during wet seasons for storage in Diamond Valley Lake. In addition, the Inland Feeder increases the conveyance capacity from the East Branch of the State Water Project by 1,000 cfs, allowing the East Branch to operate up to its full capacity. Construction of the Inland Feeder was completed in September 2009 at a total cost of \$1.14 billion.

***Operations Control Center.*** Metropolitan's water conveyance and distribution system operations are coordinated from the Operations Control Center ("OCC") centrally located in Los Angeles County. The OCC plans, balances and schedules daily water and power operations to meet member agencies' demands, taking into consideration the operational limits of the entire system.

### **Water Quality and Treatment**

Metropolitan filters and disinfects water at five water treatment plants: the F.E. Weymouth Treatment Plant, the Joseph Jensen Treatment Plant, the Henry J. Mills Treatment Plant, the Robert B. Diemer Treatment Plant, and the Robert A. Skinner Treatment Plant. In recent years, the plants typically treat between 0.8 billion and 1.0 billion gallons of water per day and have a maximum capacity of approximately 2.4 billion gallons per day. Approximately 50 percent of Metropolitan's water deliveries are treated water.

Federal and state regulatory agencies continually identify potential contaminants and establish new water quality standards. New water quality standards could affect availability of water and impose significant compliance costs on Metropolitan. The federal Safe Drinking Water Act ("SDWA") establishes drinking water quality standards, monitoring, and public notification and enforcement requirements for public water systems. To achieve these objectives, the U.S. Environmental Protection Agency (the "USEPA"), as the lead regulatory authority, promulgates national drinking water regulations and develops the mechanism for individual states to assume primary enforcement responsibilities. The SWRCB DDW, formerly the Drinking Water Program under the California Department of Public Health, has primary responsibility for the regulation of public water systems in the State. Drinking water delivered to customers must comply with statutory and regulatory water quality standards designed to protect public health and safety. Metropolitan operates its five water treatment plants under a domestic water supply permit issued by DDW, which is amended, as necessary, such as when significant facility modifications occur. Metropolitan operates and maintains water storage, treatment and conveyance facilities, implements watershed management and protection activities, performs inspections, monitors drinking water quality, and submits monthly and annual compliance reports. In addition, public water system discharges to state and federal waters are regulated



under general National Pollutant Discharge Elimination System (“NPDES”) permits. These NPDES permits, which the SWRCB issued to Metropolitan, contain numerical effluent limitations, monitoring, reporting, and notification requirements for water discharges from the facilities and pipelines of Metropolitan’s water supply and distribution system.

As described herein, Metropolitan has established five groundwater storage programs with other water agencies that allow Metropolitan to store available supplies in the Central Valley for return later. These programs help manage supplies by putting into storage surplus water in years when it is available and converting that to dry year supplies to be returned when needed. These programs can also provide emergency supplies. See “METROPOLITAN’S WATER SUPPLY–Water Transfer, Storage and Exchange Programs – State Water Project Agreements and Programs” and “–Storage Capacity and Water in Storage” in this Appendix A. Generally, water returned to Metropolitan under these groundwater storage programs (“return water”) may be made available in one of two ways: by direct pump back from a groundwater well to the California Aqueduct or, when available, by an exchange with a supply already in the aqueduct. Water quality issues can arise in water returned by direct pumping as a result of the presence of a water quality contaminant in the groundwater storage basin and due to the imposition of stricter water quality standards by federal or State regulation.

In 2017, the SWRCB adopted a regulation setting a Maximum Contaminant Level (“MCL”) for TCP of five parts per trillion or 5 ppt based upon a running annual average. TCP is a manufactured chemical used as a cleaning and degreasing solvent and has been found at industrial and hazardous waste sites. It is also associated with pesticide products used in agricultural practices. In January 2018, the new regulation went into effect. Under the new regulation, drinking water agencies are required to perform quarterly monitoring of TCP. There have been no detections of this chemical in Metropolitan’s system. However, TCP has been detected above the new MCL in groundwater wells of three of Metropolitan’s groundwater storage program partners through monitoring performed by these agencies. Levels detected in groundwater wells of the Arvin-Edison Water Storage District are the highest and will impact the ability of Metropolitan to take return water under that program. As noted under “METROPOLITAN’S WATER SUPPLY–Water Transfer, Storage and Exchange Programs” in this Appendix A, Metropolitan has temporarily suspended operation of this program until the water quality concerns can be further evaluated and managed. The levels of TCP detected at Metropolitan’s other groundwater storage programs are much lower and impact fewer groundwater wells. Metropolitan is evaluating the effects of TCP on the return capability of those programs.

Possible remediation measures include, for example, return water with other surface water supplies, removal of wells from service, return water by exchange, or treatment. Additional capital and/or operation and maintenance costs could be incurred by Metropolitan in connection with remediation options, but the magnitude of such costs is not known at this time. To the extent return water under one or more groundwater storage programs could not be utilized due to groundwater quality, the available supply of stored water during extended drought or emergency periods would be reduced.

Metropolitan continually monitors new water quality laws and regulations and frequently comments on new legislative proposals and regulatory rules. For example, on June 26, 2019, the USEPA proposed setting the MCL for perchlorate at 56 micrograms per liter ( $\mu\text{g/L}$ ). Perchlorate is both a naturally occurring and man-made chemical used in the production of rocket fuel, missiles, fireworks, flares and explosives. It is also sometimes present in bleach and in some fertilizers. Groundwater in the Henderson, Nevada area has been contaminated with perchlorate as a result of two former chemical manufacturing facilities, and there are ongoing remediation programs to mitigate its release into the Las Vegas Wash and the downstream Colorado River. In addition to its proposed setting of a perchlorate MCL of 56  $\mu\text{g/L}$ , the USEPA sought comment on three alternative regulatory options: (1) setting an MCL for perchlorate at 18  $\mu\text{g/L}$ ; (2) setting an MCL for perchlorate at 90  $\mu\text{g/L}$ ; or (3) withdrawing EPA’s 2011 determination to regulate perchlorate in drinking water. On August 23, 2019, Metropolitan submitted a comment letter on the USEPA’s proposed regulation, recommending that the USEPA consider the health effects data used by several states for setting MCLs and

Advisory Levels for perchlorate, as well as the monitoring and compliance guidance provided by California and Massachusetts in developing their perchlorate MCLs. Also, Metropolitan expressed its concern that the USEPA does not have an up-to-date accounting of perchlorate contamination and that the USEPA excluded perchlorate data from California and Massachusetts. As it has in the past, Metropolitan continued to urge the USEPA to establish a drinking water regulation for perchlorate that is protective of human health and prevents any adverse impact to the Colorado River and the millions of users that rely upon it as a source of drinking water supply. Lastly, Metropolitan asked the USEPA not to withdraw its 2011 determination to regulate perchlorate in drinking water; otherwise, drinking water utilities in Nevada and Arizona which rely on Colorado River water could then have higher levels of perchlorate in their source water, and California drinking water utilities, including some of Metropolitan's member agencies, would be challenged to comply with California's MCL for perchlorate of 6 µg/L if remediation efforts in the Henderson area were slowed down in the absence of a federal regulation. On June 18, 2020, the USEPA withdrew its 2011 determination to regulate perchlorate under the SDWA and issued a new determination that perchlorate does not meet the statutory criteria for regulation. Whether the USEPA should issue a national drinking water standard for perchlorate is the subject of ongoing litigation by the Natural Resources Defense Council, Inc. California is also reviewing its MCL for perchlorate in light of a revised Public Health Goal ("PHG") of 1 µg/L adopted in February 2015. PHGs are established by the California Office of Environmental Health Hazard Assessment ("OEHHA") and used as the basis for the development of a State regulation setting an MCL. The SWRCB is required to set an MCL for a chemical as close to the PHG as is technologically and economically feasible, placing primary emphasis on the protection of public health. As part of this process, on March 6, 2020, the SWRCB proposed lowering the detection limit for purposes of reporting ("DLR") for perchlorate from 4 µg/L to 2 µg/L. Data collected from monitoring using the lower DLR will allow the SWRCB to evaluate the technological and economic feasibility of water treatment to reduce perchlorate levels to concentrations less than the current DLR. On April 30, 2020, Metropolitan submitted a comment letter to the SWRCB supporting the lower perchlorate DLR which is consistent with laboratory capabilities and will allow for a more accurate and complete assessment of perchlorate occurrence across the State. In July 2020, due to improved analytical methods, and in order to evaluate a lower MCL, DDW modified its proposal to lowering the DLR for perchlorate initially to 2 µg/L, and subsequently to the PHG of 1 µg/L in a second phase effective January 1, 2024. On October 6, 2020, the SWRCB approved the modified proposal. Metropolitan will continue to participate in federal and state rulemaking proceedings.

Metropolitan is monitoring and commenting on the development of legislation, laws, and regulations regarding per- and poly-fluoroalkyl substances ("PFAS"). PFAS are substances widely used in consumer and industrial products such as fabrics, carpets, firefighting foams, food packaging and nonstick cookware and are known for their nonstick, waterproof, and heat and stain resistant properties. Perfluorooctane sulfonate ("PFOS") and perfluorooctanoic acid ("PFOA") are the two most common synthetic organic chemicals in the group of compounds referred to as PFAS. In August 2019, DDW lowered the notification levels for PFOS from 13 ppt to 6.5 ppt and for PFOA from 14 ppt to 5.1 ppt. Notification levels are non-regulatory, precautionary health-based measures for concentrations of chemicals in drinking water that warrant notification and further monitoring and assessment. If a chemical concentration is greater than its notification level in drinking water that is provided to consumers, DDW recommends that the utility inform its customers and consumers about the presence of the chemical, and about health concerns associated with exposure to it. In February 2020, DDW lowered response levels for PFOA and PFOS from 70 ppt for individual or combined concentrations to 10 ppt for PFOA and 40 ppt for PFOS. A response level is set higher than a notification level and represents a chemical concentration level at which DDW recommends a water system consider taking a water source out of service or providing treatment if that option is available to them. Legislation which took effect on January 1, 2020 (California Assembly Bill 756), requires that water systems that receive a monitoring order from the SWRCB and detect levels of PFAS that exceed their respective response level must either take a drinking water source out of use or provide specified public notification if they continue to supply water above the response level. PFOA and PFOS have not been detected in Metropolitan's imported or treated water supplies. In 2019, Metropolitan detected in its supplies low levels of perfluorohexanoic acid (PFHxA), which is not acutely toxic or carcinogenic and is not currently regulated

in California or at the federal level. No other PFAS have been detected in Metropolitan imported or treated supplies. However, PFOA and PFOS have been detected in groundwater wells in the region, including those of certain member agencies. Metropolitan may experience increased demands for its imported water to help offset the potential loss of any affected local supplies. On January 19, 2021, the USEPA announced its final determination to regulate PFOA and PFOS in drinking water, as well as that it is considering whether to designate PFOA and PFOS as hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and/or hazardous waste under the Resource Conservation and Recovery Act. The same day, the USEPA announced its proposed revisions to the Unregulated Contaminant Monitoring Rule (UCMR 5) for public water systems which includes monitoring for 29 PFAS in drinking water. The proposal would require pre-sampling preparations in 2022, sample collection from 2023-2025, and reporting of final results through 2026. Comments on the USEPA's proposal will be due within 60 days after it is published in the Federal Register. The USEPA also released its final toxicity assessment for perfluorobutane sulfonic acid ("PFBS"), a replacement for PFOS. The toxicity assessment will be a part of the USEPA's risk assessment decision-making process. OEHHA recently recommended a notification level for PFBS at 0.5 ppb (or 500 ppt). In addition, the SWRCB has initiated a process to establish regulatory standards for PFOA and PFOS by requesting the OEHHA to establish PHGs for these two chemicals. Metropolitan will continue to monitor and participate in federal and state rulemaking proceedings.

Metropolitan is currently operating in compliance with all state and federal drinking water regulations and permit requirements.

#### **Seismic Considerations and Emergency Response Measures**

*General.* Although the magnitude of damages resulting from a significant seismic event are impossible to predict, Metropolitan's water conveyance and distribution facilities are designed either to withstand a maximum probable seismic event or to minimize the potential repair time in the event of damage. The five pumping plants on the CRA have been buttressed to better withstand seismic events. Other components of the CRA are monitored for any necessary rehabilitation and repair. Metropolitan personnel and independent consultants periodically reevaluate the internal water distribution system's vulnerability to earthquakes. As facilities are evaluated and identified for seismic retrofitting, they are prioritized, with those facilities necessary for delivering or treating water scheduled for upgrade before non-critical facilities. However, major portions of the California Aqueduct and the CRA are located near major earthquake faults, including the San Andreas Fault. A significant earthquake could damage structures and interrupt the supply of water, adversely affecting Metropolitan's revenues and its ability to pay its obligations. Therefore, emergency supplies are stored for use throughout Metropolitan's service area, and a six-month reserve supply of water normally held in local storage (including emergency storage in Diamond Valley Lake) provides reasonable assurance of continuing water supplies during and after such events (assuming there has been no impairment of Metropolitan's internal distribution network).

Metropolitan has an ongoing surveillance program that monitors the safety and structural performance of its 20 dams and reservoirs permitted by DWR's Division of Safety of Dams. Operating personnel perform regular inspections that include monitoring and analyzing seepage flows and pressures. Engineers responsible for dam safety review the inspection data and monitor the horizontal and vertical movements for each dam. Major on-site inspections are performed at least twice each year. Instruments that transmit seismic acceleration time histories for analysis any time a dam is subjected to strong motion during an earthquake are located at a number of selected sites.

Metropolitan has developed an emergency plan that calls for specific levels of response appropriate to an earthquake's magnitude and location. Included in this plan are various communication tools, as well as a structured plan of management that varies with the severity of the event. Pre-designated personnel follow detailed steps for field facility inspection and distribution system patrol. Approximately 40 employees are designated to respond immediately under certain identifiable seismic events. An emergency operations center is maintained at the OCC. The OCC, which is specifically designed to be earthquake resistant, contains

communication equipment, including a radio transmitter, microwave capability and a response line linking Metropolitan with its member agencies, DWR, other utilities and the State's Office of Emergency Services.

Metropolitan, in conjunction with DWR and LADWP, has formed the Seismic Resilience Water Supply Task Force for the purpose of collaborating on studies and mitigation measures aimed at improving the reliability of imported water supplies to Southern California. Specific task force goals included revisiting historical assumptions regarding potential aqueduct outages after a seismic event; establishing a common understanding about individual agency aqueduct vulnerability assessments, projected damage scenarios, and planning assumptions; and discussing ideas for improving the resiliency of Southern California's imported water supplies through multi-agency cooperation. The task force has established multi-year goals and will continue to meet on these issues and develop firm plans for mitigating seismic vulnerabilities.

Metropolitan's resiliency efforts include manufacturing, pipe fabrication and coating capabilities in La Verne, California. Over \$47 million has been invested to enhance and expand Metropolitan's capacity to provide fabrication, manufacturing, and coating services for rehabilitation work, maintenance activities, and capital projects. Upon request, Metropolitan is also able to provide manufacturing, coating and fabrication services through reimbursable agreements to member agencies, and DWR. These agreements have enhanced timely and cost-effective emergency response capabilities. Materials to fabricate pipe and other appurtenant fittings are kept on site. In the event of earthquake damage, Metropolitan has taken measures to provide the design and fabrication capacity to fabricate pipe and manufacture fittings. Metropolitan is also staffed to perform emergency repairs and has pre-qualified contractors for emergency repair needs at various locations throughout Metropolitan's service area.

*State Water Project Facilities-California Aqueduct.* The California Aqueduct crosses all major faults either by canal at ground level or by pipeline at very shallow depths to ease repair in case of damage from movement along a fault. State Water Project facilities are designed to withstand major earthquakes along a local fault or the San Andreas Fault without major damage. Dams, for example, are designed to accommodate movement along their foundations and to resist earthquake forces on their embankments. Earthquake loads have been taken into consideration in the design of project structures such as pumping and power plants. The location of check structures on the canal allows for hydraulic isolation of the fault-crossing repair. While the dams, canals, pump stations and other constructed State Water Project facilities have been designed to withstand earthquake forces, the critical supply of water from Northern California must traverse the Bay-Delta through hundreds of miles of varying levels of engineered levees that are susceptible to major failures due to flood and seismic risk. In the event of a failure of the Bay-Delta levees, the quality of the Bay-Delta's water could be severely compromised as saltwater comes in from the San Francisco Bay. Metropolitan's supply of State Water Project water would be adversely impacted if pumps that move Bay-Delta water southward to the Central Valley and Southern California are shut down to contain the saltwater intrusion. Metropolitan estimates that stored water supplies, CRA supplies and local water resources that would be available in case of a levee breach or other interruption in State Water Project supplies would meet demands in Metropolitan's service area for approximately twelve months. See "METROPOLITAN'S WATER SUPPLY--Storage Capacity and Water in Storage" in this Appendix A.

Metropolitan, in cooperation with the other State Water Contractors, developed recommendations to DWR for emergency preparedness measures to maintain continuity in export water supplies and water quality during seismic and other emergency events. These measures include improvements to emergency construction materials stockpiles in the Bay-Delta, improved emergency contracting capabilities, strategic levee improvements and other structural measures of importance to Bay-Delta water export interests, including development of an emergency freshwater pathway to export facilities in a severe earthquake. DWR utilized \$12 million in fiscal year 2007-08 for initial stockpiling of rock for emergency levee repairs and development of Bay-Delta land and marine loading facilities and has identified future funding for expanded stockpiles.

**State Water Project-Perris Dam.** DWR's Perris Dam forms Lake Perris, the southernmost terminal reservoir for the State Water Project in Riverside County, with maximum capacity of approximately 130,000 acre-feet of water. Metropolitan uses water from Lake Perris for delivery to customers in Riverside and San Diego counties. Deliveries from the lake are used as a redundant source for the Mills Water Treatment Plant, drought supply from a flexible storage account, and for consumptive use by Metropolitan's customers. After seismic studies concluded in 2005 that DWR's Perris Dam facility could experience damage from moderate earthquakes along the San Jacinto or San Andreas faults due to potential weaknesses in the dam's foundation, DWR lowered the water level in the reservoir by about 25 feet and reduced the amount of water stored in the reservoir to about 75,000 acre-feet as DWR evaluated alternatives for repair of the dam. Following completion of environmental review and design work in 2011, DWR undertook a major retrofit to Perris Dam to improve its seismic stability and designed to restore the reservoir to its historical level. Repair work was completed in April 2018. Upgrades included strengthening the foundation and adding 1.4 million cubic yards of embankment at the 130-foot tall, earthen dam. DWR's current estimate for repair costs, inclusive of environmental and right-of-way work is \$139.5 million. Following completion of the work, DWR began to refill Lake Perris in March 2018 to allow the dam to be tested and certified to again store 130,000 acre-feet of water. Under the original allocation of joint costs for this facility, the State would have paid approximately six percent of the repair costs. However, because of the recreational benefit this facility provides to the public, the Legislature has approved a recommendation from DWR that the State assume 32.2 percent of these repair costs. The remaining 67.8 percent of repairs costs are being paid for by the three agencies that use the water stored in Lake Perris: Metropolitan (42.9 percent), DWA (3.0 percent) and CVWD (21.9 percent). DWR recovers the cost of repairs through its annual statement of charges sent to each agency. See "METROPOLITAN EXPENSES--State Water Contract Obligations" in this Appendix A.

The dam remediation is one of three major projects to improve seismic stability and enhance public safety in the Perris Dam Remediation Program. The other two projects include the Outlet Tower Improvements project and the Emergency Release Facility ("ERF") project. Construction on the Outlet Tower Improvements project began October 2, 2019. Work on the outlet tower bridge, with modifications to bridge support, bridge seat, end diaphragm, and installation of stiffener plates, is planned for completion in early 2022. The final EIR for the ERF project was certified and approved by DWR in May 2018. Since then, modifications to the ERF project have been identified and the Addendum No. 1 to the EIR was published in September 2020. The ERF project includes improvements downstream of the reservoir that would direct the flow of water in an emergency requiring the dewatering of the reservoir. Flows would be directed through a series of berms and lined and unlined channels that would ultimately terminate at the Riverside County Flood Control and Water Conservation District's Perris Valley Channel. The ERF project is planned to be completed in 2023. The Outlet Tower Improvements and ERF projects enhance the safety of the dam for other risks in addition to that posed by earthquakes. It is anticipated that costs will be shared in the same manner as for the Lake Perris dam remediation project. DWR's current estimate for repair costs (including the share of costs to be assumed by the State) is \$27.1 million for the Outlet Tower Improvements project and \$62.3 million for the ERF project (of which Metropolitan's anticipated share would be 42.9 percent).

### **Security Measures**

Metropolitan conducts ground and air patrols of the CRA and monitoring and testing at all treatment plants and along the CRA. Similarly, DWR has in place security measures reasonably designed to protect critical facilities of the State Water Project, including both ground and air patrols of the State Water Project.

Although Metropolitan has constructed redundant systems and other safeguards to ensure its ability to continually deliver water to its customers, and DWR has made similar efforts, a terrorist attack or other security breach against water facilities could materially impair Metropolitan's ability to deliver water to its customers, its operations, and revenues and its ability to pay its obligations.

## CAPITAL INVESTMENT PLAN

### General Description

Metropolitan’s current Capital Investment Plan (the “Capital Investment Plan” or “CIP”) involves infrastructure and system reliability projects, either as upgrades to existing capital assets or replacements and refurbishments of existing facilities, to ensure reliability as well as enhance operational efficiency and flexibility, and comply with water quality regulations. Metropolitan’s CIP is regularly reviewed and updated. Metropolitan’s biennial budget process includes a review of the projected long-term capital needs and the development of a capital expenditure forecast for the ten-year financial forecast, as well as the identification of the capital priorities of Metropolitan over the biennial budget term. While the award of major contracts and professional services agreements are subject to approval by Metropolitan’s Board, in October 2018 the Board amended the Administrative Code to update the process for appropriating funds and authorizing work to proceed for capital projects. Under the revised process, following the adoption of the biennial budget, a Board action is presented to (1) appropriate the total amount of approved biennial CIP expenditures and (2) authorize the General Manager to initiate and proceed with all work on projects that have been included in the CIP for such biennial period. The new appropriation process has resulted in faster implementation of capital projects. The amount and timing of borrowings to fund capital expenditures will depend upon, among other factors, status of construction activity and water demands within Metropolitan’s service area. From time to time, projects that have been undertaken are delayed, redesigned or deferred by Metropolitan for various reasons, and no assurance can be given that a project in the CIP will be completed in accordance with its original schedule or that any project will be completed as currently planned. In addition, from time to time, when circumstances warrant, Metropolitan’s Board may approve capital expenditures other than or in addition to those contemplated by the CIP at the time of the then current biennial budget.

### Projection of Capital Investment Plan Expenditures

The table below sets forth the projected CIP expenditures by project type for the fiscal years ending June 30, 2021 through 2025, as currently projected for fiscal years 2020-21 and 2021-22, and as reflected in the biennial budget for fiscal years 2020-21 and 2021-22 for fiscal years 2022-2023 through 2024-25. The projection for the current biennium, which covers fiscal years 2020-21 and 2021-22, is updated every month to reflect the most current changes to planned expenditures. The biennial budget is updated every two years as a result of the periodic review and adoption of the capital budget by Metropolitan’s Board. See “HISTORICAL AND PROJECTED REVENUES AND EXPENSES” in this Appendix A.

**CAPITAL INVESTMENT PLAN  
PROJECTION OF EXPENDITURES<sup>(1)</sup>  
(Fiscal Years Ended June 30 - Dollars in Thousands)**

	2021	2022	2023	2024	2025	Total
Infrastructure R&R	\$135,500	\$ 94,000	\$124,500	\$147,700	\$147,900	\$ 649,600
Infrastructure Upgrade	138,400	76,200	127,300	127,200	135,700	604,800
Regulatory Compliance	1,200	500	1,000	500	400	3,600
Stewardship	4,900	3,600	7,600	10,000	8,000	34,100
Supply Reliability	300	0	200	100	3,400	4,000
System Flexibility	16,300	18,900	34,700	0	0	69,900
Water Quality	8,000	2,200	4,700	14,500	4,600	34,000
<b>Total</b>	<b>\$304,600<sup>(2)</sup></b>	<b>\$195,400<sup>(2)</sup></b>	<b>\$300,000</b>	<b>\$300,000</b>	<b>\$300,000</b>	<b>\$1,400,000</b>

Source: Metropolitan.

<sup>(1)</sup> Fiscal years 2020-21 and 2021-22 are based on current projections. Fiscal years 2022-23 through 2024-25 are based on the ten-year financial forecast provided in the biennial budget for fiscal years 2020-21 and 2021-22.

<sup>(2)</sup> Planned capital expenditures of \$250 million per year were appropriated for fiscal years 2020-21 and 2021-22. Projected capital expenditures for fiscal years 2020-21 and 2021-22 in the table above reflect current projections as to the timing of expenditure of the \$500 million of appropriated funds.



In developing the CIP, projects are reviewed, scored and prioritized towards the objectives of ensuring the sustainable delivery of reliable, high-quality water, while meeting all regulatory requirements and maintaining affordability. Additional capital costs may arise in the future as a result of, among other things, federal and State water quality regulations, project changes and mitigation measures necessary to satisfy environmental and regulatory requirements, and additional facilities' needs. See "METROPOLITAN'S WATER DELIVERY SYSTEM—Water Quality and Treatment" in this Appendix A.

Construction projects included in the CIP are subject to ordinary construction risks and delays, including but not limited to: inclement weather or natural hazards affecting work and timeliness of completion; contractor claims or nonperformance; work stoppages or slowdowns; unanticipated project site conditions encountered during construction; errors or omissions in contract documents requiring change orders; and/or higher than anticipated construction bids or costs, any of which could affect the costs and availability of, or delivery schedule for, equipment, components, materials, labor or subcontractors, and result in increased CIP costs. The construction schedules for certain Metropolitan projects were initially delayed as a result of the COVID-19 outbreak and additional delays in the future are possible. See "INTRODUCTION—COVID-19 Pandemic."

### **Capital Investment Plan Financing**

The CIP requires funding from debt financing (see "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A) as well as from pay-as-you-go funding. In connection with the biennial budget process and the development of the ten-year financial forecast provided therein, an internal funding objective is established for the funding of capital program expenditures from current revenues. An internal funding objective to fund 55 to 60 percent of capital program expenditures from current revenues was established in connection with the adoption of the biennial budget for fiscal years 2020-21 and 2021-22. This objective is updated every two years as a result of the periodic review and adoption of the capital budget by Metropolitan's Board. The remainder of capital program expenditures are expected to be funded through the issuance from time to time of water revenue bonds, which are payable from Net Operating Revenues. However, as in prior years, pay-as-you-go or debt funding may be reduced or increased by the Board during the fiscal year.

Projections for fiscal years 2020-21 through 2024-25 assume the issuance of approximately \$585 million (including Metropolitan's 2021 Series A Bonds) in additional water revenue bonds over such period to finance the CIP. These revenue bonds may be issued either as Senior Revenue Bonds under the Senior Debt Resolutions or as Subordinate Revenue Bonds under the Subordinate Debt Resolutions (each as defined under "METROPOLITAN EXPENSES—Limitations on Additional Revenue Bonds" in this Appendix A). The cost of these projected bond issues is reflected in the financial projections under "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A.

### **Major Projects of Metropolitan's Capital Investment Plan**

*Colorado River Aqueduct Facilities.* As previously noted, deliveries through the CRA began in 1941. Through annual inspections and maintenance activities, the performance and reliability of the various components of the CRA are regularly evaluated. Projects under the CRA facilities program are designed to replace or refurbish facilities and components on the CRA system in order to reliably convey water from the Colorado River to Southern California. A variety of projects have been completed over the past 10 years, including, among other things, replacement of the uninterruptible power supply system at each of the five pumping plants, replacement of high voltage circuit breakers and transformers at the five pumping plant switchyards, refurbishment of operators and power centers on the head gates downstream of the pumping plants, replacement of several miles of deteriorated concrete canal liner, new wastewater systems at the Hinds and Eagle Mountain Pumping Plants, replacement of the sand trap facilities upstream of the Hinds, Eagle Mountain, and Iron Mountain pumping plants, and replacement of the outlet gates and appurtenant electrical, mechanical, and control systems at the Copper Basin Reservoir. Projects currently underway

include radial gates replacement along the CRA, rehabilitation of the Gene Wash Reservoir discharge structure, and projects to refurbish or replace electrical and mechanical system components at each of the five pumping plants, including power cables, overhead cranes, and sump systems. Additionally, many of the mechanical and electrical components, including the nine main pumps and motors at each of the five pumping plants will be evaluated and replaced or refurbished over the next several years. The current projected cost estimate for all prior and planned refurbishment or replacement projects under the CRA facilities program is \$762.8 million. Costs through October 2020 were \$349.4 million. Budgeted aggregate capital expenditures for improvements on the CRA for fiscal years 2020-21 and 2021-22 are \$107.4 million.

***Distribution System – Prestressed Concrete Cylinder Pipe.*** Metropolitan's distribution system is comprised of approximately 830 miles of pipelines ranging in diameter from 30 inches to over 200 inches. (See "METROPOLITAN'S WATER DELIVERY SYSTEM" in this Appendix A.) 163 miles of the distribution system is made up of prestressed concrete cylinder pipe ("PCCP"). In response to PCCP failures experienced by several water agencies, Metropolitan initiated the PCCP Assessment Program in December 1996 to evaluate the condition of Metropolitan's PCCP lines and investigate inspection and refurbishment methods. As a result, Metropolitan has identified and made improvements to several sections of PCCP. The costs for these improvements through February 2020 were \$99.2 million. Rather than continue to make spot repairs to pipe segments, Metropolitan has initiated a long-term capital program to rehabilitate approximately 100 miles of PCCP in five pipelines by relining with a welded steel liner. The first two major contracts to reline approximately 6.4 miles of PCCP on the Second Lower Feeder have been completed. The third major contract to reline an additional approximately 4.5 miles of PCCP on the Second Lower Feeder was awarded in May 2019 and is estimated to be completed by the end of 2020. As a change order to the same contract, an additional approximately 2,900 feet of re-lining of PCCP on the Second Lower Feeder was completed in late 2020. Subsequent contracts are planned to be awarded annually depending on shutdown scheduling. In order to meet the critical timing of the relining projects, the steel pipe lining sections for the next contract are being purchased in advance. Costs through October 2020 for all PCCP work (including the \$99.3 million of repairs costs noted above) were \$280.1 million. The estimated cost to reline all 100 miles of PCCP is approximately \$2.2 billion and is expected to be undertaken over a period of approximately 20 years. Budgeted aggregate capital expenditures for PCCP rehabilitation for fiscal years 2020-21 and 2021-22 are \$53.9 million.

***Distribution System – Refurbishments and Improvements.*** In addition to the long-term program to rehabilitate Metropolitan's PCCP lines, several other components of the distribution system including dams and reservoirs are being refurbished and/or improved. Major projects completed to date include the \$70 million replacement of the outlet facilities at Lake Mathews, the first two phases of the Orange County Feeder and Etiwanda Pipeline relining projects for a total of \$34 million, and various other facility refurbishment and replacement projects ranging in cost from approximately \$500,000 to over \$10 million. Ongoing projects to ensure the reliability of the distribution system, primarily due to age, include multiple replacements or refurbishments of isolation and control valves and gates, lining replacement of remaining portions of the Etiwanda Pipeline and Orange County Feeder, refurbishment to pressure control and hydroelectric power facilities, system improvements to provide drought relief, replacement of finished water reservoir covers and liners, upgrading dam monitoring systems, and various other upgrades totaling approximately \$450.1 million through October 2020. The current projected cost estimate for the prior and planned refurbishment or replacement projects, other than the PCCP relining, is \$1.4 billion. For fiscal years 2020-21 and 2021-22, budgeted aggregate capital expenditures for refurbishing and improvements on the distribution system, other than PCCP rehabilitation, are \$123.7 million.

***System Reliability.*** System Reliability projects are implemented at facilities throughout Metropolitan's system to utilize new processes or technologies, to improve safety, or to increase overall reliability. Significant projects in this category include seismic strengthening of Metropolitan's headquarters building, construction or improvement of operations support facilities such as the La Verne machine and fabrication shops, security system enhancements, and information technology infrastructure projects. The total estimated cost for all prior and projected system reliability improvements under this program is

approximately \$544.8 million, with \$237.8 million spent through October 2020. Budgeted aggregate capital expenditures for improvements on system reliability projects for fiscal years 2020-21 and 2021-22 are \$97.4 million.

***F.E. Weymouth Treatment Plant Improvements.*** The Weymouth Treatment Plant, built in 1938, is Metropolitan's oldest water treatment facility. It has been subsequently expanded several times since its original construction. Metropolitan has completed several upgrades and refurbishment/replacement projects to maintain the plant's reliability and improve its efficiency. These include power systems upgrades, residual solids dewatering facility, refurbishment/replacement of the mechanical equipment in two of the eight flocculation and settling basins, a new plant maintenance facility, new chemical feed systems and storage tanks, replacement of the plant domestic/fire water system, seismic upgrades to the plant inlet structure and filter buildings, upgrades to the plants filters, and a new chlorine handling and containment facility. Significant projects over the next several years include refurbishment of four of the plant's settling basins and strengthening inlet channels to the basins, seismic retrofits to the administration building, and replacement of the valves used to control filter operation. The cost estimate for all prior and projected improvements at the Weymouth plant, not including the ozone facilities, is approximately \$453.8 million, with \$300.8 million spent through October 2020. Budgeted aggregate capital expenditures for improvements at the Weymouth plant for fiscal years 2020-21 and 2021-22 are \$18.7 million.

***Robert B. Diemer Treatment Plant Improvements.*** The Diemer Treatment Plant, built in 1963 and subsequently expanded in 1968, is Metropolitan's second oldest water treatment facility. Several upgrades and refurbishment/replacement projects have been completed at the Diemer plant, including power system upgrades, a new residual solids dewatering facility, new vehicle and plant maintenance facilities, new chemical feed systems and storage tanks, a new chlorine handling and containment facility, construction of a roller-compacted concrete slope stabilization system, a new secondary access road, and upgrades to half of the plant's settling basins and filter valves. Significant projects over the next several years include the completion of refurbishment of the plant's settling basins and replacement of the valves used to control filter operation, and seismic retrofits to the filter buildings. The current cost estimate for all prior and projected improvements at the Diemer plant, not including the ozone facilities, is approximately \$432.1 million, with \$315.2 million spent through October 2020. Budgeted aggregate capital expenditures for improvements at the Diemer plant for fiscal years 2020-21 and 2021-22 are \$22.9 million.

## METROPOLITAN REVENUES

### General

Until water deliveries began in 1941, Metropolitan's activities were, by necessity, supported entirely through the collection of *ad valorem* property taxes. Since the mid-1980s, water revenues, which includes revenues from water sales, wheeling and exchanges, have provided approximately 80 percent of total revenues annually. In that time period, *ad valorem* property taxes have accounted for about 10 percent of total revenues, and in fiscal year 2019-20, *ad valorem* property taxes accounted for approximately 10 percent of total revenues. See "Revenue Allocation Policy and Tax Revenues." The remaining revenues have been derived principally from the sale of hydroelectric power, interest on investments and additional revenue sources (water standby charges and availability of service charges) beginning in 1992. *Ad valorem* taxes do not constitute a part of Operating Revenues and are not available to make payments with respect to the water revenue bonds issued by Metropolitan.

The basic rate for untreated water service for domestic and municipal uses is \$777 per acre-foot at the Tier 1 level, which became effective January 1, 2021. See "Rate Structure" and "Water Rates." The *ad valorem* tax rate for Metropolitan purposes has gradually been reduced from a peak equivalent rate of 0.1250 percent of full assessed valuation in fiscal year 1945-46 to 0.0035 percent of full assessed valuation for fiscal year 2020-21. The rates charged by Metropolitan represent the cost of Metropolitan's wholesale

water service to its member agencies, and not the cost of water to the ultimate consumer. Metropolitan does not exercise control over the rates charged by its member agencies or their subagencies to their customers.

### Summary of Revenues by Source

The following table sets forth Metropolitan’s sources of revenues for the five fiscal years ended June 30, 2020, on a modified accrual basis. All information is unaudited. Audited financial statements for the fiscal years ended June 30, 2020 and June 30, 2019 are included in APPENDIX B–“THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA INDEPENDENT AUDITORS’ REPORT AND BASIC FINANCIAL STATEMENTS FOR FISCAL YEARS ENDED JUNE 30, 2020 AND JUNE 30, 2019 AND BASIC FINANCIAL STATEMENTS FOR THE THREE MONTHS ENDED SEPTEMBER 30, 2020 AND 2019 (UNAUDITED).”

#### SUMMARY OF REVENUES BY SOURCE<sup>(1)</sup> Fiscal Years Ended June 30 (Dollars in Millions)

	2016	2017	2018	2019	2020
Water Revenues <sup>(2)</sup>	\$1,166	\$1,151	\$1,285	\$1,149	\$1,188
Taxes, Net <sup>(3)</sup>	108	116	131	145	147
Additional Revenue Sources <sup>(4)</sup>	200	184	172	170	165
Interest on Investments	18	4	8	34	20
Hydroelectric Power Sales	7	21	24	18	16
Other Revenues <sup>(5)</sup>	245	51	28	22	14
Total Revenues	<u>\$1,744</u>	<u>\$1,527</u>	<u>\$1,648</u>	<u>\$1,538</u>	<u>\$1,550</u>

Source: Metropolitan.

- (1) Does not include any proceeds from the sale of bonded indebtedness.
- (2) Water revenues include revenues from water sales, exchanges, and wheeling.
- (3) *Ad valorem* taxes levied by Metropolitan are applied solely to the payment of outstanding general obligation bonds of Metropolitan and to State Water Contract obligations.
- (4) Includes revenues derived from water standby charges, readiness-to-serve, and capacity charges.
- (5) Includes miscellaneous revenues and Build America Bonds (BABs) subsidy payment of \$12.3 million, \$9.8 million, \$15.0 million, \$12.5 million, and \$2.9 in fiscal years 2015-16 through 2019-20, respectively. Fiscal years 2015-16, 2016-17, and 2017-18, include \$222 million, \$33 million, and \$1 million, respectively, of water conservation and supply program expenses, funded from a like amount of funds transferred from the Water Management Fund.

### Revenue Allocation Policy and Tax Revenues

The Board determines the water revenue requirement for each fiscal year after first projecting the *ad valorem* tax levy for that year. The tax levy for any year is subject to limits imposed by the State Constitution, the Act and Board policy and to the requirement under the State Water Contract that in the event that Metropolitan fails or is unable to raise sufficient funds by other means, Metropolitan must levy upon all property within its boundaries not exempt from taxation a tax or assessment sufficient to provide for all payments under the State Water Contract. See “HISTORICAL AND PROJECTED REVENUES AND EXPENSES” in this Appendix A. Beginning with fiscal year 1990-91, the Act limits Metropolitan’s tax levy to the amount needed to pay debt service on Metropolitan’s general obligation bonds and to satisfy a portion of Metropolitan’s State Water Contract obligation. However, Metropolitan has authority to impose a greater tax levy if, following a public hearing, the Board finds that such revenue is essential to Metropolitan’s fiscal integrity. For each fiscal year since 2013-14, the Board has exercised that authority and voted to suspend the tax limit clause in the Act, maintaining the fiscal year 2012-13 *ad valorem* tax rate to pay for a greater portion of Metropolitan’s State Water Contract obligations. Any deficiency between tax levy receipts and Metropolitan’s State Water Contract obligations is expected to be paid from Operating Revenues, as defined

in the Senior Debt Resolutions (defined in this Appendix A under “METROPOLITAN EXPENSES—Limitations on Additional Revenue Bonds”).

The COVID-19 pandemic has negatively affected economic activity throughout the U.S., including within the Southern California region. These negative impacts may reduce or otherwise negatively affect future property tax values within Metropolitan’s service area and/or Metropolitan’s tax levy receipts. The assumptions underlying Metropolitan’s financial projections for fiscal years 2020-21 through 2024-25 include modest annual increases in assessed valuation over the five-year projection period that are significantly below the average annual assessed valuation increases actually observed, and property tax delinquency rates that are significantly in excess of the property tax delinquency rate actually experienced, over the five fiscal years 2014-15 through 2018-19, which is expected to help abate the financial effects of such COVID-19 impacts if they occur. See “INTRODUCTION—COVID-19 Pandemic.”

### **Water Revenues**

**General; Authority.** Water rates are established by the Board and are not subject to regulation or approval by the California Public Utilities Commission or by any other local, State or federal agency. In accordance with the Act, water rates must be uniform for like classes of service. Metropolitan, a wholesaler, provides two types of services: full-service water service (treated or untreated) and wheeling service. See “Classes of Water Service.”

No member agency of Metropolitan is obligated to purchase water from Metropolitan. However, 21 of Metropolitan’s 26-member agencies have entered into 10-year voluntary water supply purchase orders (“Purchase Orders”) effective through December 31, 2024. See “Member Agency Purchase Orders.” Consumer demand and locally supplied water vary from year to year, resulting in variability in water revenues. See “REGIONAL WATER RESOURCES” in this Appendix A. Metropolitan uses its financial reserves and budgetary tools to manage the financial impact of the variability in revenues due to fluctuations in annual water transactions. See “MANAGEMENT’S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES” in this Appendix A.

**Payment Procedure.** Water is delivered to the member agencies on demand and is metered at the point of delivery. Member agencies are billed monthly and a late charge of one percent of the delinquent payment is assessed for a payment that is delinquent for no more than five business days. A late charge of two percent of the amount of the delinquent payment is charged for a payment that is delinquent for more than five business days for each month or portion of a month that the payment remains delinquent. Metropolitan has the authority to suspend service to any member agency delinquent for more than 30 days. Delinquencies have been rare; in such instances late charges have been collected. No service has been suspended because of delinquencies.

**Water Revenues.** The following table sets forth water transactions (which includes water sales, exchanges, and wheeling) in acre-feet and water revenues (which includes revenues from water sales, exchanges, and wheeling) for the five fiscal years ended June 30, 2020, on a modified accrual basis. As reflected in the table below, water revenues for the fiscal year ended June 30, 2020 aggregated \$1,188.0 million, of which \$1,047.9 million was generated from water sales and \$140.1 million was generated from exchanges and wheeling. Water revenues of Metropolitan for the fiscal years ended June 30, 2020 and June 30, 2019, on an accrual basis, are shown in Metropolitan’s audited financial statements included in Appendix B.

**SUMMARY OF WATER TRANSACTIONS AND REVENUES**  
**Fiscal Years Ended June 30**

<b>Year</b>	<b>Water Transactions in Acre-Feet<sup>(1)</sup></b>	<b>Water Revenues<sup>(2)</sup> (in millions)</b>	<b>Dollars Per Acre-Foot</b>	<b>Average Dollars Per 1,000 Gallons</b>
2016	1,623,052	\$1,166.0	\$718	\$2.20
2017	1,540,915	1,150.5	747	2.29
2018	1,610,969	1,285.2	798	2.45
2019	1,418,324	1,148.7	810	2.49
2020	1,419,156	1,188.0	837	2.57

Source: Metropolitan.

<sup>(1)</sup> Water Transactions include water sales, exchanges, and wheeling with member agencies and third parties.

<sup>(2)</sup> Water Revenues include revenues from water sales, exchanges, and wheeling. Water Revenues from wheeling and exchange transactions were \$84.3 million, \$87.4 million, \$96.1 million, \$102.2 million and \$140.1 million in the fiscal years ended June 30, 2016 through 2020, respectively.

**Principal Customers**

Total water transactions accrued for the fiscal year ended June 30, 2020, were 1.42 million acre-feet, generating \$1.19 billion in water revenues for such period. Metropolitan's ten largest water customers for the year ended June 30, 2020 are shown in the following table, on an accrual basis. The SDCWA has filed litigation challenging Metropolitan's rates. See "--Litigation Challenging Rate Structure."

**TEN LARGEST WATER CUSTOMERS**  
**Year Ended June 30, 2020**  
**Accrual Basis**

<b>Agency</b>	<b>Water Revenues<sup>(1)</sup> (in Millions)</b>	<b>Percent of Total</b>	<b>Water Transactions in Acre-Feet<sup>(2)</sup></b>	<b>Percent of Total</b>
San Diego CWA	\$ 187.3	15.8%	324,660	22.9%
MWD of Orange County	152.6	12.8	157,346	11.1
City of Los Angeles	129.0	10.9	148,022	10.4
West Basin MWD	119.7	10.1	112,636	7.9
Calleguas MWD	99.6	8.4	93,802	6.6
Eastern MWD	93.9	7.9	105,215	7.4
Three Valleys MWD	65.4	5.5	73,239	5.2
Western MWD of Riverside County	59.8	5.0	64,811	4.6
Inland Empire Utilities Agency	47.0	4.0	64,538	4.5
City of Long Beach	30.2	2.5	28,332	2.0
<b>Total</b>	<b>\$ 984.5</b>	<b>82.9%</b>	<b>1,172,602</b>	<b>82.6%</b>
<b>Total Water Revenues<sup>(1)</sup></b>	<b>\$1,188.0</b>	<b>Total Acre-Feet<sup>(2)</sup></b>	<b>1,419,156</b>	

Source: Metropolitan.

<sup>(1)</sup> Water Revenues include revenues from water sales, exchanges, and wheeling.

<sup>(2)</sup> Water Transactions include water sales, exchanges, and wheeling with member agencies and third parties.

**Rate Structure**

The following rates and charges are elements of Metropolitan's unbundled rate structure:

**Tier 1 and Tier 2 Water Supply Rates.** The rate structure recovers supply costs through a two-tiered price structure. The Tier 1 Supply Rate supports a regional approach through the uniform, postage stamp



rate. The Tier 1 Supply Rate is calculated as the amount of the total supply revenue requirement that is not covered by the Tier 2 Supply Rate divided by the estimated amount of Tier 1 water sales. The Tier 2 Supply Rate is a volumetric rate that reflects Metropolitan's cost of purchasing water transfers north of the Delta. The Tier 2 Supply Rate encourages the member agencies and their customers to maintain existing local supplies and develop cost-effective local supply resources and conservation. Member agencies are charged the Tier 1 or Tier 2 Water Supply Rate for water purchases, as described under "–Member Agency Purchase Orders" below.

**System Access Rate.** The System Access Rate recovers the cost of the conveyance and distribution system that is used on an average annual basis through a uniform, volumetric rate. The System Access Rate is charged for each acre-foot of water transported by Metropolitan, regardless of the ownership of the water being transported. All users (including member agencies and third-party wheelers) using Metropolitan's water system to transport water pay the same System Access Rate for the use of the system conveyance and distribution capacity to meet average annual demands.

**Water Stewardship Rate.** The Water Stewardship Rate was designed to provide a dedicated source of funding for conservation and local resources development through a uniform, volumetric rate. The Water Stewardship Rate was charged on each acre-foot of water delivered by Metropolitan through December 31, 2020, except SDCWA Exchange Agreement deliveries as explained below, and is allocated to Metropolitan's transportation rates. All users (including member agencies and third-party wheelers) benefit from avoided system infrastructure costs through conservation and local resources development, and from the system capacity made available by investments in demand management programs like Metropolitan's Conservation Credits Program and Local Resources Program. Therefore, all users paid the Water Stewardship Rate, except on water delivered to SDCWA pursuant to the Exchange Agreement (see "METROPOLITAN REVENUES–Water Rates" and "–Litigation Challenging Rate Structure" in this Appendix A) in calendar years 2018, 2019, and 2020. The Water Stewardship Rate was not incorporated into Metropolitan's rates and charges for calendar years 2021 and 2022 and therefore has not been collected on water transactions after December 31, 2020. See also "CONSERVATION AND WATER SHORTAGE MEASURES–General."

In *San Diego County Water Authority v. Metropolitan Water District of Southern California, et al.* (see "–Litigation Challenging Rate Structure" below), the Court of Appeal held that the administrative record before it for the rates in calendar years 2011 through 2014 did not support Metropolitan's Water Stewardship Rate allocation to transportation rates, but the court did not address the allocation in subsequent years based on a different record. On April 10, 2018, the Board suspended the billing and collection of the Water Stewardship Rate on Exchange Agreement deliveries to SDCWA in calendar years 2018, 2019, and 2020, pending Metropolitan's completion of a cost allocation study of its demand management costs recovered through the Water Stewardship Rate. For calendar year 2018, the suspension was retroactive to January 1, 2018. The total effect of the suspension, taking into consideration the lower revenues over the three calendar years, is estimated to be up to approximately \$46 million.

Having completed a demand management cost allocation process, on December 10, 2019, Metropolitan's Board directed staff to incorporate the use of the 2019-20 fiscal year-end balance of the Water Stewardship Fund to fund demand management costs in the proposed biennial budget for fiscal years 2020-21 and 2021-22 and to not incorporate the Water Stewardship Rate (or any other rates or charges to recover demand management costs), with the proposed rates and charges for calendar years 2021 and 2022, to allow the Board to consider demand management funding in relation to the 2020 Integrated Resources Plan update and to undergo a rate structure refinement process. The balance of the Water Stewardship Fund as of June 30, 2020 was \$133 million, which based on the biennial budget for fiscal years 2020-21 and 2021-22, is expected to be sufficient to fund the demand management costs during the biennial budget period.

**System Power Rate.** The System Power Rate recovers the cost of energy required to pump water to Southern California through the State Water Project and CRA. The cost of power is recovered through a

uniform, volumetric rate. The System Power Rate is applied to all deliveries of Metropolitan water to member agencies. Wheeling parties pay for actual cost (not system average) of power needed to move the water. Member agencies engaging in wheeling transactions of up to one year pay the wheeling rate (consisting of the actual cost of power, the System Access Rate, the Water Stewardship Rate, and an administrative fee). Other wheeling transactions are pursuant to individual contracts. For example, a party wheeling water through the California Aqueduct would pay the variable power cost associated with using the State Water Project transportation facilities.

**Treatment Surcharge.** The Treatment Surcharge recovers all of the costs of providing treatment capacity and operations through a uniform, volumetric rate per acre-foot of treated water transactions. The Treatment Surcharge is charged to all treated water transactions.

The amount of each of these rates since January 1, 2016, is shown in the table entitled "SUMMARY OF WATER RATES" under "–Water Rates" below.

### **Member Agency Purchase Orders**

The current rate structure allows member agencies to choose to purchase water from Metropolitan by means of a Purchase Order. Purchase Orders are voluntary agreements that determine the amount of water that a member agency can purchase at the Tier 1 Supply Rate. Under the Purchase Orders, member agencies have the option to purchase a greater amount of water (based on past purchase levels) over the term of the Purchase Order. Such agreements allow member agencies to manage costs and provide Metropolitan with a measure of secure revenue.

In November 2014, the Metropolitan Board approved new Purchase Orders effective January 1, 2015 through December 31, 2024 (the "Purchase Order Term"). Twenty-one of Metropolitan's 26-member agencies have Purchase Orders, which commit the member agencies to purchase a minimum amount of supply from Metropolitan (the "Purchase Order Commitment").

The key terms of the Purchase Orders include:

- A ten-year term, effective January 1, 2015 through December 31, 2024;
- A higher Tier 1 limit based on the Base Period Demand, determined by the member agency's choice between (1) the Revised Base Firm Demand, which is the highest fiscal year purchases during the 13-year period of fiscal year 1989-90 through fiscal year 2001-02, or (2) the highest year purchases in the most recent 12-year period of fiscal year 2002-03 through 2013-14. The demand base is unique for each member agency, reflecting the use of Metropolitan's system water over time;
- An overall purchase commitment by the member agency based on the Demand Base period chosen, times ten to reflect the ten-year Purchase Order term. Those agencies choosing the more recent 12-year period may have a higher Tier 1 Maximum and commitment. The commitment is also unique for each member agency;
- The opportunity to reset the Base Period Demand using a five-year rolling average;
- Any obligation to pay the Tier 2 Supply Rate will be calculated over the ten-year period, consistent with the calculation of any Purchase Order commitment obligation; and
- An appeals process for agencies with unmet purchase commitments that will allow each acre-foot of unmet commitment to be reduced by the amount of production from a local resource project that commences operation on or after January 1, 2014.

Member agencies that do not have Purchase Orders in effect are subject to Tier 2 Supply Rates for amounts exceeding 60 percent of their base amount (equal to the member agency's highest fiscal year demand between 1989-90 and 2001-02) annually.

### **Other Charges**

The following paragraphs describe the additional charges for the use of Metropolitan's distribution system:

**Readiness-to-Serve Charge.** The Readiness-to-Serve Charge ("RTS") recovers the cost of the portion of the system that is available to provide emergency service and available capacity during outages and hydrologic variability. The RTS is a fixed charge that is allocated among the member agencies based on a ten-fiscal year rolling average of firm demands. Water transfers and exchanges, except SDCWA Exchange Agreement transactions, are included for purposes of calculating the ten-fiscal year rolling average. The Standby Charge, described below, will continue to be collected at the request of a member agency and applied as a direct offset to the member agency's RTS obligation. The RTS (including RTS charge amounts collected through the Standby Charge described below) generated \$137.5 million in fiscal year 2017-18, \$136.5 million in fiscal year 2018-19, and \$134.5 million in fiscal year 2019-20. Based on the adopted rates and charges, the RTS (including RTS charge amounts expected to be collected through the Standby Charge described below) is projected to generate \$133.0 million in fiscal year 2020-21 and \$135.0 million in fiscal year 2021-22.

**Water Standby Charges.** The Standby Charge is authorized by the State Legislature and has been levied by Metropolitan since fiscal year 1992-93. Metropolitan will continue to levy the Standby Charge only within the service areas of the member agencies that request that the Standby Charge be utilized to help fund a member agency's RTS obligation. See "-- Readiness-to-Serve Charge" above. The Standby Charge for each acre or parcel of less than an acre will vary from member agency to member agency, reflecting current rates, which have not exceeded the rates set in fiscal year 1993-94, and range from \$5 to \$15 for each acre or parcel less than an acre within Metropolitan's service area, subject to specified exempt categories. Standby charges are assessments under the terms of Proposition 218, a State constitutional ballot initiative approved by the voters on November 5, 1996, but Metropolitan's current standby charges are exempt from Proposition 218's procedural requirements. See "--California Ballot Initiatives."

Twenty-two of Metropolitan's member agencies collect their RTS charges through Standby Charges. RTS charges collected by means of such Standby Charges were \$41.6 million in fiscal year 2017-18, \$41.7 million in fiscal year 2018-19, and \$41.7 million in fiscal year 2019-20.

**Capacity Charge.** The Capacity Charge recovers costs incurred to provide peak capacity within Metropolitan's distribution system. The Capacity Charge provides a price signal to encourage agencies to reduce peak demands on the distribution system and to shift demands that occur during the May 1 through September 30 period into the October 1 through April 30 period. This results in more efficient utilization of Metropolitan's existing infrastructure and deferring capacity expansion costs. Each member agency will pay the Capacity Charge per cfs based on a three-year trailing peak (maximum) day demand, measured in cfs. Each member agency's peak day is likely to occur on different days; therefore, this measure approximates peak week demands on Metropolitan. The Capacity Charge was \$8,800 per cfs effective as of January 1, 2020 and was \$10,700 per cfs effective as of January 1, 2021. The Capacity Charge will be \$12,200 per cfs effective as of January 1, 2022. The Capacity Charge generated \$34.6 million in fiscal year 2017-18, \$33.0 million in fiscal year 2018-19, and \$30.5 million in fiscal year 2019-20. Based on the adopted rates and charges, the Capacity Charge is projected to generate \$32.3 million in fiscal year 2020-21 and \$40.5 million in fiscal year 2021-22.

## Classes of Water Service

Metropolitan, a wholesaler, provides two types of services: full-service water service (treated or untreated) and wheeling service. Metropolitan has one class of customers: its member agencies. The level of rate unbundling in Metropolitan's rate structure provides transparency to show that rates and charges recover only those functions involved in the applicable service, and that no cross-subsidy of costs exists. Metropolitan's cost of service process and resulting unbundled rate structure ensures that its wholesale customers pay for only those services they elect to receive.

The applicable rate components and fixed charges for each class of water service are shown in the chart below.

### Current Services and Rate Components

Service	Rates & Charges That Apply						
	System Access	Water Stewardship <sup>(1)</sup>	System Power	Tier 1/ Tier 2	Readiness to Serve	Capacity Charge	Treatment Surcharge
Full Service Untreated	Yes	No	Yes	Yes	Yes	Yes	No
Full Service Treated	Yes	No	Yes	Yes	Yes	Yes	Yes
Wheeling Service <sup>(2)</sup>	Yes	No	No <sup>(3)</sup>	No	Yes	Yes	Yes <sup>(4)</sup>

<sup>(1)</sup> As described under "Rate Structure –Water Stewardship Rate," the Water Stewardship Rate has not been incorporated into Metropolitan's rates and charges for calendar years 2021 and 2022 and therefore has not been collected on water transactions after December 31, 2020.

<sup>(2)</sup> Metropolitan's rate for wheeling service applies to wheeling to member agencies in transactions of up to one year.

<sup>(3)</sup> Under Metropolitan's rate for wheeling service, wheeling parties must pay for their own cost for power (if such power can be scheduled by Metropolitan) or pay Metropolitan for the actual cost (not system average) of power service utilized for delivery of the wheeled water. In addition, wheeling parties shall be assessed an administration fee of not less than \$5,000 per transaction.

<sup>(4)</sup> If applicable.

Metropolitan offers three programs that encourage the member agencies to increase groundwater and emergency storage and for which certain Metropolitan charges are inapplicable.

*(1) Conjunctive Use Program.* The Conjunctive Use Program is operated through individual agreements with member and retail agencies for groundwater storage within Metropolitan's service area. Wet-year imported supplies are stored to enhance reliability during dry, drought, and emergency conditions. Metropolitan has the option to call water stored in the groundwater basins for the participating member agency pursuant to its contractual conjunctive use agreement. At the time of the call, the member agency pays the prevailing rate for that water, but the deliveries are excluded from the calculation of the Capacity Charge because Conjunctive Use Program deliveries are made at Metropolitan's discretion. Conjunctive use programs may also contain cost-sharing terms related to operational costs. See "REGIONAL WATER RESOURCES–Local Water Supplies" in this Appendix A.

*(2) Cyclic Storage Program.* The Cyclic Storage Program refers collectively to the existing Cyclic Storage Program agreements and the Pre-Deliveries Program approved in 2019. The Program is operated through individual agreements with member agencies for groundwater or surface water storage or pre-deliveries within Metropolitan's service area. Wet-year imported supplies are stored to enhance reliability during dry, drought, and emergency conditions. Deliveries to the cyclic storage accounts are at Metropolitan's discretion while member agencies have discretion on whether they want to accept the water. At the time the water is delivered from the cyclic storage account, the prevailing full-service rate applies, but deliveries are excluded from the calculation of the Capacity Charge because Cyclic Storage Program deliveries are made at Metropolitan's discretion. Cyclic agreements may also contain a credit payable to the member agencies under terms approved by the Board in April 2019. See "REGIONAL WATER RESOURCES–Local Water Supplies" in this Appendix A.

(3) *Emergency Storage Program.* The Emergency Storage Program is used for delivering water for emergency storage in surface water reservoirs and storage tanks. Emergency Storage Program purposes include initially filling a newly constructed reservoir or storage tank and replacing water used during an emergency. Because Metropolitan could interrupt delivery of this water, Emergency Storage Program Deliveries are excluded from the calculation of the RTS Charge, the Capacity Charge, and the Tier 1 maximum.

The applicable rate components and fixed charges applicable for each such program are shown in the following chart.

**Current Programs and Rate Components**

Program	Rates & Charges That Apply						
	Supply	System Access	Water Stewardship <sup>(1)</sup>	System Power	Readiness to Serve	Capacity Charge	Tier 1 Maximum
Full Service	Yes	Yes	No	Yes	Yes	Yes	Yes
Conjunctive Use	Yes	Yes	No	Yes	Yes	No	Yes
Cyclic	Yes	Yes	No	Yes	Yes	No	Yes
Emergency Storage	Yes	Yes	No	Yes	No	No	No <sup>(2)</sup>

<sup>(1)</sup> As described under “–Rate Structure –Water Stewardship Rate,” the Water Stewardship Rate has not been incorporated into Metropolitan’s rates and charges for calendar years 2021 and 2022 and therefore has not been collected on water transactions after December 31, 2020.

<sup>(2)</sup> Emergency Storage Program pays the Tier 1 Supply Rate; purchases under Emergency Storage program do not count towards a member agency’s Tier 1 Maximum.

**Water Rates**

The following table sets forth Metropolitan’s water rates by category beginning January 1, 2016. See also “MANAGEMENT’S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES–Water Revenues” in this Appendix A. In addition to the base rates for untreated water sold in the different classes of service, the columns labeled “Treated” include the surcharge that Metropolitan charges for water treated at its water treatment plants. See “–Rate Structure” and “–Classes of Water Service” for descriptions of current rates. See also “–Litigation Challenging Rate Structure” for a description of litigation challenging Metropolitan’s water rates.

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**SUMMARY OF WATER RATES  
(Dollars Per Acre-Foot)**

	SUPPLY RATE		SYSTEM ACCESS RATE	WATER STEWARDSHIP RATE <sup>(1)</sup>	SYSTEM POWER RATE	TREATMENT SURCHARGE
	Tier 1	Tier 2				
January 1, 2016	\$156	\$290	\$259	\$41	\$138	\$348
January 1, 2017	\$201	\$295	\$289	\$52	\$124	\$313
January 1, 2018	\$209	\$295	\$299	\$55	\$132	\$320
January 1, 2019	\$209	\$295	\$326	\$69	\$127	\$319
January 1, 2020	\$208	\$295	\$346	\$65	\$136	\$323
January 1, 2021*	\$243	\$285	\$373	\$--	\$161	\$327
January 1, 2022*	\$243	\$285	\$389	\$--	\$167	\$344

	FULL SERVICE TREATED <sup>(2)</sup>		FULL SERVICE UNTREATED <sup>(3)</sup>	
	Tier 1	Tier 2	Tier 1	Tier 2
January 1, 2016	\$942	\$1,076	\$594	\$728
January 1, 2017	\$979	\$1,073	\$666	\$760
January 1, 2018	\$1,015	\$1,101	\$695	\$781
January 1, 2019	\$1,050	\$1,136	\$731	\$817
January 1, 2020	\$1,078	\$1,165	\$755	\$842
January 1, 2021*	\$1,104	\$1,146	\$777	\$819
January 1, 2022*	\$1,143	\$1,185	\$799	\$841

Source: Metropolitan.

\* Rates effective January 1, 2021 and January 1, 2022 were adopted by Metropolitan's Board on April 14, 2020.

(1) As described under "Rate Structure - Water Stewardship Rate," the Water Stewardship Rate has not been incorporated into Metropolitan's rates and charges for calendar years 2021 and 2022 and therefore has not been collected on water transactions after December 31, 2020.

(2) Full service treated water rates are the sum of the applicable Supply Rate, System Access Rate, Water Stewardship Rate, System Power Rate and Treatment Surcharge.

(3) Full service untreated water rates are the sum of the applicable Supply Rate, System Access Rate, Water Stewardship Rate and System Power Rate.

**Financial Reserve Policy**

Metropolitan's reserve policy provides for a minimum reserve requirement and target amount of unrestricted reserves at June 30 of each year. The minimum reserve requirement at June 30 of each year is equal to the portion of fixed costs estimated to be recovered by water revenues for the 18 months beginning with the immediately succeeding July. Funds representing the minimum reserve requirement are held in the Revenue Remainder Fund. Any funds in excess of the minimum reserve requirement are held in the Water Rate Stabilization Fund. The target amount of unrestricted reserves is equal to the portion of the fixed costs estimated to be recovered by water revenues during the two years immediately following the 18-month period used to calculate the minimum reserve requirement. Funds in excess of the target amount are to be utilized for capital expenditures in lieu of the issuance of additional debt, or for the redemption, defeasance or purchase of outstanding bonds or commercial paper as determined by the Board. Provided that the fixed charge coverage ratio is at or above 1.2, amounts in the Water Rate Stabilization Fund may be expended for



any lawful purpose of Metropolitan, as determined by the Board. See “CAPITAL INVESTMENT PLAN–Capital Investment Plan Financing” in this Appendix A.

At June 30, 2020, unrestricted reserves, which consist of the Water Rate Stabilization Fund and the Revenue Remainder Fund, totaled \$448 million on a modified accrual basis. As of June 30, 2020, the minimum reserve requirement was \$269.5 million, and the target reserve level was \$654.4 million.

Due to SDCWA’s litigation challenging Metropolitan’s rates and pursuant to the Exchange Agreement between Metropolitan and SDCWA, Metropolitan is required to set aside funds based on the quantities of exchange water that Metropolitan provides to SDCWA and the amount of charges disputed by SDCWA. In April 2016, Metropolitan transferred these funds from unrestricted financial reserves to a new designated fund, the Exchange Agreement Set-Aside Fund. As of November 30, 2020, Metropolitan held \$57.90 million in the Exchange Agreement Set-Aside Fund. This amount contains the disputed Water Stewardship Rate payments and interest earned thereon based on the rate earned by Metropolitan’s investment portfolio. The amounts held do not include the statutory prejudgment interest, post-judgment interest, attorneys’ fees, or costs awards, none of which the Exchange Agreement requires to be held. Amounts held pursuant to the Exchange Agreement will continue to accumulate based on the quantities of exchange water that Metropolitan provides to SDCWA and the payments disputed by SDCWA, until the litigation, including all appeals, is concluded. See “METROPOLITAN’S WATER SUPPLY–Colorado River Aqueduct –Metropolitan and San Diego County Water Authority Exchange Agreement” in this Appendix A. See also “–Litigation Challenging Rate Structure” below.

Metropolitan projects that its unrestricted reserves as of June 30, 2021 will be approximately \$429 million. This amount does not include funds held in the Exchange Agreement Set-Aside Fund. This projection is based on the assumptions set forth in the table entitled “HISTORICAL AND PROJECTED REVENUES AND EXPENSES” under “HISTORICAL AND PROJECTED REVENUES AND EXPENSES” in this Appendix A. In addition, this projection is based on the assumption that Metropolitan’s Board will not authorize the use of any additional amounts in the unrestricted reserves.

### **California Ballot Initiatives**

Proposition 218, a State ballot initiative known as the “Right to Vote on Taxes Act,” was approved by the voters on November 5, 1996 adding Articles XIIC and XIID to the California Constitution. Article XIID provides substantive and procedural requirements on the imposition, extension or increase of any “fee” or “charge” levied by a local government upon a parcel of real property or upon a person as an incident of property ownership. As a wholesaler, Metropolitan serves water to its member agencies, not to persons or properties as an incident of property ownership. Thus, water rates charged by Metropolitan to its member agencies are not property related fees and charges and therefore are exempt from the requirements of Article XIID. Fees for retail water service by Metropolitan’s member agencies or their agencies are subject to the requirements of Article XIID.

Article XIID also imposes certain procedures with respect to assessments. Under Article XIID, “standby charges” are considered “assessments” and must follow the procedures required for “assessments,” unless they were in existence on the effective date of Article XIID. Metropolitan has imposed its water standby charges since 1992 and therefore its current standby charges are exempt from the Article XIID procedures. Changes to Metropolitan’s current standby charges could require notice to property owners and approval by a majority of such owners returning mail-in ballots approving or rejecting any imposition or increase of such standby charge. Twenty-two of Metropolitan’s member agencies have elected to collect all or a portion of their readiness-to-serve charges through standby charges. See “–Other Charges – Readiness-to-Serve Charge” and “– Water Standby Charges” above. Even if Article XIID is construed to limit the ability of Metropolitan and its member agencies to impose or collect standby charges, the member agencies will continue to be obligated to pay the readiness-to-serve charges.

Article XIII C makes all taxes either general or special taxes and imposes voting requirements for each kind of tax. It also extends the people's initiative power to reduce or repeal previously authorized local taxes, assessments, fees and charges. This extension of the initiative power is not limited by the terms of Article XIII C to fees imposed after November 6, 1996 or to property-related fees and charges and absent other authority could result in retroactive reduction in existing taxes, assessments or fees and charges.

Proposition 26, a State ballot initiative aimed at restricting regulatory fees and charges, was approved by the California voters on November 2, 2010. Proposition 26 broadens the definition of "tax" in Article XIII C of the California Constitution to include: levies, charges and exactions imposed by local governments, except for charges imposed for benefits or privileges or for services or products granted to the payor (and not provided to those not charged) that do not exceed their reasonable cost; regulatory fees that do not exceed the cost of regulation and are allocated in a fair or reasonable manner; fees for the use of local governmental property; fines and penalties imposed for violations of law; real property development fees; and assessments and property-related fees imposed under Article XIII D of the California Constitution. Special taxes imposed by local governments including special districts are subject to approval by two-thirds of the electorate. Proposition 26 applies to charges imposed or increased by local governments after the date of its approval. Metropolitan believes its water rates and charges are not taxes under Proposition 26. SDCWA's lawsuit challenging the rates adopted by Metropolitan in April 2012 (part of which became effective January 1, 2013 and part of which became effective January 1, 2014) alleged that such rates violate Proposition 26. On June 21, 2017, the California Court of Appeal ruled that whether or not Proposition 26 applies to Metropolitan's rates, the System Access Rate and System Power Rate challenged by SDCWA in such lawsuit comply with Proposition 26. See "--Litigation Challenging Rate Structure."

Propositions 218 and 26 were adopted as measures that qualified for the ballot pursuant to the State's initiative process. Other initiative measures have been proposed from time to time, including presently, or could be proposed in the future, which if qualified for the ballot, could be adopted, or legislative measures could be approved by the Legislature, which may place limitations on the ability of Metropolitan or its member agencies to increase revenues or to increase appropriations. Such measures may further affect Metropolitan's ability to collect taxes, assessments or fees and charges, which could have an effect on Metropolitan's revenues.

### **Preferential Rights**

Section 135 of the Act gives each of Metropolitan's member agencies a preferential right to purchase for domestic and municipal uses within the agency a portion of the water served by Metropolitan, based upon a ratio of all payments on tax assessments and otherwise, except purchases of water, made to Metropolitan by the member agency compared to total payments made by all member agencies on tax assessments and otherwise since Metropolitan was formed, except purchases of water. Historically, these rights have not been used in allocating Metropolitan's water. In 2004, the California Court of Appeal upheld Metropolitan's methodology for calculation of the respective member agencies' preferential rights under Section 135 of the Act. SDCWA's litigation challenging Metropolitan's rate structure also challenged Metropolitan's exclusion of payments for Exchange Agreement deliveries from the calculation of SDCWA's preferential right. On June 21, 2017, the California Court of Appeal held that SDCWA's payments under the Exchange Agreement must be included in the preferential rights calculation. See "--Litigation Challenging Rate Structure."

### **Litigation Challenging Rate Structure**

SDCWA filed *San Diego County Water Authority v. Metropolitan Water District of Southern California, et al.* on June 11, 2010. The complaint alleges that the rates adopted by the Board on April 13, 2010, which became effective January 1, 2011 and January 1, 2012, misallocate certain State Water Contract costs to the System Access Rate and the System Power Rate, and thus affect charges for transportation of water, resulting in an overcharge to SDCWA by at least \$24.5 million per year. The complaint alleges that all State Water Project costs should be allocated instead to Metropolitan's Supply Rate, even though under the

State Water Contract Metropolitan is billed separately for transportation, power and supply costs. It states additionally that Metropolitan will overcharge SDCWA by another \$5.4 million per year by including the Water Stewardship Rate in transportation charges.

The complaint requested a court order invalidating the rates adopted April 13, 2010, and that Metropolitan be mandated to allocate costs associated with the State Water Contract and the Water Stewardship Rate to water supply rates and not to transportation rates. Rates in effect in prior years are not challenged in this lawsuit.

SDCWA filed its First Amended Petition for Writ of Mandate and Complaint on October 27, 2011, adding five new claims to this litigation, two of which were eliminated from the case on January 4, 2012. The three remaining new claims were for breach of the water Exchange Agreement between Metropolitan and SDCWA (described herein under "METROPOLITAN'S WATER SUPPLY-Colorado River Aqueduct - Metropolitan and San Diego County Water Authority Exchange Agreement") due to a price based on allegedly illegal rates; improper exclusion of SDCWA's payments under such Exchange Agreement from calculation of SDCWA's preferential rights to purchase Metropolitan supplies (see "-Preferential Rights" above); and illegality of the rate structure integrity provision in conservation and local resources incentive agreements between Metropolitan and SDCWA. The rate structure integrity provision permitted the Board to terminate incentives payable under conservation and local resources incentive agreements between Metropolitan and a member agency due to certain actions by the member agency to challenge the rates that are the source of incentive payments. In June 2011, Metropolitan's Board authorized termination of two incentive agreements with SDCWA under the rate structure integrity provision in such agreements after SDCWA filed its initial complaint challenging Metropolitan's rates. SDCWA filed a Second Amended Petition for Writ of Mandate and Complaint on April 17, 2012, which contained additional allegations but no new causes of action.

On June 8, 2012, SDCWA filed a new lawsuit challenging the rates adopted by Metropolitan on April 10, 2012 and effective on January 1, 2013 and January 1, 2014. The complaint contained allegations similar to those in the Second Amended Petition for Writ of Mandate and Complaint and new allegations asserting that Metropolitan's rates, adopted in April 2012, violate Proposition 26. See "-California Ballot Initiatives" for a description of Proposition 26.

SDCWA filed a Third Amended Petition for Writ of Mandate and Complaint on January 23, 2013, to add new allegations that Metropolitan's rates adopted in April 2010 did not meet the requirements of Proposition 26. The court granted Metropolitan's motion to strike allegations relating to Proposition 26 on March 29, 2013, expressly ruling that SDCWA may not allege a violation of Proposition 26 in its challenge to the rates adopted in April 2010. This ruling did not affect SDCWA's separate challenge to Metropolitan's rates adopted in April 2012, which also includes Proposition 26 allegations.

Following trial of both lawsuits in two phases, concluding on January 23, 2014 and April 30, 2015, respectively, the Superior Court of the State of California, County of San Francisco (the "Superior Court"), issued its Final Judgment and a Peremptory Writ of Mandate in the 2010 and 2012 SDCWA v. Metropolitan cases. Metropolitan appealed the trial court's decision in each case, and SDCWA filed a cross-appeal of the court's ruling on the rate structure integrity claim and an attorneys' fees order.

On June 21, 2017, the California Court of Appeal released its decision in the appeals and cross-appeal filed by Metropolitan and SDCWA, respectively. The Court of Appeal ruled that Metropolitan may lawfully include its State Water Project transportation costs in the System Access Rate and System Power Rate that are part of the Exchange Agreement's price term, and that Metropolitan may also lawfully include the System Access Rate in its wheeling rate, reversing the trial court decision on this issue. The Court held Metropolitan's allocation of the State Water Project transportation costs as its own transportation costs is proper and does not violate the wheeling statutes (Water Code, § 1810, *et seq.*), Proposition 26 (Cal. Const.,

Article XIII C, §1, subd.(e)), whether or not that Proposition applies to Metropolitan's rates, California Government Code section 54999.7, the common law, or the terms of the parties' Exchange Agreement.

The Court of Appeal also ruled that the administrative record before it for the rates in calendar years 2011 through 2014 did not support Metropolitan's inclusion of its Water Stewardship Rate as a transportation cost in the Exchange Agreement price or the wheeling rate, under the common law and wheeling statutes. Having made that determination, the Court of Appeal stated it need not evaluate the issue under any other law. The court did not address the allocation of the Water Stewardship Rate in subsequent years based on a different record. The court noted, and in a subsequent modification confirmed, that its holding does not preclude Metropolitan from including the Water Stewardship Rate in Metropolitan's full-service rate.

The Court of Appeal held that because the Water Stewardship Rate was included in the Exchange Agreement price, there was a breach by Metropolitan of the Exchange Agreement in 2011 through 2014. The court remanded the case to the trial court for a redetermination of damages in light of its ruling concerning the Water Stewardship Rate. The Court of Appeal agreed with the trial court that statutory prejudgment interest applies with respect to any damages award, not a lesser contractual interest. The Court of Appeal reversed the trial court by finding that the Exchange Agreement may entitle SDCWA to attorneys' fees for the second phase of the case concerning breach of contract; but directed the trial court on remand to make a new determination of the prevailing party, if any. The cases were therefore remanded to the trial court for a review of both damages and attorneys' fees.

With respect to other issues considered on appeal, the Court of Appeal upheld the trial court's ruling that Metropolitan improperly excludes SDCWA's payments under the Exchange Agreement in Metropolitan's calculation of SDCWA's preferential rights. The court also ruled that SDCWA had the constitutional right to challenge the rate structure integrity provision in Metropolitan's conservation and local resources incentive agreements and found that the rate structure integrity provision was invalid and unenforceable as an unconstitutional condition on the provision of a public benefit.

On September 27, 2017, the California Supreme Court denied SDCWA's petition for review, declining to consider the Court of Appeal's decision. The Court of Appeal's decision is therefore final.

On July 25, 2018, the Superior Court issued an order regarding the scope of the matters to be reconsidered by the Superior Court on remand pursuant to the Court of Appeal decision. With respect to the Superior Court's re-determination of damages in light of the Court of Appeal's ruling that the administrative record for calendar years 2011 through 2014 did not support Metropolitan's inclusion of its demand management costs in the Exchange Agreement price, the Superior Court ruled that it will award SDCWA \$28,678,190.90 in contract damages for breach of the Exchange Agreement, plus prejudgment interest at 10 percent per annum. The Superior Court determined that Metropolitan is not entitled in the remand proceedings to show what it could have lawfully charged SDCWA for demand management costs and to deduct that from SDCWA's damages.

The Superior Court further ruled that SDCWA is not entitled in the remand proceedings to litigate the issue of "offsetting benefits" under the wheeling statutes for the parties' Exchange Agreement. The Superior Court found that such claim is both outside the scope of remand and waived.

The Superior Court also ruled that SDCWA is entitled to judgment on its declaratory relief cause of action declaring the rate structure integrity provision in Metropolitan's conservation and local resources incentive agreements invalid and unenforceable, SDCWA is entitled to further proceedings to litigate the issue of an entitlement to monetary restitution for 2011 through 2014, and the parties shall also litigate in further proceedings the issue of what prospective relief SDCWA may be entitled to in connection with this cause of action.

Finally, the Superior Court confirmed, as the parties agreed, that it will conduct further proceedings for a redetermination of the prevailing party and attorneys' fees in this matter.

On September 14, 2018, Metropolitan filed a Petition for Writ of Mandate with the California Court of Appeal, requesting the court to require the Superior Court to recalculate contract damages for breach of the Exchange Agreement from years 2011 through 2014, to include a set-off for the additional sums SDCWA would have paid had Metropolitan collected the Water Stewardship Rate through its full service sales as SDCWA argued was correct. On November 1, 2018, the Court of Appeal determined that it would not review the issue at this stage of the cases. Metropolitan may raise this issue again on any later appeal from the cases' final judgment.

Due to SDCWA's litigation challenging Metropolitan's rates, and pursuant to the Exchange Agreement between Metropolitan and SDCWA, as of November 30, 2020, Metropolitan held \$57.90 million in a designated fund, the Exchange Agreement Set-Aside Fund. See "Financial Reserve Policy." This amount includes the disputed Water Stewardship Rate payments for calendar years 2011 through 2017, and interest earned by Metropolitan thereon. The amount held does not include statutory prejudgment interest or any post-judgment interest, attorneys' fees, or costs the Court may award.

On February 14, 2019, Metropolitan tendered to SDCWA payment of \$44.4 million for the San Francisco Superior Court's contract damages award for Water Stewardship Rate payments from 2011 through 2014, plus statutory interest through February 15, 2019, with a reservation of appeal rights, in the 2010 and 2012 SDCWA v. Metropolitan actions. This tender was made under compulsion to cease accrual of statutory interest in excess of market rates, but did not affect Metropolitan's rights to appeal, including its right to challenge the amount of the damages award. The tendered payment included \$31.6 million of amounts withdrawn from the Exchange Agreement Set-Aside Fund, and \$12.8 million withdrawn from reserves (representing statutory interest). On March 7, 2019, SDCWA rejected the tendered payment and returned the uncashed check for the tendered payment. The returned funds were credited back to the Exchange Agreement Set-Aside Fund and Metropolitan reserves in the amounts drawn. The balance in the Exchange Agreement Set-Aside Fund set forth above includes the returned funds. In the 2010-2012 Judgment (discussed below), the Superior Court confirmed that Metropolitan's tender was effective and stopped the accrual of interest in February 2019. On August 29, 2019, as a result of changes in reorganization of assignments at the San Francisco Superior Court, the 2010, 2012, 2016, and 2017 SDCWA v. Metropolitan cases were reassigned to a different department of the Court. SDCWA filed a motion for peremptory disqualification of the new judge and on September 6, 2019, the motion was sustained. On September 27, 2019, the 2010, 2012, 2016, and 2017 cases were assigned to Department 304, a different complex department in which the 2014 case is already pending.

The Superior Court had scheduled an evidentiary hearing for June 16 to June 18, 2020 on SDCWA's requested relief based on its rate structure integrity provision claim. Following action of the SDCWA Board of Directors on February 27, 2020 (discussed below), SDCWA informed Metropolitan and the court that it was no longer seeking this relief. Accordingly, the evidentiary hearing was canceled.

On August 13, 2020, the Superior Court entered a final judgment in the 2010 and 2012 SDCWA v. Metropolitan cases (the "2010-2012 Judgment"). On August 14, 2020, SDCWA served notice of entry of judgment and notice of the court's peremptory writ of mandate in the cases.

In the 2010-2012 Judgment, the Court entered judgment: (1) on the first three causes of action – for writ of mandate, declaratory relief, and invalidation (the rate challenges) – in SDCWA's favor, because the Court of Appeal found Metropolitan's inclusion of the Water Stewardship Rate as a component of the transportation rates charged under the Exchange Agreement and wheeling rate was unlawful, and ordered issuance of a writ of mandate as described below; (2) on the fourth cause of action – breach of contract – in favor of SDCWA but only with respect to its challenge to Metropolitan's inclusion of the Water Stewardship Rate in the Exchange Agreement price for deliveries in 2011-2014, the Court awarded SDCWA a total of

\$44,373,872.29, comprised of: (A) \$28,678,190.90 in damages; (B) prejudgment interest at the rate of 10 percent per annum through November 18, 2015 in the amount of \$7,484,315.54; and (C) post-judgment interest at the rate of 7 percent per annum from November 19, 2015 until February 15, 2019 (the date of Metropolitan's tender of \$44,373,872.29 to SDCWA), in the amount of \$8,211,365.85; (3) on the fifth cause of action – declaratory relief regarding the rate structure integrity (RSI) provision – in favor of SDCWA as the RSI provision is invalid and unenforceable; (4) on the sixth cause of action – declaratory relief regarding preferential rights calculation – in favor of SDCWA that Metropolitan's previous methodology for calculating preferential rights violates § 135 of the Metropolitan Water District Act; (5) on the previously-dismissed cause of action for breach of fiduciary duty – in favor of Metropolitan; and (6) on the previously dismissed cause of action for breach of the covenant of good faith and fair dealing – in favor of Metropolitan.

The peremptory writ of mandate commands Metropolitan to “enact only legal wheeling and transportation rates in the future and, specifically, not to do the things that [the Court of Appeal] held were unlawful,” and incorporates by reference the Court of Appeal decision; and to “exclude the costs of conservation programs and other demand management programs, enacted in [the 2010 and 2012] cases as the Water Stewardship Rate, from Metropolitan's wheeling rate published in Section 4405 of Metropolitan's Administrative Code and from the transportation rates charged under the [Exchange Agreement].” Metropolitan filed a notice of appeal of the 2010-2012 Judgment and the writ on September 11, 2020.

The court requested the parties' briefing as to whether it has jurisdiction to determine the prevailing party, if any, in the 2010 and 2012 cases, after the appeal was filed. The parties filed a joint submission that the court has jurisdiction and the court agreed. On December 16, 2020, the court heard the parties' cross-motions on the determination of a prevailing party, if any, under the Exchange Agreement's attorneys' fees and costs provision. On January 13, 2021, the court issued an order finding SDCWA is the prevailing party on the contract, entitled to its attorneys' fees and costs under the contract. The court will schedule further proceedings to determine fees. On January 12, 2021, the court heard the parties' motions to strike or tax each's memorandum of statutory costs, which involves a determination of prevailing party as to all claims. The court has not yet ruled on the costs motions. For both sets of motions, Metropolitan contended that it is the prevailing party entitled to attorneys' fees and costs, or else there is not a prevailing party in these mixed-result cases. The determinations as to prevailing party, attorneys' fees, and costs are subject to appeal after entry of the final order.

In May 2014, SDCWA filed a new lawsuit asserting essentially the same rate claims and breach of contract claim in connection with the Board's April 2014 rate adoption. Metropolitan filed its answer on June 30, 2014. On February 9, 2015, pursuant to stipulation by the parties, the San Francisco Superior Court ordered that the case be stayed.

On April 13, 2016, SDCWA filed a new lawsuit that alleged all rates and charges for 2017 and 2018 adopted by Metropolitan's Board on April 12, 2016 violate the California Constitution, statutes, and common law. The Petition for Writ of Mandate and Complaint asserted misallocation of costs as alleged in the previous cases listed above and additional claims of over-collection and misallocation of costs and procedural violations. Following a stipulated order issued by the court on November 10, 2016, SDCWA filed a First Amended Petition for Writ of Mandate and Complaint and the court ordered the case stayed pending final resolution of the 2010 and 2012 SDCWA v. Metropolitan cases' appeals. The amended petition/complaint added allegations of the same Exchange Agreement breach as in the previous cases listed above and breach of a provision that requires Metropolitan to set aside disputed amounts, relating to the manner in which Metropolitan has set aside the amounts; requested a judicial declaration that, if a judgment is owed to SDCWA under the Exchange Agreement, SDCWA will not be required to pay any portion of that judgment; and requests a refund to SDCWA of any amount Metropolitan has collected in excess of the reasonable costs of the services provided or, alternatively, a reduction in SDCWA's future fees.

On August 27, 2020, the court granted SDCWA's motion to lift the stays in the 2014 and 2016 SDCWA v. Metropolitan cases and to file a further amended petition/complaint. On August 28, 2020,



SDCWA filed the amended petitions/complaints, which included claims for offsetting benefits. On September 28, 2020, Metropolitan filed demurrers to, or in the alternative motions to strike, portions of the amended petitions/complaints, which are set for hearing on February 10, 2021. The pleadings seek to remove offsetting benefits claims in both cases as to alleged breach of contract and Metropolitan's wheeling rate, and the declaratory relief claim in the 2016 case as to how Metropolitan may satisfy a judgment.

On June 9, 2017, SDCWA filed a new Petition for Writ of Mandate and Complaint challenging the Readiness-to-Serve Charge and Capacity Charge for 2018 adopted by Metropolitan's Board on April 11, 2017. These two charges are set annually, and SDCWA's 2016 lawsuit included a challenge to these two charges for 2017. The new lawsuit similarly alleged the 2018 Readiness-to-Serve Charge and Capacity Charge violated the California Constitution, statutes, and common law. The petition/complaint asserts misallocation of costs. Metropolitan was served with the petition/complaint on June 20, 2017. On July 18, 2017, SDCWA filed a first amended petition/complaint to add Metropolitan's Board action of July 11, 2017 to make minor corrections to the Readiness-to-Serve Charge. On July 31, 2018, pursuant to stipulation by the parties, the San Francisco Superior Court ordered that the case be stayed. On July 23, 2020, the court entered SDCWA's requested dismissal of the 2017 case. The dismissal is without prejudice, which means SDCWA would not be precluded from re-initiating the case in the future.

On June 8, 2018, SDCWA filed a new lawsuit that alleges all rates and charges for 2019 and 2020 adopted by Metropolitan's Board on April 10, 2018 violate the California Constitution, statutes, and common law. The Petition for Writ of Mandate and Complaint asserts the Water Stewardship Rate is unlawful per se and its collection in transportation charges is also unlawful; failure to provide wheelers a reasonable credit for "offsetting benefits" pursuant to Water Code Section 1810, *et seq.*, which SDCWA contends (and Metropolitan disputes) applies to the parties' Exchange Agreement; over-collection and misallocation of costs, including misallocation of Metropolitan's California WaterFix costs as its transportation costs; and specified procedural violations. SDCWA states in the Petition and Complaint that it intends to amend its complaint to allege additional claims against Metropolitan, including but not limited to a claim for breach of contract. Following a stipulated order issued by the San Francisco Superior Court on January 10, 2019, SDCWA filed a First Amended Petition for Writ of Mandate and Complaint and the court ordered the case stayed pending final resolution of the 2010 and 2012 SDCWA v. Metropolitan cases. The amended petition/complaint adds a cause of action for breach of the Exchange Agreement alleging Metropolitan charged an unlawful price that includes the Water Stewardship Rate (despite suspension of this charge), failing to provide credit for offsetting benefits, charging transportation rates that are not based on costs of service, including California WaterFix costs, and not following procedural requirements; and requests a refund to SDCWA of any amount Metropolitan has collected in excess of the reasonable costs of the services provided or, alternatively, a reduction in SDCWA's future fees. On July 28, 2020, the parties filed a stipulation and application to designate the case complex and related to the 2010-2017 cases. Metropolitan is unable to assess at this time the likelihood of success of this case, any possible appeal or any future claims.

On November 15, 2019, Metropolitan provided a statutory Offer to Compromise to SDCWA to resolve all pending litigation filed by SDCWA. The offer, which was not confidential, was made under California Code of Civil Procedure Section 998 and was deemed withdrawn if not accepted by December 30, 2019. By letter dated December 19, 2019, SDCWA notified Metropolitan that it had determined not to act upon Metropolitan's Section 998 Offer to Compromise. Metropolitan's statutory Offer to Compromise was deemed withdrawn. SDCWA made its own settlement offer, which is public but non-statutory. SDCWA's settlement offer was made subject to acceptance by Metropolitan no later than the close of business on January 31, 2020. The Metropolitan Board reviewed SDCWA's proposal at its January 14, 2020 Board meeting and took no action.

On February 27, 2020, the SDCWA Board of Directors authorized its attorneys to dismiss, without prejudice, claims related to payments of the Water Stewardship Rate on supply purchases only and the unquantified claims in the stayed cases relating to cost-of-service grounds and the rate model. The above-

mentioned amended petitions/complaints in the 2014 and 2016 cases added, removed, and retained certain claims. Retained claims include SDCWA's challenge to Metropolitan's Water Stewardship Rate for calendar years 2015 through 2018 based on its allocation to transportation, with a request for the court to invalidate the transportation rates and the wheeling rate and award damages for breach of the parties' Exchange Agreement as a result. Added claims include a challenge to the wheeling rate and alleged breach of the Exchange Agreement for failure to provide offsetting benefits (only the stayed 2018 case had previously included an offsetting benefits claim). SDCWA has not yet dismissed claims in the 2018 case. Metropolitan has not yet assessed the impact of the authorized dismissals. Metropolitan is unable to assess at this time the likelihood of success of these cases, any possible appeals or any future claims.

### **Other Revenue Sources**

**Hydroelectric Power Recovery Revenues.** Metropolitan has constructed 16 small hydroelectric plants on its distribution system. The combined generating capacity of these plants is approximately 130 megawatts. The plants are located in Los Angeles, Orange, Riverside, and San Diego Counties at existing pressure control structures and other locations. The total capital cost of the 16 facilities is approximately \$176.1 million. Since 2000, annual energy generation sales revenues have ranged between \$7.3 million and nearly \$29.6 million. Including the sale of excess energy generation from Hoover and Parker dams, the total energy sales revenues were \$18.3 million in fiscal year 2018-19 and \$15.9 million in fiscal year 2019-20.

**Investment Income.** In fiscal years 2017-18, 2018-19 and 2019-20, Metropolitan's earnings on investments, including adjustments for gains and losses and premiums and discounts, including construction account and trust fund earnings, excluding gains and losses on swap terminations, on a cash basis (unaudited) were \$15.5 million, \$31.3 million, and \$18.1 million, respectively.

### **Investment of Moneys in Funds and Accounts**

The Board has delegated to the Treasurer the authority to invest funds. All moneys in any of the funds and accounts established pursuant to Metropolitan's water revenue or general obligation bond resolutions are managed by the Treasurer in accordance with Metropolitan's Statement of Investment Policy. All Metropolitan funds available for investment are currently invested in United States Treasury and agency securities, supranationals, commercial paper, negotiable certificates of deposit, banker's acceptances, corporate notes, municipal bonds, government-sponsored enterprise, money market funds, California Asset Management Program ("CAMP") and the California Local Agency Investment Fund ("LAIF"). CAMP is a program created through a joint powers agency as a pooled short-term portfolio and cash management vehicle for California public agencies. CAMP is a permitted investment for all local agencies under California Government Code Section 53601(p). LAIF is a voluntary program created by statute as an investment alternative for California's local governments and special districts. LAIF permits such local agencies to participate in an investment portfolio, which invests billions of dollars, managed by the State Treasurer's Office.

The Statement of Investment Policy provides that in managing Metropolitan's investments, the primary objective shall be to safeguard the principal of the invested funds. The secondary objective shall be to meet all liquidity requirements and the third objective shall be to achieve a return on the invested funds. Although the Statement of Investment Policy permits investments in some government-sponsored enterprise, the portfolio does not include any of the special investment vehicles related to sub-prime mortgages. The Statement of Investment Policy allows Metropolitan to exceed the portfolio and single issuer limits for purchases of California local agency securities when purchasing Metropolitan tendered bonds in conjunction with its self-liquidity program. Metropolitan's current investments comply with the Statement of Investment Policy.

As of November 30, 2020, the total market value (cash-basis) of all Metropolitan invested funds was \$1.0 billion, including bond reserves of \$1.7 million. The market value of Metropolitan's investment

portfolio is subject to market fluctuation and volatility and general economic conditions. Over the three years ended November 30, 2020 the market value of the month-end balance of Metropolitan's investment portfolio (excluding bond reserve funds) averaged approximately \$1.0 billion. The minimum month-end balance of Metropolitan's investment portfolio (excluding bond reserve funds) during such period was approximately \$831.9 million on July 31, 2019. See Note 3 to Metropolitan's audited financial statements in Appendix B for additional information on the investment portfolio.

Metropolitan's administrative code requires that (1) the Treasurer provide an annual Statement of Investment Policy for approval by Metropolitan's Board, (2) the Treasurer provide a monthly investment report to the Board and the General Manager showing by fund the description, maturity date, yield, par, cost and current market value of each security, and (3) the General Counsel review as to eligibility the securities invested in by the Treasurer for that month and report his or her determinations to the Board. The Board approved the Statement of Investment Policy for fiscal year 2020-21 on June 9, 2020.

Subject to the provisions of Metropolitan's water revenue or general obligation bond resolutions, obligations purchased by the investment of bond proceeds in the various funds and accounts established pursuant to a bond resolution are deemed at all times to be a part of such funds and accounts and any income realized from investment of amounts on deposit in any fund or account therein will be credited to such fund or account. The Treasurer is required to sell or present for redemption any investments whenever it may be necessary to do so in order to provide moneys to meet required payments or transfers from such funds and accounts. For the purpose of determining at any given time the balance in any such funds, any such investments constituting a part of such funds and accounts will be valued at the then estimated or appraised market value of such investments.

All investments, including those authorized by law from time to time for investments by public agencies, contain certain risks. Such risks include, but are not limited to, a lower rate of return than expected and loss or delayed receipt of principal. The occurrence of these events with respect to amounts held under Metropolitan's water revenue or general obligation revenue bond resolutions, or other amounts held by Metropolitan, could have a material adverse effect on Metropolitan's finances. These risks may be mitigated, but are not eliminated, by limitations imposed on the portfolio management process by Metropolitan's Statement of Investment Policy.

The Statement of Investment Policy requires that investments have a minimum credit rating of "A-1/P-1/F1" for short-term securities and "A" for longer-term securities, without regard to modifiers, at the time of purchase. If a security is downgraded below the minimum rating criteria specified in the Statement of Investment Policy, the Treasurer shall determine a course of action to be taken on a case-by-case basis considering such factors as the reason for the downgrade, prognosis for recovery or further rating downgrades, and the market price of the security. The Treasurer is required to note in the Treasurer's monthly report any securities which have been downgraded below Policy requirements and the recommended course of action.

The Statement of Investment Policy also limits the amount of securities that can be purchased by category, as well as by issuer, and prohibits investments that can result in zero interest income. Metropolitan's securities are settled on a delivery versus payment basis and are held by an independent third-party custodian. See Metropolitan's financial statements included in APPENDIX B—"THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA INDEPENDENT AUDITORS' REPORT AND BASIC FINANCIAL STATEMENTS FOR FISCAL YEARS ENDED JUNE 30, 2020 AND JUNE 30, 2019 AND BASIC FINANCIAL STATEMENTS FOR THE THREE MONTHS ENDED SEPTEMBER 30, 2020 AND 2019 (UNAUDITED)" for a description of Metropolitan's investments at June 30, 2020 and September 30, 2020.

Since July 2019, Metropolitan has retained one outside investment firm to manage the portion of Metropolitan's portfolio not needed to provide liquidity for expenditures over the next six months. As of November 30, 2020, this manager was managing approximately \$196.4 million in investments on behalf of Metropolitan. Since December 2018, Metropolitan has retained an outside investment firm to manage a portion of the liquidity portfolio and certain trust funds. As of November 30, 2020, this firm managed approximately \$529.5 million. The outside managers are required to adhere to Metropolitan's Statement of Investment Policy.

Metropolitan's Statement of Investment Policy may be changed at any time by the Board (subject to State law provisions relating to authorized investments). There can be no assurance that the State law and/or the Statement of Investment Policy will not be amended in the future to allow for investments that are currently not permitted under State law or the Statement of Investment Policy, or that the objectives of Metropolitan with respect to investments or its investment holdings at any point in time will not change.

## METROPOLITAN EXPENSES

### General

The following table sets forth a summary of Metropolitan's expenses, by major function, for the five years ended June 30, 2020, on a modified accrual basis. All information is unaudited. Expenses of Metropolitan for the fiscal years ended June 30, 2020 and June 30, 2019, on an accrual basis, are shown in Metropolitan's audited financial statements included in Appendix B.

### SUMMARY OF EXPENSES Fiscal Years Ended June 30 (Dollars in Millions)

	2016	2017	2018	2019	2020
Operation and Maintenance Costs <sup>(1)</sup>	\$ 799	\$ 559	\$ 568	\$ 569	\$ 641
Total State Water Project <sup>(2)</sup>	512	506	527	482	519
Total Debt Service	332	330	360	347	285
Construction Expenses from Revenues <sup>(3)</sup>	273	132	98	128	39
Other <sup>(4)</sup>	6	4	5	6	6
Total Expenses (net of reimbursements)	<u>\$1,922</u>	<u>\$1,531</u>	<u>\$1,558</u>	<u>\$1,532</u>	<u>\$1,490</u>

Source: Metropolitan.

<sup>(1)</sup> Includes operation and maintenance, debt administration, conservation and local resource programs, CRA power, and water supply expenses. Fiscal years 2015-16, 2016-17, and 2017-18 include \$222 million, \$33 million, and \$1 million, respectively, of conservation and supply program expenses funded from transfers from the Water Management Fund.

<sup>(2)</sup> Includes both operating and capital expense portions.

<sup>(3)</sup> At the discretion of the Board, in any given year, Metropolitan may increase or decrease funding available for construction disbursements to be paid from revenues. Includes \$160 million for acquiring properties in Riverside and Imperial Counties, funded by \$160 million from the Replacement and Refurbishment Fund Reserves in fiscal year 2015-16. Does not include expenditures of bond proceeds.

<sup>(4)</sup> Includes operating equipment.

### Revenue Bond Indebtedness and Other Obligations

As of December 1, 2020, Metropolitan had total outstanding indebtedness secured by a lien on Net Operating Revenues of \$3.81 billion. This indebtedness was comprised of \$2.40 billion of Senior Revenue Bonds issued under the Senior Debt Resolutions (each as defined below), which includes \$2.07 billion of fixed rate Senior Revenue Bonds, and \$331.9 million of variable rate Senior Revenue Bonds; \$1.36 billion of Subordinate Revenue Bonds issued under the Subordinate Debt Resolutions (each as defined below), which includes \$915.87 million of fixed rate Subordinate Revenue Bonds, and \$446.3 million of variable rate Subordinate Revenue Bonds; and \$46.8 million of subordinate lien short-term certificates, which bear a

variable rate, and are on parity with the Subordinate Revenue Bonds. In addition, Metropolitan has \$438.7 million of fixed-payor interest rate swaps which provides a fixed interest rate hedge to an equivalent amount of variable rate debt. Metropolitan's revenue bonds and other revenue obligations are more fully described below.

### REVENUE BOND INDEBTEDNESS AND OTHER OBLIGATIONS

	Variable Rate	Fixed Rate	Total
Senior Lien Revenue Bonds	\$ 331,875,000	\$2,068,605,000	\$2,400,480,000
Subordinate Lien Revenue Bonds	446,255,000	915,865,000	1,362,120,000
Subordinate Lien Short-Term Certificates	<u>46,800,000</u>	--	<u>46,800,000</u>
<b>Total</b>	<b>\$ 824,930,000</b>	<b>\$2,984,470,000</b>	<b>\$3,809,400,000</b>
Fixed-Payor Interest Rate Swaps	<u>(438,665,000)</u>	<u>438,665,000</u>	--
<b>Net Amount (after giving effect to Swaps)</b>	<b>\$ 386,265,600</b>	<b>\$3,423,135,000</b>	<b>\$3,809,400,000</b>

Source: Metropolitan.

#### Limitations on Additional Revenue Bonds

Resolution 8329, adopted by Metropolitan's Board on July 9, 1991, as amended and supplemented (the "Master Senior Resolution," and collectively with all such supplemental resolutions, the "Senior Debt Resolutions"), provides for the issuance of Metropolitan's senior lien water revenue bonds. The Senior Debt Resolutions establish limitations on the issuance of additional obligations payable from Net Operating Revenues. Under the Senior Debt Resolutions, no additional bonds, notes or other evidences of indebtedness payable out of Operating Revenues may be issued having any priority in payment of principal, redemption premium, if any, or interest over any water revenue bonds authorized by the Senior Debt Resolutions ("Senior Revenue Bonds") or other obligations of Metropolitan having a lien and charge upon, or being payable from, the Net Operating Revenues on parity with such Senior Revenue Bonds ("Senior Parity Obligations"). No additional Senior Revenue Bonds or Senior Parity Obligations may be issued or incurred unless the conditions of the Senior Debt Resolutions have been satisfied.

Resolution 9199, adopted by Metropolitan's Board on March 8, 2016, as amended and supplemented (the "Master Subordinate Resolution," and collectively with all such supplemental resolutions, the "Subordinate Debt Resolutions," and together with the Senior Debt Resolutions, the "Revenue Bond Resolutions"), provides for the issuance of Metropolitan's subordinate lien water revenue bonds and other obligations secured by a pledge of Net Operating Revenues that is subordinate to the pledge securing Senior Revenue Bonds and Senior Parity Obligations. The Subordinate Debt Resolutions establish limitations on the issuance of additional obligations payable from Net Operating Revenues. Under the Subordinate Debt Resolutions, with the exception of Senior Revenue Bonds and Senior Parity Obligations, no additional bonds, notes or other evidences of indebtedness payable out of Operating Revenues may be issued having any priority in payment of principal, redemption premium, if any, or interest over any subordinate water revenue bonds authorized by the Subordinate Debt Resolutions ("Subordinate Revenue Bonds" and, together with Senior Revenue Bonds, "Revenue Bonds") or other obligations of Metropolitan having a lien and charge upon, or being payable from, the Net Operating Revenues on parity with the Subordinate Revenue Bonds ("Subordinate Parity Obligations"). No additional Subordinate Revenue Bonds or Subordinate Parity Obligations may be issued or incurred unless the conditions of the Subordinate Debt Resolutions have been satisfied.

The laws governing Metropolitan's ability to issue water revenue bonds currently provide two additional limitations on indebtedness that may be incurred by Metropolitan. The Act provides for a limit on general obligation bonds, water revenue bonds and other evidences of indebtedness of 15 percent of the assessed value of all taxable property within Metropolitan's service area. As of December 1, 2020, outstanding general obligation bonds, water revenue bonds and other evidences of indebtedness in the

amount of \$3.84 billion represented approximately 0.12 percent of the fiscal year 2020-21 taxable assessed valuation of \$3,263.4 billion. The second limitation under the Act specifies that no revenue bonds may be issued, except for the purpose of refunding, unless the amount of net assets of Metropolitan as shown on its balance sheet as of the end of the last fiscal year prior to the issuance of such bonds, equals at least 100 percent of the aggregate amount of revenue bonds outstanding following the issuance of such bonds. The net assets of Metropolitan at June 30, 2020 were \$6.94 billion. The aggregate amount of revenue bonds outstanding as of December 1, 2020 was \$3.76 billion. The limitation does not apply to other forms of financing available to Metropolitan. Audited financial statements including the net assets of Metropolitan as of June 30, 2020 and June 30, 2019 are shown in Metropolitan's audited financial statements included in APPENDIX B—"THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA INDEPENDENT AUDITORS' REPORT AND BASIC FINANCIAL STATEMENTS FOR FISCAL YEARS ENDED JUNE 30, 2020 AND JUNE 30, 2019 AND BASIC FINANCIAL STATEMENTS FOR THE THREE MONTHS ENDED SEPTEMBER 30, 2020 AND 2019 (UNAUDITED)."

Metropolitan provides no assurance that the Act's limitations on indebtedness will not be revised or removed by future legislation. Limitations under the Revenue Bond Resolutions respecting the issuance of additional obligations payable from Net Operating Revenues on parity with the Senior Revenue Bonds and Subordinate Revenue Bonds of Metropolitan will remain in effect so long as any Senior Revenue Bonds and Subordinate Revenue Bonds authorized pursuant to the applicable Revenue Bond Resolutions are outstanding, provided however, that the Revenue Bond Resolutions are subject to amendment and supplement in accordance with their terms.

#### **Variable Rate Exposure Policy**

As of December 1, 2020, Metropolitan had outstanding \$331.9 million of variable rate obligations issued as Senior Revenue Bonds under the Senior Debt Resolutions (described under "–Outstanding Senior Revenue Bonds and Senior Parity Obligations –Variable Rate and Swap Obligations" below). In addition, as of December 1, 2020, \$493.1 million of Metropolitan's \$1.41 billion of outstanding Subordinate Revenue Bonds issued under the Subordinate Debt Resolutions and other Subordinate Parity Obligations were variable rate obligations (described under "–Outstanding Subordinate Revenue Bonds and Subordinate Parity Obligations" below).

As of December 1, 2020, of Metropolitan's \$824.9 million of variable rate obligations, \$438.7 million of such variable rate demand obligations are treated by Metropolitan as fixed rate debt, by virtue of interest rate swap agreements (described under "–Outstanding Senior Revenue Bonds and Senior Parity Obligations –Variable Rate and Swap Obligations – Interest Rate Swap Transactions" below), for the purpose of calculating debt service requirements. The remaining \$386.3 million of variable rate obligations represent approximately 10.1 percent of total outstanding water revenue secured indebtedness (including Senior Revenue Bonds and Senior Parity Obligations and Subordinate Revenue Bonds and Subordinate Parity Obligations), as of December 1, 2020.

Metropolitan's variable rate exposure policy requires that variable rate debt be managed to limit net interest cost increases within a fiscal year as a result of interest rate changes to no more than \$5 million. In addition, the maximum amount of variable interest rate exposure (excluding variable rate bonds associated with interest rate swap agreements) is limited to 40 percent of total outstanding water revenue bond debt. Variable rate debt capacity will be reevaluated as interest rates change and managed within these parameters.

The periodic payments due to Metropolitan from counterparties under its outstanding interest rate swap agreements and the interest payments to be payable by Metropolitan under certain of its outstanding variable rate obligations (including some of Metropolitan's Subordinate Revenue Bonds and certain notes issued pursuant to its short-term revolving credit agreement and subordinate note purchase agreements as hereinafter described) are calculated by reference to the London interbank offering rate ("LIBOR"). On July 27, 2017, the Financial Conduct Authority (the "FCA"), the U.K. regulatory body currently responsible



for the regulation and supervision of LIBOR, announced that it will no longer persuade or compel banks to submit rates for the calculation of the LIBOR rates after 2021 (the “FCA Announcement”). On November 30, 2020, Intercontinental Exchange Benchmark Administration (“IBA”), the administrator of LIBOR authorized and regulated by the FCA, announced, with the support of the Federal Reserve Board and the FCA, that it is commencing a consultation on its intention to cease publication of (1) only the one-week and two-month USD LIBOR on December 31, 2021, and (2) all other tenors of USD LIBOR, including the one-month LIBOR and three-month LIBOR, the most widely used tenors of USD LIBOR and which are used to determine the periodic payments due to Metropolitan from swap counterparties and the interest payments to be payable by Metropolitan under certain of its outstanding variable rate obligations, on June 30, 2023. The IBA proposal isn’t final and is subject to feedback on the consultation. IBA has indicated that it expects to complete the consultation process by the end of January 2021. Metropolitan staff is monitoring alternate benchmark rates. Metropolitan is unable to predict the outcome of the IBA’s ongoing consultation as to the specific timing for the cessation of publication of USD LIBOR, or how the prospective phasing out of LIBOR as a reference rate and transition to an alternate benchmark rate will ultimately be implemented, but increased volatility in the reported LIBOR rates may occur and the level of Metropolitan’s LIBOR-based swap and interest payments may be affected by the transition to an alternate benchmark rate when it occurs.

### **Outstanding Senior Revenue Bonds and Senior Parity Obligations**

#### **Senior Revenue Bonds**

The water revenue bonds issued under the Senior Debt Resolutions outstanding as of December 1, 2020, are set forth below:

<u>Name of Issue</u>	<u>Principal Outstanding</u>
Water Revenue Refunding Bonds, 1993 Series A	\$ 2,040,000
Water Revenue Bonds, 2000 Authorization, Series B-3 <sup>(1)</sup>	78,900,000
Water Revenue Refunding Bonds, 2011 Series C	118,700,000
Water Revenue Refunding Bonds, 2012 Series A	181,180,000
Water Revenue Refunding Bonds, 2012 Series C	5,635,000
Water Revenue Refunding Bonds, 2012 Series F	37,735,000
Water Revenue Refunding Bonds, 2012 Series G	89,820,000
Water Revenue Refunding Bonds, 2014 Series A	4,870,000
Water Revenue Refunding Bonds, 2014 Series C-3	2,810,000
Water Revenue Refunding Bonds, 2014 Series E	86,060,000
Water Revenue Bonds, 2015 Authorization, Series A	201,535,000
Water Revenue Refunding Bonds, 2016 Series A	239,455,000
Special Variable Rate Water Revenue Refunding Bonds, 2016 Series B-1 and B-2 <sup>(1)</sup>	82,905,000
Water Revenue Bonds, 2017, Authorization, Series A <sup>(1)</sup>	80,000,000
Special Variable Water Revenue Refunding Bonds, 2018 Series A-1 and A-2 <sup>(1)</sup>	90,070,000
Water Revenue Refunding Bonds, 2018 Series B	133,510,000
Water Revenue Refunding Bonds, 2019 Series A	218,090,000
Water Revenue Bonds, 2020 Series A	207,355,000
Special Variable Rate Water Revenue Refunding Bonds, 2020 Series B <sup>(2)</sup>	271,815,000
Water Revenue Refunding Bonds, 2020 Series C	267,995,000
<b>Total</b>	<b>\$2,400,480,000</b>

Source: Metropolitan.

<sup>(1)</sup> Outstanding variable rate obligation.

<sup>(2)</sup> Initially delivered in a long mode at a fixed interest rate to April 2, 2021.

#### **Variable Rate and Swap Obligations**

As of December 1, 2020, Metropolitan had outstanding \$331.9 million of senior lien variable rate obligations. The outstanding variable rate obligations consist of Senior Revenue Bonds issued under the Senior Debt Resolutions (described under this caption “–Variable Rate and Swap Obligations”) as variable rate demand obligations in a daily mode supported by standby bond purchase agreements between

Metropolitan and various liquidity providers (the “Liquidity Supported Bonds”). Metropolitan also has an outstanding Short-Term Revolving Credit Facility under which it may incur variable rate Senior Parity Obligations (described under “–Senior Parity Obligations – Short-Term Revolving Credit Facility” below).

**Liquidity Supported Bonds.** The interest rates for Metropolitan’s variable rate demand obligations issued under the Senior Debt Resolutions, totaling \$331.9 million as of December 1, 2020, are currently reset on a daily basis. While bearing interest at a daily rate, such variable rate demand obligations are subject to optional tender on any business day with same day notice by the owners thereof and mandatory tender upon specified events. Such variable rate demand obligations are supported by standby bond purchase agreements between Metropolitan and liquidity providers that provide for purchase of variable rate bonds by the applicable liquidity provider upon tender of such variable rate bonds and a failed remarketing. Metropolitan has secured its obligation to repay principal and interest advanced under the standby bond purchase agreements as Senior Parity Obligations. A decline in the creditworthiness of a liquidity provider will likely result in an increase in the interest rate of the applicable variable rate bonds, as well as an increase in the risk of a failed remarketing of such tendered variable rate bonds. Variable rate bonds purchased by a liquidity provider (“bank bonds”) would initially bear interest at a per annum interest rate equal to, depending on the liquidity facility, either: (a) the highest of (i) the Prime Rate, (ii) the Federal Funds Rate plus one-half of a percent, or (iii) seven and one-half percent (with the spread or rate increasing in the case of each of (i), (ii) and (iii) of this clause (a) by one percent after 60 days); or (b) the highest of (i) the Prime Rate plus one percent, (ii) Federal Funds Rate plus two percent, and (iii) seven percent (with the spread or rate increasing in the case of each of (i), (ii) and (iii) of this clause (b) by one percent after 90 days). To the extent such bank bonds have not been remarketed or otherwise retired as of the earlier of the 60<sup>th</sup> day following the date such bonds were purchased by the liquidity provider or the stated expiration date of the related liquidity facility, Metropolitan’s obligation to reimburse the liquidity provider may convert the term of the variable rate bonds purchased by the liquidity provider into a term loan payable under the terms of the current liquidity facilities in semi-annual installments over a period ending on either the third anniversary or fifth anniversary, depending on the applicable liquidity facility, of the date on which the variable rate bonds were purchased by the liquidity provider. In addition, upon an event of default under any such liquidity facility, including a failure by Metropolitan to perform or observe its covenants under the applicable standby bond purchase agreement, a default in other specified indebtedness of Metropolitan, or other specified events of default (including a reduction in the credit rating assigned to Senior Revenue Bonds issued under the Senior Debt Resolutions by any of Fitch, S&P or Moody’s below “A–” or “A3”), the liquidity provider could require all bank bonds to be subject to immediate mandatory redemption by Metropolitan.

The following table lists the liquidity providers, the expiration date of each facility and the principal amount of outstanding variable rate demand obligations covered under each facility as of December 1, 2020.

**Liquidity Facilities and Expiration Dates**

<u>Liquidity Provider</u>	<u>Bond Issue</u>	<u>Principal Outstanding</u>	<u>Facility Expiration</u>
The Toronto-Dominion Bank, New York Branch	2018 Series A-1 and Series A-2	\$ 90,070,000	June 2021 <sup>(1)</sup>
Bank of America, N.A.	2016 Series B-1 and Series B-2	\$ 82,905,000	July 2021 <sup>(1)</sup>
PNC Bank, N.A.	2017 Authorization Series A	\$ 80,000,000	March 2023
PNC Bank, N.A.	2000 Authorization Series B-3	<u>\$ 78,900,000</u>	March 2023
<b>Total</b>		<b>\$331,875,000</b>	

Source: Metropolitan.

<sup>(1)</sup> Metropolitan expects to renew or replace such liquidity facilities prior to their expiration date.

**Interest Rate Swap Transactions.** By resolution adopted on September 11, 2001, Metropolitan's Board authorized the execution of interest rate swap transactions and related agreements in accordance with a master swap policy, which was subsequently amended by resolutions adopted on July 14, 2009 and May 11, 2010. Metropolitan may execute interest rate swaps if the transaction can be expected to reduce exposure to changes in interest rates on a particular financial transaction or in the management of interest rate risk derived from Metropolitan's overall asset/liability balance, result in a lower net cost of borrowing or achieve a higher net rate of return on investments made in connection with or incidental to the issuance, incurring or carrying of Metropolitan's obligations or investments, or manage variable interest rate exposure consistent with prudent debt practices and Board-approved guidelines. The Chief Financial Officer reports to the Finance and Insurance Committee of Metropolitan's Board each quarter on outstanding swap transactions, including notional amounts outstanding, counterparty exposures and termination values based on then-existing market conditions.

Metropolitan currently has one type of interest rate swap, referred to in the table below as "Fixed Payor Swaps." Under this type of swap, Metropolitan receives payments that are calculated by reference to a floating interest rate and makes payments that are calculated by reference to a fixed interest rate.

Metropolitan's obligations to make regularly scheduled net payments under the terms of the interest rate swap agreements are payable on a parity with the Senior Parity Obligations. Termination payments under the 2002A and 2002B interest rate swap agreements would be payable on a parity with the Senior Parity Obligations. Termination payments under all other interest rate swap agreements would be on parity with the Subordinate Parity Obligations.

The following swap transactions were outstanding as of December 1, 2020:

**FIXED PAYOR SWAPS:**

<b>Designation</b>	<b>Notional Amount Outstanding</b>	<b>Swap Counterparty</b>	<b>Fixed Payor Rate</b>	<b>Metropolitan Receives</b>	<b>Maturity Date</b>
2002 A	\$ 48,282,000	Morgan Stanley Capital Services, Inc.	3.300%	57.74% of one-month LIBOR	7/1/2025
2002 B	18,063,000	JPMorgan Chase Bank	3.300	57.74% of one-month LIBOR	7/1/2025
2003	150,047,500	Wells Fargo Bank	3.257	61.20% of one-month LIBOR	7/1/2030
2003	150,047,500	JPMorgan Chase Bank	3.257	61.20% of one-month LIBOR	7/1/2030
2004 C	7,760,500	Morgan Stanley Capital Services, Inc.	2.980	61.55% of one-month LIBOR	10/1/2029
2004 C	6,349,500	Citigroup Financial Products, Inc.	2.980	61.55% of one-month LIBOR	10/1/2029
2005	29,057,500	JPMorgan Chase Bank	3.360	70% of 3-month LIBOR	7/1/2030
2005	<u>29,057,500</u>	Citigroup Financial Products, Inc.	3.360	70% of 3-month LIBOR	7/1/2030
<b>Total</b>	<b>\$438,665,000</b>				

Source: Metropolitan.

These interest rate swap agreements entail risk to Metropolitan. The counterparty may fail or be unable to perform, interest rates may vary from assumptions, Metropolitan may be required to post collateral in favor of its counterparties and Metropolitan may be required to make significant payments in the event of

an early termination of an interest rate swap. Metropolitan believes that if such an event were to occur, it would not have a material adverse impact on its financial position. Metropolitan seeks to manage counterparty risk by diversifying its swap counterparties, limiting exposure to any one counterparty, requiring collateralization or other credit enhancement to secure swap payment obligations, and by requiring minimum credit rating levels. Initially, swap counterparties must be rated at least "Aa3" or "AA-", or equivalent by any two of the nationally recognized credit rating agencies; or use a "AAA" subsidiary as rated by at least one nationally recognized credit rating agency. Should the credit rating of an existing swap counterparty drop below the required levels, Metropolitan may enter into additional swaps if those swaps are "offsetting" and risk-reducing swaps. Each counterparty is initially required to have minimum capitalization of at least \$150 million. See Note 5(e) in Metropolitan's audited financial statements in Appendix B.

Early termination of an interest rate swap agreement could occur due to a default by either party or the occurrence of a termination event (including defaults under other specified swaps and indebtedness, certain acts of insolvency, if a party may not legally perform its swap obligations, or, with respect to Metropolitan, if its credit rating is reduced below "BBB-" by Moody's or "Baa3" by S&P (under most of the interest rate swap agreements) or below "BBB" by Moody's or "Baa2" by S&P (under one of the interest rate swap agreements)). As of September 30, 2020, Metropolitan would have been required to pay to some of its counterparties termination payments if its swaps were terminated on that date. Metropolitan's net exposure to its counterparties for all such termination payments on that date was approximately \$68.1 million. Metropolitan does not presently anticipate early termination of any of its interest rate swap agreements due to default by either party or the occurrence of a termination event. However, Metropolitan has previously exercised, and may in the future exercise, from time to time, optional early termination provisions to terminate all or a portion of certain interest rate swap agreements.

Metropolitan is required to post collateral in favor of a counterparty to the extent that Metropolitan's total exposure for termination payments to that counterparty exceeds the threshold specified in the applicable swap agreement. Conversely, the counterparties are required to release collateral to Metropolitan or post collateral for the benefit of Metropolitan as market conditions become favorable to Metropolitan. As of September 30, 2020, Metropolitan had no collateral posted with any counterparty. The highest, month-end, amount of collateral posted was \$36.8 million, on June 30, 2012, which was based on an outstanding swap notional amount of \$1.4 billion at that time. The amount of required collateral varies from time to time due primarily to interest rate movements and can change significantly over a short period of time. See "METROPOLITAN REVENUES—Financial Reserve Policy" in this Appendix A. In the future, Metropolitan may be required to post additional collateral, or may be entitled to a reduction or return of the required collateral amount. Collateral deposited by Metropolitan is held by the counterparties; a bankruptcy of any counterparty holding collateral posted by Metropolitan could adversely affect the return of the collateral to Metropolitan. Moreover, posting collateral limits Metropolitan's liquidity. If collateral requirements increase significantly, Metropolitan's liquidity may be materially adversely affected. See "METROPOLITAN REVENUES—Financial Reserve Policy" in this Appendix A.

#### **Direct Purchase Long Mode Bonds**

In April 2020, Metropolitan entered into a Bond Purchase Agreement, dated as of April 1, 2020 (the "2020 Direct Purchase Agreement") with Wells Fargo Municipal Capital Strategies, LLC ("WFMCS"), for the purchase by WFMCS and sale by Metropolitan of Metropolitan's \$271.8 million Special Variable Rate Water Revenue Refunding Bonds 2020 Series B (the "2020B Senior Revenue Bonds"). The 2020B Senior Revenue Bonds were issued for the purpose of refunding all of Metropolitan's then outstanding variable rate Senior Revenue Bonds that were designated as self-liquidity bonds as part of Metropolitan's self-liquidity program ("Self-Liquidity Bonds").

The 2020B Senior Revenue Bonds were issued under the Senior Debt Resolutions and are further described in a related paying agent agreement, dated as of April 1, 2020 (the "2020B Paying Agent Agreement"), by and between Metropolitan and Wells Fargo Bank, N.A., as paying agent. Pursuant to the

2020B Paying Agent Agreement, the 2020B Senior Revenue Bonds may bear interest from time to time in any one of several interest rate modes at the election of Metropolitan. The 2020B Senior Revenue Bonds were initially issued in a Long Mode under the 2020B Paying Agent Agreement and initially bear interest at a Long Rate equal to 1.04 percent per annum for the initial Long Period ending on April 2, 2021. The 2020B Senior Revenue Bonds are subject to mandatory tender for purchase on April 2, 2021 (the "Mandatory Tender Date"), the last day of the Long Period. The 2020B Senior Revenue Bonds were initially designated as Self-Liquidity Bonds pursuant to the 2020B Paying Agent Agreement and no standby bond purchase agreement or other liquidity facility is in effect for the purchase of such bonds.

On or before the date 120 days prior to the end of the Long Period, Metropolitan may request WFMCS to purchase the 2020B Senior Revenue Bonds for another Long Period, or Metropolitan may seek to remarket the 2020B Senior Revenue Bonds to another bank or in the public debt markets in a new interest rate mode or at a fixed interest rate. In the event the 2020B Bonds are not purchased by WFMCS for a subsequent Long Period, Metropolitan is obligated under the 2020 Direct Purchase Agreement to cause 2020B Senior Revenue Bonds that have not been converted to another interest rate mode or remarketed to a purchaser or purchasers other than WFMCS ("Unremarketed 2020B Bonds") to be redeemed on the Mandatory Tender Date; provided, that if no default or event of default under the 2020 Direct Purchase Agreement shall have occurred and be continuing and the representations and warranties of Metropolitan shall be true and correct on the Mandatory Tender Date, then the principal amount of the Unremarketed 2020B Senior Revenue Bonds shall be due and payable on the date that is 30 days following the Mandatory Tender Date and shall accrue interest at the Purchaser Rate, a fluctuating interest per annum equal to, the greatest of the (i) the Prime Rate, (ii) Federal Funds Rate plus one-half of one percent, and (iii) five percent, as specified in the 2020 Direct Purchase Agreement. If no default or event of default under the 2020 Direct Purchase Agreement shall have occurred and be continuing and the representations and warranties of Metropolitan shall be true and correct at the end of such 30-day period, the Unremarketed 2020B Senior Revenue Bonds will continue to bear interest at the Purchaser Rate plus, after 180 days from the Mandatory Tender Date, a spread of one percent, and the principal amount of such Unremarketed 2020B Senior Revenue Bonds may, at Metropolitan's request, instead be subject to mandatory redemption in substantially equal installments payable every six months over an amortization period commencing six months after the Mandatory Tender Date and ending on the third anniversary of the Mandatory Tender Date.

Under the 2020 Direct Purchase Agreement, upon a failure by Metropolitan to pay principal or interest of any 2020B Senior Revenue Bonds, a failure by Metropolitan to perform or observe its covenants, a default in other specified indebtedness of Metropolitan, certain acts of bankruptcy or insolvency, or other specified events of default (including if S&P shall have assigned a credit rating below "BBB-", or if any of Fitch, S&P or Moody's shall have assigned a credit rating below "A-" or "A3," to Senior Revenue Bonds issued under the Senior Debt Resolutions), WFMCS has the right to cause a mandatory tender of the 2020B Senior Revenue Bonds and accelerate (depending on the event, seven days after the occurrence, or for certain events, only after 180 days' notice) Metropolitan's obligation to repay the 2020B Senior Revenue Bonds.

In connection with the execution of the 2020 Direct Purchase Agreement, Metropolitan designated the principal payable on the 2020B Senior Revenue Bonds on the Mandatory Tender Date as Excluded Principal Payments under the Senior Debt Resolutions and thus, for purposes of calculating Maximum Annual Debt Service, included the amount of principal and interest due and payable in connection therewith on a schedule of Assumed Debt Service. This schedule of Assumed Debt Service assumes that Metropolitan will pay the principal of the 2020B Senior Revenue Bonds over a period of 30 years at a fixed interest rate of approximately 5.00 percent.

Metropolitan has previously, and may in the future, enter into one or more self-liquidity revolving credit agreements which may be drawn upon for the purpose of paying the purchase price of any Self-Liquidity Bonds issued by Metropolitan, the repayment obligations of Metropolitan under which may be secured as either Senior Parity Obligations or Subordinate Parity Obligations.

### **Term Mode Bonds**

As of December 1, 2020, Metropolitan had outstanding \$2.8 million of Senior Revenue Bonds bearing interest in a term mode, comprised of its 2014 Series C-3 Bonds (the "Term Mode Bonds"). The Term Mode Bonds initially bear interest at a fixed rate for a specified period from their date of issuance, after which there shall be determined a new interest mode for such Term Mode Bonds (which may be another term mode, a daily mode, a weekly mode, a short-term mode or an index mode) or the Term Mode Bonds may be converted to bear fixed interest rates through the maturity date thereof. The owners of the Term Mode Bonds must tender for purchase, and Metropolitan must purchase, all of the Term Mode Bonds on the specified scheduled mandatory tender date of each term period for such Term Mode Bonds. The Term Mode Bonds outstanding as of December 1, 2020, are summarized in the following table:

<b>Term Mode Bonds</b>		
<b>Series</b>	<b>Original Principal Amount Issued</b>	<b>Next Scheduled Mandatory Tender Date</b>
2014 C-3	\$ 2,810,000	October 1, 2021 <sup>(1)</sup>

*Source: Metropolitan.*

<sup>(1)</sup> Metropolitan expects to refund or remarket the Term Mode Bonds prior to their next scheduled mandatory tender date.

Metropolitan will pay the principal of, and interest on, the Term Mode Bonds on parity with its other Senior Revenue Bonds. Metropolitan anticipates that it will pay the purchase price of tendered Term Mode Bonds from the proceeds of remarketing such Term Mode Bonds or from other available funds. Metropolitan's obligation to pay the purchase price of any tendered Term Mode Bonds is an unsecured, special limited obligation of Metropolitan payable from Net Operating Revenues. Purchase price payments of Term Mode Bonds are subordinate to both the Senior Revenue Bonds and Senior Parity Obligations and to the Subordinate Revenue Bonds and Subordinate Parity Obligations. Metropolitan has not secured any liquidity facility or letter of credit to support the payment of the purchase price of Term Mode Bonds in connection with any scheduled mandatory tender. If the purchase price of the Term Mode Bonds is not paid from the proceeds of remarketing or other funds following a scheduled mandatory tender, such Term Mode Bonds will then bear interest at a default rate of up to 12 percent per annum until purchased by Metropolitan or redeemed. Failure to pay the purchase price of Term Mode Bonds on a scheduled mandatory tender date is a default under the related paying agent agreement, upon the occurrence and continuance of which a majority in aggregate principal amount of the owners of such Term Mode Bonds may elect a bondholders' committee to exercise rights and powers of such owners under such paying agent agreement. Failure to pay the purchase price of Term Mode Bonds on a scheduled mandatory tender date is not a default under the Senior Debt Resolutions. If the purchase price of the Term Mode Bonds is not paid on a scheduled mandatory tender date, such Term Mode Bonds will also be subject to special mandatory redemption, in part, 18, 36 and 54 months following the purchase default. Any such special mandatory redemption payment will constitute an obligation payable on parity with the Senior Revenue Bonds and Senior Parity Obligations.

### **Senior Parity Obligations**

**Short-Term Revolving Credit Facility.** In April 2016, Metropolitan entered into a noteholder's agreement (such agreement as subsequently amended, the "RBC Short-Term Revolving Credit Facility") with RBC Municipal Products, LLC ("RBC") and a related note purchase agreement with RBC Capital Products, LLC, as the underwriter, for the issuance and sale by Metropolitan and the purchase by RBC of Metropolitan's short-term Index Notes. Pursuant to the RBC Short-Term Revolving Credit Facility, Metropolitan may borrow, pay down and re-borrow amounts, through the issuance and sale from time to time of up to \$200 million of notes (including, subject to certain terms and conditions, notes to refund maturing notes) to be purchased by RBC during the term of RBC's commitment thereunder (which commitment currently extends to April 5, 2022). As of December 1, 2020, Metropolitan had outstanding \$0 of short-term notes under the RBC Short-Term Revolving Credit Facility. Any unpaid principal remaining outstanding at



the April 5, 2022 commitment end date of the RBC Short-Term Revolving Credit Facility is required to be paid by Metropolitan in quarterly installments over a period of approximately one year.

Notes under the RBC Short-Term Revolving Credit Facility bear interest at a variable rate of interest: for taxable borrowings, at a spread of 0.54 percent (so long as the current credit rating on Metropolitan's Senior Revenue Bonds issued under the Senior Debt Resolutions is maintained) to the one-month LIBOR; and for tax-exempt borrowings, at a spread of 0.38 percent (so long as the current credit rating on Metropolitan's Senior Revenue Bonds issued under the Senior Debt Resolutions is maintained) to the SIFMA Municipal Swap Index. Under the RBC Short-Term Revolving Credit Facility, upon a failure by Metropolitan to pay principal or interest of any note thereunder, a failure by Metropolitan to perform or observe its covenants, a default in other specified indebtedness of Metropolitan, certain acts of insolvency, or other specified events of default (including a reduction in the credit rating assigned to Senior Revenue Bonds issued under the Senior Debt Resolutions by Fitch, S&P or Moody's below "A-" or "A3"), the bank has the right to terminate its commitments and may accelerate (depending on the event, seven days after the occurrence, or for certain events, only after 180 days' notice) Metropolitan's obligation to repay its borrowings. Metropolitan has secured its obligation to pay principal and interest on notes evidencing borrowings under the RBC Short-Term Credit Facility as Senior Parity Obligations.

In connection with the execution of the RBC Short-Term Revolving Credit Facility, Metropolitan designated the principal and interest payable on the notes thereunder as Excluded Principal Payments under the Senior Debt Resolutions and thus, for purposes of calculating Maximum Annual Debt Service, included the amount of principal and interest due and payable under the RBC Short-Term Revolving Credit Facility on a schedule of Assumed Debt Service. This schedule of Assumed Debt Service assumes that Metropolitan will pay the principal under the RBC Short-Term Revolving Credit Facility over a period of 30 years at a fixed interest rate of approximately 3.3 percent.

Metropolitan has previously, and may in the future, enter into one or more other or alternative short-term revolving credit facilities, the repayment obligations of Metropolitan under which may be secured as either Senior Parity Obligations or Subordinate Parity Obligations.

## **Outstanding Subordinate Revenue Bonds and Subordinate Parity Obligations**

### **Subordinate Revenue Bonds**

The water revenue bonds issued under the Subordinate Debt Resolutions outstanding as of December 1, 2020, are set forth below:

<u>Name of Issue</u>	<u>Principal Outstanding</u>
Subordinate Water Revenue Bonds, 2016 Authorization Series A <sup>(1)</sup>	\$ 175,000,000
Subordinate Water Revenue Refunding Bonds, 2017 Series A	232,715,000
Subordinate Water Revenue Refunding Bonds, 2017 Series B <sup>(2)</sup>	142,575,000
Subordinate Water Revenue Bonds, 2017 Series C <sup>(1)</sup>	80,000,000
Subordinate Water Revenue Refunding Bonds, 2017 Series D <sup>(1)</sup>	95,630,000
Subordinate Water Revenue Refunding Bonds, 2017 Series E <sup>(1)</sup>	95,625,000
Subordinate Water Revenue Refunding Bonds, 2018 Series A	90,115,000
Subordinate Water Revenue Bonds, 2018 Series B	64,345,000
Subordinate Water Revenue Refunding Bonds, 2019 Series A	233,660,000
Subordinate Water Revenue Refunding Bonds, 2020 Series A	152,455,000
<b>Total</b>	<b>\$1,362,120,000</b>

Source: Metropolitan.

<sup>(1)</sup> Outstanding variable rate obligation.

<sup>(2)</sup> Metropolitan expects to refund the \$35,645,000 principal amount of these bonds maturing on August 1, 2021 on or after their July 1, 2021 optional call date and prior to their maturity date.

### **Variable Rate Bonds**

As of December 1, 2020, of the \$1.36 billion outstanding Subordinate Revenue Bonds, \$446.3 million were variable rate obligations. The outstanding variable rate Subordinate Revenue Bonds (described under this caption “-Variable Rate Bonds”) are all bonds bearing interest in a LIBOR Index Mode or a SIFMA Index Mode (referred to herein as “Index Tender Bonds”). Metropolitan also has outstanding \$46.8 million short-term notes issued as variable rate Subordinate Parity Obligations (described under “-Subordinate Parity Obligations – Subordinate Short-Term Certificates” below).

**Direct Purchase LIBOR Index Mode Bonds.** In December 2016, Metropolitan entered into a Continuing Covenant Agreement with Bank of America, N.A. (“BANA,” and the “2016 BANA Agreement”), for the purchase by BANA and sale by Metropolitan of \$175 million Subordinate Water Revenue Bonds, 2016 Authorization Series A (the “Subordinate 2016 Series A Bonds”), which was the first series of bonds issued under the Subordinate Debt Resolutions. Proceeds were used to reimburse Metropolitan for the purchase of the Delta Islands in the San Francisco Bay\Sacramento-San Joaquin River Delta that was funded from Metropolitan’s reserves in July 2016.

The Subordinate 2016 Series A Bonds bear interest at a variable rate of interest, at a spread of 0.32 percent (so long as the current credit rating on Metropolitan’s Senior Revenue Bonds issued under the Senior Debt Resolutions is maintained) to one-month LIBOR. Under the 2016 BANA Agreement, upon a failure by Metropolitan to pay principal or interest of any Subordinate 2016 Series A Bonds, a failure by Metropolitan to perform or observe its covenants, a default in other specified indebtedness of Metropolitan, certain acts of insolvency, or other specified events of default (including if S&P shall have assigned a credit rating below “BBB-,” or if any of Fitch, S&P or Moody’s shall have assigned a credit rating below “BBB” or “Baa2,” to Senior Revenue Bonds issued under the Senior Debt Resolutions), BANA has the right to accelerate (depending on the event, seven days after the occurrence, or for certain events, only after 180 days’ notice) Metropolitan’s obligation to repay the Subordinate 2016 Series A Bonds. Metropolitan has secured its obligation to pay principal and interest under the 2016 BANA Agreement as a Subordinate Parity Obligation. The Subordinate 2016 Series A Bonds are Index Tender Bonds and are subject to mandatory tender for purchase on the scheduled mandatory tender date of June 21, 2021, or, if directed by BANA upon the occurrence and continuance of an event of default under the 2016 BANA Agreement, five business days after receipt of such direction. On or before the scheduled mandatory tender date, Metropolitan may request an extension of the 2016 BANA Agreement for another tender period or may request BANA to purchase the Subordinate 2016 Series A Bonds in another interest rate mode, or Metropolitan may seek to remarket the Subordinate 2016 Series A Bonds to another bank or in the public debt markets. In the event the 2016 BANA Agreement is not extended, Metropolitan is obligated under the 2016 BANA Agreement to cause unremarketed Subordinate 2016 Series A Bonds to be redeemed five business days after the scheduled mandatory tender date in the event the purchase price of the Subordinate 2016 Series A Bonds is not paid from the proceeds of a remarketing or other funds on the scheduled mandatory tender date. A failure to pay the purchase price of the Subordinate 2016 Series A Bonds upon a mandatory tender would constitute a default under the Subordinate Debt Resolutions if not remedied within five business days.

**SIFMA Index Mode Bonds.** Metropolitan’s Subordinate Water Revenue Bonds, 2017 Series C, Subordinate Water Revenue Refunding Bonds, 2017 Series D and Subordinate Water Revenue Refunding Bonds, 2017 Series E (collectively, the “Subordinate 2017 Series C, D and E Bonds”) bear interest at a rate that fluctuates weekly based on the SIFMA Municipal Swap Index plus a spread. The Subordinate 2017 Series C, D and E Bonds are Index Tender Bonds and are subject to mandatory tender under certain circumstances, including on certain scheduled mandatory tender dates (unless earlier remarketed or otherwise retired). Metropolitan anticipates that it will pay the purchase price of tendered Subordinate 2017 Series C, D and E Bonds from the proceeds of remarketing such Index Tender Bonds or from other available funds. Metropolitan’s obligation to pay the purchase price of any such tendered Subordinate 2017 Series C, D and E Bonds is a special limited obligation of Metropolitan payable solely from Net Operating Revenues subordinate to the Senior Revenue Bonds and Senior Parity Obligations and on parity with the other

outstanding Subordinate Revenue Bonds and Subordinate Parity Obligations. Metropolitan has not secured any liquidity facility or letter of credit to support the payment of the purchase price of Subordinate 2017 Series C, D and E Bonds in connection with a scheduled mandatory tender. Failure to pay the purchase price of any Subordinate 2017 Series C, D and E Bonds on a scheduled mandatory tender date for such Index Tender Bonds for a period of five business days following written notice by any Owner of such Subordinate 2017 Series C, D and E Bonds will constitute an event of default under the Subordinate Debt Resolutions, upon the occurrence and continuance of which the owners of 25 percent in aggregate principal amount of the Subordinate Revenue Bonds then outstanding may elect a bondholders' committee to exercise rights and powers of such owners under the Subordinate Debt Resolutions, including the right to declare the entire unpaid principal of the Subordinate Revenue Bonds then outstanding to be immediately due and payable.

The mandatory tender dates and related tender periods for the Index Tender Bonds outstanding as of December 1, 2020, are summarized in the following table:

<b>Index Tender Bonds</b>				
<b>Series</b>	<b>Date of Issuance</b>	<b>Original Principal Amount Issued</b>	<b>Next Scheduled Mandatory Tender Date</b>	<b>Maturity Date</b>
Subordinate 2016 Authorization Series A	December 21, 2016	\$175,000,000	June 21, 2021 <sup>(1)</sup>	July 1, 2045
Subordinate 2017 Series C	July 3, 2017	80,000,000	June 21, 2021 <sup>(1)</sup>	July 1, 2047
Subordinate 2017 Refunding Series D	July 3, 2017	95,630,000	June 21, 2021 <sup>(1)</sup>	July 1, 2037
Subordinate 2017 Refunding Series E	July 3, 2017	<u>95,625,000</u>	June 21, 2021 <sup>(1)</sup>	July 1, 2037
<b>Total</b>		<b>\$446,255,000</b>		

Source: Metropolitan.

<sup>(1)</sup> Metropolitan expects to refund or remarket the Index Tender Bonds prior to their next scheduled mandatory tender date.

### **Subordinate Parity Obligations**

**Subordinate Short-Term Certificates.** In August 2019, Metropolitan entered into an amended and restated note purchase and continuing covenant agreement with BANA (the "Subordinate Refunding Note Purchase Agreement") for the purchase by BANA and sale by Metropolitan of Metropolitan's \$46.8 million principal amount of Short-Term Revenue Refunding Certificates, Series 2019 A (the "2019A Subordinate Short-Term Refunding Notes"). The \$46.8 principal amount of 2019A Subordinate Short-Term Refunding Notes issued by Metropolitan and purchased by BANA on August 1, 2019 refunded all of the outstanding notes previously issued by Metropolitan under a prior note purchase and continuing covenant agreement entered into in 2018 between Metropolitan and BANA. Such refunded notes were issued for the purpose of providing advance funding to support the California WaterFix as authorized by the Board on July 10, 2018. On May 2, 2019, DWR withdrew its approval of California WaterFix and announced plans to pursue a new planning and environmental review process for a single tunnel Bay-Delta conveyance project. See "METROPOLITAN'S WATER SUPPLY—State Water Project —Bay-Delta Proceedings Affecting State Water Project — Bay-Delta Planning Activities; Delta Conveyance" in this Appendix A.

The 2019A Subordinate Short-Term Refunding Notes bear interest at a fluctuating per annum interest rate, equal to one-month LIBOR plus a spread of 0.32 percent (which spread is subject to increase on a scale based upon the then applicable credit ratings on Metropolitan's Senior Revenue Bonds), not to exceed 18 percent per annum. The scheduled maturity date of the 2019A Subordinate Short-Term Refunding Notes is August 1, 2021. On or before the date 120 days prior to the scheduled maturity date of the 2019A Subordinate Short-Term Refunding Notes, Metropolitan may request BANA to extend its commitment and to refund and exchange the 2019A Subordinate Short-Term Refunding Notes with new refunding notes, or Metropolitan may seek to refund the 2019A Subordinate Short-Term Refunding Notes with another bank or

to refinance the 2019A Subordinate Short-Term Refunding Notes on a short or long-term basis in the public debt markets.

Concurrently with the execution of the Subordinate Refunding Note Purchase Agreement, in August 2019, Metropolitan entered into an additional note purchase and continuing covenant agreement (the "2019 Subordinate Note Purchase Agreement") with BANA for the purchase by BANA and sale by Metropolitan, from time to time, of Metropolitan's Short-Term Revenue Certificates, Series 2019. Pursuant to the terms of the 2019 Subordinate Note Purchase Agreement, Metropolitan may borrow, through the issuance and sale from time to time of short-term notes (with maturity dates not exceeding one year from their delivery date), an aggregate principal amount not to exceed \$39.2 million (including, subject to certain terms and conditions, notes to refund maturing notes) to be purchased by BANA during the term of BANA's commitment thereunder (the stated expiration date of which is July 30, 2021). As of December 1, 2020, Metropolitan had outstanding \$0 of Short-Term Revenue Certificates under the 2019 Subordinate Note Purchase Agreement.

Notes under the 2019 Subordinate Note Purchase Agreement bear interest at a fluctuating per annum interest rate: (i) for taxable borrowings, equal to one-month LIBOR plus a spread of 0.32 percent; and (ii) for tax-exempt borrowings, equal to 80 percent of one-month LIBOR plus a spread of 0.20 percent; in each case, which spread is subject to increase on a scale based upon the then applicable credit ratings on Metropolitan's Senior Revenue Bonds. The per annum interest rate on notes under 2019 Subordinate Note Purchase Agreement shall not exceed 12 percent on notes issued for new money purposes and shall not exceed 18 percent on notes issued to refund maturing notes.

Metropolitan has secured its obligations to pay principal and interest under the Subordinate Refunding Note Purchase Agreement and the 2019 Subordinate Note Purchase Agreement as Subordinate Parity Obligations, payable from Net Operating Revenues on a basis junior and subordinate to Metropolitan's Senior Revenue Bonds and Senior Parity Obligations and on parity with Metropolitan's Subordinate Revenue Bonds.

Under each of Subordinate Refunding Note Purchase Agreement and the 2019 Subordinate Note Purchase Agreement, upon a failure by Metropolitan to pay principal or interest of any note thereunder, upon a failure by Metropolitan to perform or observe its covenants, a default in other specified indebtedness of Metropolitan, certain acts of bankruptcy or insolvency, or other specified events of default (including if S&P shall have assigned a credit rating below "BBB-", or if any of Fitch, S&P or Moody's shall have assigned a credit rating below "BBB" or "Baa2," to Metropolitan's Senior Revenue Bonds), BANA has the right to terminate its commitments thereunder and may accelerate (depending on the event, seven days after the occurrence, or for certain events, only after 180 days' notice) Metropolitan's obligation to repay its borrowings. Upon the occurrence and during the continuation of an event of default under the Subordinate Refunding Note Purchase Agreement or the 2019 Subordinate Note Purchase Agreement, outstanding notes thereunder would bear interest at a default rate of 12 percent per annum.

#### **Other Junior Obligations**

Metropolitan currently is authorized to issue up to \$400,000,000 of Commercial Paper Notes payable from Net Operating Revenues on a basis subordinate to both the Senior Revenue Bonds and Senior Parity Obligations and to the Subordinate Revenue Bonds and Subordinate Parity Obligations. Although no Commercial Paper Notes are currently outstanding, the authorization remains in full force and effect and Metropolitan may issue Commercial Paper Notes from time to time.

#### **General Obligation Bonds**

As of December 1, 2020, \$32,230,000 aggregate principal amount of general obligation bonds payable from *ad valorem* property taxes were outstanding. See "METROPOLITAN REVENUES-General" and "--Revenue Allocation Policy and Tax Revenues" in this Appendix A. Metropolitan's revenue bonds are not payable from the levy of *ad valorem* property taxes.

<u>General Obligation Bonds</u>	<u>Amount Issued<sup>(1)</sup></u>	<u>Principal Outstanding</u>
Waterworks General Obligation Refunding Bonds, 2014 Series A	\$49,645,000	\$ 4,540,000
Waterworks General Obligation Refunding Bonds, 2019 Series A	16,755,000	14,025,000
Water Works General Obligation Refunding Bonds, 2020 Series A	<u>13,665,000</u>	<u>13,665,000</u>
<b>Total</b>	<b><u>\$80,065,000</u></b>	<b><u>\$32,230,000</u></b>

Source: Metropolitan.

<sup>(1)</sup> Voters authorized Metropolitan to issue \$850,000,000 of Waterworks General Obligation Bonds, Election 1966, in multiple series, in a special election held on June 7, 1966. This authorization has been fully utilized. This table lists bonds that refunded such Waterworks General Obligation Bonds, Election 1966.

### State Water Contract Obligations

**General.** As described herein, in 1960, Metropolitan entered into its State Water Contract with DWR to receive water from the State Water Project. All expenditures for capital and operations, maintenance, power and replacement costs associated with the State Water Project facilities used for water delivery are paid for by the 29 Contractors that have executed State water supply contracts with DWR, including Metropolitan. Contractors are obligated to pay allocable portions of the cost of construction of the system and ongoing operating and maintenance costs through at least 2035, regardless of quantities of water available from the project. Other payments are based on deliveries requested and actual deliveries received, costs of power required for actual deliveries of water, and offsets for credits received. In exchange, Contractors have the right to participate in the system, with an entitlement to water service from the State Water Project and the right to use the portion of the State Water Project conveyance system necessary to deliver water to them at no additional cost as long as capacity exists. Metropolitan's State Water Contract accounts for nearly one-half of the total entitlement for State Water Project water contracted for by all Contractors.

DWR and other State Water Contractors, including Metropolitan, have reached an Agreement in Principle to extend their State water supply contracts to 2085 and to make certain changes related to the financial management of the State Water Project in the future. See "METROPOLITAN'S WATER SUPPLY—State Water Project" in this Appendix A.

Metropolitan's payment obligation for the State Water Project for the fiscal year ended June 30, 2020 was \$518.9 million, which amount reflects prior year's credits of \$33.2 million. For the fiscal year ended June 30, 2020, Metropolitan's payment obligations under the State Water Contract were approximately 35 percent of Metropolitan's total annual expenses. A portion of Metropolitan's annual property tax levy is for payment of State Water Contract obligations, as described above under "METROPOLITAN REVENUES—Revenue Allocation Policy and Tax Revenues" in this Appendix A. Any deficiency between tax levy receipts and Metropolitan's State Water Contract obligations is expected to be paid from Operating Revenues, as defined in the Senior Debt Resolutions. See Note 9(a) to Metropolitan's audited financial statements in Appendix B for an estimate of Metropolitan's payment obligations under the State Water Contract. See also "—Power Sources and Costs; Related Long-Term Commitments" for a description of current and future costs for electric power required to operate State Water Project pumping systems and a description of litigation involving the federal relicensing of the Hyatt-Thermalito hydroelectric generating facilities at Lake Oroville.

Metropolitan capitalizes its share of the State Water Project capital costs as participation rights in State Water Project facilities as such costs are billed by DWR. Unamortized participation rights essentially represent a prepayment for future water deliveries through the State Water Project system. Metropolitan's share of system operating and maintenance costs are annually expensed.

DWR and various subsets of the State Water Contractors have entered into amendments to the State water supply contracts related to the financing of certain State Water Project facilities. The amendments establish procedures to provide for the payment of construction costs financed by DWR bonds by establishing separate subcategories of charges to produce the revenues required to pay all of the annual financing costs (including coverage on the allocable bonds) relating to the financed project. If any affected Contractor defaults on payment under certain of such amendments, the shortfall may be collected from the non-defaulting affected Contractors, subject to certain limitations.

These amendments represent additional long-term obligations of Metropolitan, as described below.

***Devil Canyon-Castaic Contract.*** On June 23, 1972, Metropolitan and five other Southern California public agencies entered into a contract (the "Devil Canyon-Castaic Contract") with DWR for the financing and construction of the Devil Canyon and Castaic power recovery facilities, located on the aqueduct system of the State Water Project. Under this contract, DWR agreed to build the Devil Canyon and Castaic facilities, using the proceeds of revenue bonds issued by DWR under the State Central Valley Project Act. DWR also agreed to use and apply the power made available by the construction and operation of such facilities to deliver water to Metropolitan and the other contracting agencies. Metropolitan, in turn, agreed to pay to DWR 88 percent of the debt service on the revenue bonds issued by DWR. For calendar year 2020, this represented a payment of \$7.8 million. In addition, Metropolitan agreed to pay 78.5 percent of the operation and maintenance expenses of the Devil Canyon facilities and 96 percent of the operation and maintenance expenses of the Castaic facilities. Metropolitan's obligations under the Devil Canyon-Castaic Contract continue until the bonds are fully retired in 2022 even if DWR is unable to operate the facilities or deliver power from these facilities.

***Off-Aqueduct Power Facilities.*** In addition to system "on-aqueduct" power facilities costs, DWR has, either on its own or by joint venture, financed certain off-aqueduct power facilities. The power generated is utilized by the system for water transportation and other State Water Project purposes. Power generated in excess of system needs is marketed to various utilities and the California Independent System Operator ("CAISO"). Metropolitan is entitled to a proportionate share of the revenues resulting from sales of excess power. By virtue of a 1982 amendment to the State Water Contract and the other water supply contracts, Metropolitan and the other water Contractors are responsible for paying the capital and operating costs of the off-aqueduct power facilities regardless of the amount of power generated.

***East Branch Enlargement Amendment.*** In 1986, Metropolitan's State Water Contract and the water supply contracts of certain other State Water Contractors were amended for the purpose, among others, of financing the enlargement of the East Branch of the California Aqueduct. Under the amendment, enlargement of the East Branch can be initiated either at Metropolitan's request or by DWR finding that enlargement is needed to meet demands. Metropolitan, the other State Water Contractors on the East Branch, and DWR are currently in discussions on the timetable and plan for future East Branch enlargement actions.

The amendment establishes a separate subcategory of the Transportation Charge under the State Water Contract for the East Branch Enlargement and provides for the payment of costs associated with financing and operating the East Branch Enlargement. Under the amendment, the annual financing costs for such facilities financed by bonds issued by DWR are allocated among the participating Contractors based upon the delivery capacity increase allocable to each participating Contractor. Such costs include, but are not limited to, debt service, including coverage requirements, deposits to reserves, and certain operation and maintenance expenses, less any credits, interest earnings or other moneys received by DWR in connection with this facility.

If any participating Contractor defaults on payment of its allocable charges under the amendment, among other things, the non-defaulting participating Contractors may assume responsibility for such charges and receive delivery capability that would otherwise be available to the defaulting participating Contractor in



proportion to the non-defaulting Contractor's participation in the East Branch Enlargement. If participating Contractors fail to cure the default, Metropolitan will, in exchange for the delivery capability that would otherwise be available to the defaulting participating Contractor, assume responsibility for the capital charges of the defaulting participating Contractor.

***Water System Revenue Bond Amendment.*** In 1987, the State Water Contract and other water supply contracts were amended for the purpose of financing State Water Project facilities through revenue bonds. This amendment establishes a separate subcategory of the Delta Water Charge and the Transportation Charge under the State water supply contracts for projects financed with DWR water system revenue bonds. This subcategory of charge provides the revenues required to pay the annual financing costs of the bonds and consists of two elements. The first element is an annual charge for repayment of capital costs of certain revenue bond financed water system facilities under the existing water supply contract procedures. The second element is a water system revenue bond surcharge to pay the difference between the total annual charges under the first element and the annual financing costs, including coverage and reserves, of DWR's water system revenue bonds.

If any Contractor defaults on payment of its allocable charges under this amendment, DWR is required to allocate a portion of the default to each of the nondefaulting Contractors, subject to certain limitations, including a provision that no nondefaulting Contractor may be charged more than 125 percent of the amount of its annual payment in the absence of any such default. Under certain circumstances, the nondefaulting Contractors would be entitled to receive an allocation of the water supply of the defaulting Contractor.

The following table sets forth Metropolitan's projected costs of State Water Project water based upon DWR's Appendix B to Bulletin 132-19 (an annual report produced by DWR setting forth data and computations used by the State in determining State Water Contractors' Statements of Charges), Metropolitan's share of the forecasted costs associated with the planning of a single tunnel Bay-Delta conveyance project (see "METROPOLITAN'S WATER SUPPLY-State Water Project -Bay-Delta Proceedings Affecting State Water Project - Bay-Delta Planning Activities; Delta Conveyance"), and power costs forecasted by Metropolitan.

The projections for fiscal year 2020-21 are revised from the projections adopted in the fiscal year 2020-21 and 2021-22 biennial budget and based on results through November 2020. The projections for fiscal years 2021-22 through 2024-25 reflect Metropolitan's biennial budget for fiscal years 2020-21 and 2021-22, which includes a ten-year financial forecast. See also "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A. The projections reflect certain assumptions concerning future events and circumstances which may not occur or materialize. Actual costs may vary from these projections if such events and circumstances do not occur as expected or materialize, and such variances may be material.

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**PROJECTED COSTS OF METROPOLITAN  
FOR STATE WATER CONTRACT AND DELTA CONVEYANCE  
(Dollars in Millions)**

Year Ending June 30	Capital Costs <sup>(1)</sup>	Minimum OMP&R <sup>(1)</sup>	Power Costs <sup>(2)</sup>	Refunds & Credits <sup>(1)</sup>	Delta Conveyance <sup>(3)</sup>	Total <sup>(4)</sup>
2021	\$180.4	\$262.8	\$126.6	\$(39.9)	\$25.0	\$554.9
2022	211.9	275.2	212.4	(70.1)	25.0	654.4
2023	189.4	283.9	212.2	(63.5)	50.0	672.0
2024	209.9	294.9	212.5	(64.0)	--	653.3
2025	228.2	309.8	218.9	(66.8)	--	690.1

Source: Metropolitan.

- (1) Capital Costs, Minimum Operations, Maintenance, Power and Replacement ("OMP&R") and Refunds and Credits projections are based on DWR's Appendix B to Bulletin 132-19. Capital costs reflect DWR's October 2019 capital expenditures projections based upon its condition assessment review of State Water Project repair and replacement needs.
- (2) Power costs are forecasted by Metropolitan based on a 50 percent State Water Project allocation. Availability of State Water Project supplies vary and deliveries may include transfers and storage. All deliveries are based upon availability, as determined by hydrology, water quality and wildlife conditions. See "METROPOLITAN'S WATER SUPPLY-State Water Project" and "Endangered Species Act and Other Environmental Considerations" in this Appendix A.
- (3) Based on Metropolitan's share of the forecasted planning costs for a single tunnel project. Does not include any capital costs associated with any future proposed Bay-Delta conveyance project.
- (4) Totals may not add due to rounding.

**Power Sources and Costs; Related Long-Term Commitments**

Current and future costs for electric power required for operating the pumping systems of the CRA and the State Water Project are a substantial part of Metropolitan's overall expenses. Metropolitan's power costs include various ongoing fixed annual obligations under its contracts with the U.S. Department of Energy Western Area Power Administration and the Bureau of Reclamation for power from the Hoover and Parker Power Plants respectively. Expenses for electric power for the CRA for the fiscal years 2018-19 and 2019-20 were approximately \$39.3 million and \$39.6 million, respectively. Expenses for electric power and transmission service for the State Water Project for fiscal years 2018-19 and 2019-20 were approximately \$127.5 million and \$134.0 million, respectively. Electricity markets are subject to volatility and Metropolitan is unable to give any assurance with respect to the magnitude of future power costs.

**Colorado River Aqueduct.** Approximately 50 percent of the annual power requirements for pumping at full capacity (1.25 million acre-feet of Colorado River water) in Metropolitan's CRA are secured through long-term contracts for energy generated from federal facilities located on the Colorado River (Hoover Power Plant and Parker Power Plant). Payments made under the Hoover Power Plant and Parker Power Plant contracts are operation and maintenance expenses. These contracts provide Metropolitan with reliable and economical power resources to pump Colorado River water to Metropolitan's service area.

As provided for under the Hoover Power Allocation Act of 2011 (H.R. 470), Metropolitan has executed a 50-year agreement with the Western Area Power Administration for the continued purchase of electric energy generated at the Hoover Power Plant through September 2067, succeeding Metropolitan's prior Hoover contract that expired on September 30, 2017.

Depending on pumping conditions, Metropolitan can require additional energy in excess of the base resources available to Metropolitan from the Hoover and Parker Power Plants. The remaining up to approximately 50 percent of annual pumping power requirements for full capacity pumping on the CRA is obtained through energy purchases from municipal and investor-owned utilities, third party suppliers, or the

CAISO markets. Metropolitan is a member of the Western Systems Power Pool (“WSPP”) and utilizes its industry standard form contract to make wholesale power purchases at market cost.

Gross diversions of water from Lake Havasu for fiscal years 2018-19 and 2019-20 were approximately 798,000 acre-feet and 552,000 acre-feet, respectively, including Metropolitan’s basic apportionment of Colorado River water and supplies from water transfer and storage programs. In fiscal years 2018-19 and 2019-20, Metropolitan purchased approximately 395,000 and sold 54,000 megawatt-hours, respectively, of additional energy.

Metropolitan has agreements with the Arizona Electric Power Cooperative (“AEPSCO”) to provide transmission and energy purchasing services to support CRA power operations. The term of these agreements extends to December 31, 2035.

**State Water Project.** The State Water Project’s power requirements are met from a diverse mix of resources, including State-owned hydroelectric generating facilities. DWR has short-term contracts with Metropolitan (hydropower), Kern River Conservation District (hydropower), Northern California Power Agency (natural gas generation), Wells Fargo Company (Solar), Dominion Solar Holdings (Solar), and S-Power Corporation (Solar). The remainder of the State Water Project power needs is met by purchases from the CAISO.

DWR is seeking renewal of the license issued by FERC for the State Water Project’s Hyatt-Thermalito hydroelectric generating facilities at Lake Oroville. A Settlement Agreement containing recommended conditions for the new license was submitted to FERC in March 2006. That agreement was signed by over 50 stakeholders, including Metropolitan and other State Water Contractors. With only a few minor modifications, FERC staff recommended that the Settlement Agreement be adopted as the condition for the new license. DWR issued a final EIR for the relicensing project on July 22, 2008.

Butte County and Plumas County filed separate lawsuits against DWR challenging the adequacy of the final EIR. This lawsuit also named all of the signatories to the Settlement Agreement, including Metropolitan, as “real parties in interest,” since they could be adversely affected by this litigation. On September 5, 2019, the Court of Appeal ruled that review pursuant to CEQA is preempted in certain respects by the Federal Power Act. The case is now before the California Supreme Court. If the decision is affirmed, the case will be dismissed. If the California Supreme Court finds in favor of the plaintiffs, the case will be remanded to the California Court of Appeal for a determination of sufficiency regarding the merits of the CEQA petition.

Regulatory permits and authorizations are also required before the new license can take effect. In December 2016, NMFS issued a biological opinion setting forth the terms and conditions under which the relicensing project must operate in order to avoid adverse impacts to threatened and endangered species. This was the last major regulatory requirement prior to FERC issuing a new license. Following the 2017 Oroville Dam spillway incident, Butte County, the City of Oroville, and others requested that FERC not issue a new license until an Independent Forensic Team (“IFT”) delivered their final report to FERC and FERC has had adequate time to review the report. The Final IFT report was delivered on January 5, 2018. DWR submitted a plan to address the findings of the report to FERC on March 12, 2018. See “METROPOLITAN’S WATER SUPPLY—State Water Project –2017 Oroville Dam Spillway Incident.” Metropolitan anticipates that FERC will issue the new license; however, the timeframe for FERC approval is not currently known. However, FERC has issued one-year renewals of the existing license since its initial expiration date on January 31, 2007 and is expected to issue successive one-year renewals until a new license is obtained.

DWR receives transmission service from the CAISO. The transmission service providers participating in the CAISO may seek increased transmission rates, subject to the approval of FERC. DWR

has the right to contest any such proposed increase. DWR may also be subject to increases in the cost of transmission service as new electric grid facilities are constructed.

On September 10, 2018, Governor Brown signed SB 100 into law, which took effect on January 1, 2019. SB 100 establishes a goal of providing 100 percent carbon-free electricity by 2045 and increases the 2030 Renewables Portfolio Standard ("RPS") requirement for retail electric utilities from 50 percent to 60 percent. Simultaneously, the Governor announced Executive Order B-55-18 directing state agencies to develop a framework to achieve and maintain carbon neutrality by 2045. Metropolitan and DWR are not subject to the RPS requirements. However, as a state agency, DWR is subject to the Executive Order. DWR has an existing climate action plan in order to achieve carbon neutrality by 2045.

October 9, 2019, Governor Newsom signed SB 49 into law. SB 49 requires Natural Resources, in collaboration with the Energy Commission and the Department of Water Resources to assess by January 1, 2022 the opportunities and constraints for potential operational and structural upgrades to the State Water Project to aid California in achieving its climate and energy goals, and to provide associated recommendations consistent with California's energy goals.

### **Defined Benefit Pension Plan and Other Post-Employment Benefits**

Metropolitan is a member of the California Public Employees' Retirement System ("PERS"), a multiple-employer pension system that provides a contributory defined-benefit pension for substantially all Metropolitan employees. PERS provides retirement and disability benefits, annual cost-of-living adjustments and death benefits to plan members and beneficiaries. PERS acts as a common investment and administrative agent for participating public entities within the State. PERS is a contributory plan deriving funds from employee contributions as well as from employer contributions and earnings from investments. A menu of benefit provisions is established by State statutes within the Public Employees' Retirement Law. Metropolitan selects optional benefit provisions from the benefit menu by contract with PERS.

Metropolitan makes contributions to PERS based on actuarially determined employer contribution rates. The actuarial methods and assumptions used are those adopted by the PERS Board of Administration ("PERS Board"). Employees hired prior to January 1, 2013 are required to contribute 7.00 percent of their earnings (excluding overtime pay) to PERS. Pursuant to the current memoranda of understanding, Metropolitan contributes the requisite 7.00 percent contribution for all employees represented by the Management and Professional Employees Association, the Association of Confidential Employees, Supervisors and Professional Personnel Association and AFSCME Local 1902 and who were hired prior to January 1, 2012. Employees in all four bargaining units who were hired on or after January 1, 2012 but before January 1, 2013, pay the full 7.00 percent contribution to PERS for the first five years of employment. After the employee completes five years of employment, Metropolitan contributes the requisite 7.00 percent contribution. Metropolitan also contributes the entire 7.00 percent on behalf of unrepresented employees. Employees hired on or after January 1, 2013 and who are "new" PERS members as defined by Public Employees' Pension Reform Act of 2013 pay a member contribution of 6.00 percent in fiscal years 2018-19 through 2019-20 and 7.25 percent in fiscal years 2020-21 through 2021-22. In addition, Metropolitan is required to contribute the actuarially determined remaining amounts necessary to fund the benefits for its members.

The contribution requirements of the plan members are established by State statute and the employer contribution rate is established and may be amended by PERS. The fiscal year contributions were/are based on the following actuarial reports and discount rates:

<b>Fiscal Year</b>	<b>Actuarial Valuation</b>	<b>Discount Rate</b>
2018-19	June 30, 2016	7.375%
2019-20	June 30, 2017	7.25%
2020-21	June 30, 2018	7.00%
2021-22	June 30, 2019	7.00%

Metropolitan was required to contribute 25.97 percent and 29.97 percent of annual projected payroll for fiscal years 2018-19 and 2019-20, respectively. Metropolitan's actual contribution for fiscal years 2018-19 and 2019-20 were \$68.3 million or 32.14 percent of annual covered payroll and \$77.6 million or 34.38 percent of annual covered payroll, respectively. The fiscal years 2018-19 and 2019-20 actual contribution included \$11.8 million or 5.56 percent and \$11.5 million or 5.10 percent of annual covered payroll, respectively, for Metropolitan's pick-up of the employees' 7.00 percent share. For fiscal years 2020-21 and 2021-22, Metropolitan is required to contribute 32.43 percent and 34.39 percent, respectively, of annual projected payroll, in addition to member contributions paid by Metropolitan.

Metropolitan's required contributions to PERS fluctuate each year and include a normal cost component and a component equal to an amortized amount of the unfunded liability. Many assumptions are used to estimate the ultimate liability of pensions and the contributions that will be required to meet those obligations. The PERS Board has adjusted and may in the future further adjust certain assumptions used in the PERS actuarial valuations, which may increase Metropolitan's required contributions to PERS in future years. Accordingly, Metropolitan cannot provide any assurances that its required contributions to PERS in future years will not significantly increase (or otherwise vary) from any past or current projected levels of contributions.

On December 21, 2016, the PERS Board approved lowering the discount rate to 7.00 percent over a three-year period. PERS has estimated that with a reduction in the rate of return to 7.00 percent, most employers could expect a rate increase of 1.00 percent to 3.00 percent of normal cost as a percent of payroll for miscellaneous plans and an increase in payments toward unfunded accrued liabilities of between 30 to 40 percent. As a result, required contributions of employers, including Metropolitan, are expected to increase.

Beginning with fiscal year 2017-18 PERS began collecting employer contributions towards the plan's unfunded liability as dollar amounts instead of the prior method of contribution rate. This change addresses potential funding issues that could arise from a declining payroll or reduction in the number of active members in the plan.

On December 19, 2017, the PERS Board adopted new actuarial assumptions based on the recommendations in the December 2017 CalPERS Experience Study and Review of Actuarial Assumptions. This study reviewed the retirement rates, termination rates, mortality rates, rates of salary increases and inflation assumption for public agencies. These new assumptions were incorporated in the June 30, 2017 actuarial valuation and reflected in the required contribution for fiscal year 2019-20. In addition, the Board adopted a new asset portfolio as part of its Asset Liability Management. The new asset mix supports a 7.00 percent discount rate. The reduction of the inflation assumption will be implemented in two steps in conjunction with the decreases in the discount rate. For the June 30, 2017 valuation an inflation rate of 2.625 percent was used and for the June 30, 2018 and subsequent valuations, an inflation rate of 2.50 percent was/will be used.

The PERS Board has adopted a new amortization policy effective with the June 30, 2019 actuarial valuation. The new policy shortens the period over which actuarial gains and losses are amortized from 30 years to 20 years with the payments computed using a level dollar amount. In addition, the new policy removes the five-year ramp-up and ramp-down on unfunded accrued liability bases attributable to

assumption changes and non-investment gains/losses. The new policy removes the five-year ramp-down on investment gains/losses. These changes will apply only to new unfunded accrued liability bases established on or after June 30, 2019.

The following table shows the funding progress of Metropolitan’s pension plan.

<b>Valuation Date</b>	<b>Accrued Liability (\$ in billions)</b>	<b>Market Value of Assets (\$ in billions)</b>	<b>Unfunded Accrued Liability (\$ in billions)</b>	<b>Funded Ratio</b>
6/30/19 <sup>(1)</sup>	\$2.534	\$1.810	\$(0.724)	71.4%
6/30/18	\$2.433	\$1.744	\$(0.689)	71.7%
6/30/17	\$2.269	\$1.651	\$(0.618)	72.7%
6/30/16	\$2.166	\$1.524	\$(0.642)	70.3%
6/30/15	\$2.060	\$1.556	\$(0.504)	75.5%
6/30/14	\$1.983	\$1.560	\$(0.423)	78.7%
6/30/13	\$1.805	\$1.356	\$(0.449)	75.1%

<sup>(1)</sup> Most recent actuarial valuation available.

Source: California Public Employees’ Retirement System.

The market value of assets reflected above is based upon the most recent actuarial valuation as of June 30, 2019. The actuarial valuation as of June 30, 2020 is not expected to be available before summer 2021. The June 30, 2020 valuation report will be used to establish the contribution requirements for fiscal year 2022-23. Increased volatility has been experienced in the financial markets in recent months and the market value at the time of the June 30, 2020 valuation is not yet known. Significant losses in market value or failure to achieve projected investment returns could substantially increase unfunded pension liabilities and future pension costs. See also “INTRODUCTION–COVID-19 Pandemic.” However, as noted above, under the amortization policy adopted by PERS, changes in the unfunded accrued liability due to actuarial gains or losses are amortized over a fixed 20-year period with a five-year ramp up at the beginning and a five-year ramp down at the end of the amortization period, as a result of which the immediate fiscal impact of any one year’s negative return on Metropolitan’s contribution rates is reduced.

The following tables show the changes in Net Pension Liability and related ratios of Metropolitan’s pension plan for fiscal years 2019-20 and 2018-19, and for fiscal years 2018-19 and 2017-18.

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<u>(Dollars in thousands)</u>	<u>06/30/20</u>	<u>6/30/19</u>	<u>Increase/ (Decrease)</u>
<b>Total Pension Liability</b>	\$2,479,307	\$2,376,778	\$102,529
<b>Plan Fiduciary Net Position</b>	1,810,312	1,742,741	67,571
<b>Plan Net Pension Liability</b>	\$ 668,995	\$ 634,037	\$ 34,958
Plan fiduciary net positions as a % of the total pension liability	73.02%	73.32%	
Covered payroll	\$ 212,558	\$ 204,635	
Plan net pension liability as a % of covered payroll	314.74%	309.84%	

<u>(Dollars in thousands)</u>	<u>06/30/19</u>	<u>6/30/18</u>	<u>Increase/ (Decrease)</u>
<b>Total Pension Liability</b>	\$2,376,778	\$2,315,248	\$61,530
<b>Plan Fiduciary Net Position</b>	1,742,741	1,654,331	88,410
<b>Plan Net Pension Liability</b>	\$ 634,037	\$ 660,917	\$(26,880)
Plan fiduciary net positions as a % of the total pension liability	73.32%	71.45%	
Covered payroll	\$ 204,635	\$ 199,186	
Plan net pension liability as a % of covered payroll	309.84%	331.81%	

The Net Pension Liability for Metropolitan's Miscellaneous Plan for the fiscal years ended June 30, 2020 and 2019 was measured as of June 30, 2019 and June 30, 2018, respectively, and the Total Pension Liability used to calculate the Net Pension Liability as of such dates was determined by an annual actuarial valuation as of June 30, 2018 and June 30, 2017, respectively.

For more information on the plan, see APPENDIX B—"THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA INDEPENDENT AUDITORS' REPORT AND BASIC FINANCIAL STATEMENTS FOR FISCAL YEARS ENDED JUNE 30, 2020 AND JUNE 30, 2019 AND BASIC FINANCIAL STATEMENTS FOR THE THREE MONTHS ENDED SEPTEMBER 30, 2020 AND 2019 (UNAUDITED)."

Metropolitan currently provides post-employment medical insurance to retirees and pays the post-employment medical insurance premiums to PERS. On January 1, 2012, Metropolitan implemented a longer vesting schedule for retiree medical benefits, which applies to all new employees hired on or after January 1, 2012. Payments for this benefit were \$27.3 million in fiscal year 2018-19 and \$45.3 million in fiscal year 2019-20. Under Governmental Accounting Standards Board Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*, Metropolitan is required to account for and report the outstanding obligations and commitments related to such benefits, commonly referred to as other post-employment benefits ("OPEB"), on an accrual basis.

The actuarial valuations dated June 30, 2017 and June 30, 2019, were released in March of 2018 and June of 2020, respectively. The 2017 valuation indicated that the Actuarially Determined Contribution ("ADC") in fiscal year 2019-20 was \$28.1 million and 2019 valuation indicate that the ADC will be

\$23.2 million and \$23.6 million in fiscal years 2020-21 and 2021-22, respectively. The ADC was based on the entry-age normal actuarial cost method with contributions determined as a level percent of pay. The actuarial assumptions included the following:

	June 30, 2019 Valuation	June 30, 2017 Valuation
Investment Rate of Return	6.75%	6.75%
Inflation	2.75%	2.75%
Salary Increases	3.00%	3.00%
Health Care Cost Trends	Medicare – starting at 6.3%, grading down to 4.0% over fifty-five years. Non-Medicare – starting at 7.25%, grading down to 4.0% over fifty-five years	Medicare – starting at 6.5%, grading down to 4.0% over fifty-seven years. Non-Medicare – starting at 7.5%, grading down to 4.0% over fifty-seven years.
Mortality, Termination, Disability	CalPERS 1997-2015 Experience Study Mortality projected fully generational with Scale MP-2019	CalPERS 1997-2011 Experience Study Mortality projected fully generational with Scale MP-2017
Affordable Care Act (ACA) Excise Tax	Not included. Repealed in December 2019.	2% load on retiree medical premium subsidy

As of June 30, 2019, the date of the most recent OPEB actuarial report, the unfunded actuarial accrued liability was estimated to be \$164.3 million and projected to be \$156.7 million at June 30, 2020. The amortization period for the unfunded actuarial accrued liability is 23 years closed with 17 years remaining as of fiscal year end 2020 and the amortization period of actuarial gains and losses is 15 years closed. Adjustments to the ADC include amortization of the unfunded actuarial accrued liability and actuarial gains and losses.

In September 2013, Metropolitan’s Board established an irrevocable OPEB trust fund with the California Employers’ Retiree Benefit Trust Fund. The market value of assets in the trust as of June 30, 2020 was \$287.7 million. As part of its biennial budget process, the Board approved the full funding of the ADC for fiscal years 2020-21 and 2021-22.

As noted above, the COVID-19 pandemic and related economic consequences have contributed to increased volatility in the financial markets. Declines in the market value of the OPEB trust fund or failure to achieve projected investment returns could negatively affect the funding status of the trust fund and increase ADCs in the future. See also “INTRODUCTION–COVID-19 Pandemic.”

The following tables show the changes in Net OPEB Liability and related ratios of Metropolitan’s OPEB plan for fiscal years 2019-20 and 2018-19, and for fiscal years 2018-19 and 2017-18.

<u>(Dollars in thousands)</u>	<u>06/30/20</u>	<u>6/30/19</u>	<u>Increase/ (Decrease)</u>
<b>Total OPEB Liability</b>	\$434,759	\$468,185	\$(33,426)
<b>Plan Fiduciary Net Position</b>	266,773	239,851	26,922
<b>Plan Net OPEB Liability</b>	\$167,986	\$228,334	\$(60,348)
Plan fiduciary net positions as a % of the total OPEB liability	61.36%	51.23%	
Covered payroll	\$212,558	\$204,635	
Plan net OPEB liability as a % of covered payroll	79.03%	111.58%	

<u>(Dollars in thousands)</u>	<u>06/30/19</u>	<u>6/30/18</u>	<u>Increase/ (Decrease)</u>
<b>Total OPEB Liability</b>	\$468,185	\$448,095	\$ 20,090
<b>Plan Fiduciary Net Position</b>	239,851	207,526	32,325
<b>Plan Net OPEB Liability</b>	\$228,334	\$240,569	\$(12,235)
Plan fiduciary net positions as a % of the total OPEB liability	51.23%	46.31%	
Covered payroll	\$204,635	\$199,186	
Plan net OPEB liability as a % of covered payroll	111.58%	120.78%	

The Net OPEB Liability for the fiscal years ended June 30, 2020 and 2019 was measured as of June 30, 2019 and June 30, 2018, respectively, and the Total OPEB Liability used to calculate the Net OPEB Liability as of such dates was determined by an annual actuarial valuation as of June 30, 2019 and June 30, 2017, respectively.

### HISTORICAL AND PROJECTED REVENUES AND EXPENSES

The "Historical and Projected Revenues and Expenses" table below provides a summary of revenues and expenses of Metropolitan prepared on a modified accrual basis. This is consistent with the biennial budget for fiscal years 2020-21 and 2021-22, which includes a ten-year financial forecast. The table does not reflect the accrual basis of accounting, which is used to prepare Metropolitan's annual audited financial statements. The modified accrual basis of accounting varies from the accrual basis of accounting in the following respects: depreciation and amortization are not recorded and payments for debt service and pay-as-you-go construction are recorded when paid. Under the modified accrual basis of accounting, revenues are recognized in the fiscal year in which they are earned, and expenses are recognized when incurred. Thus, water revenues are recognized in the month the water transaction occurs and expenses are recognized when goods have been received and services have been rendered. The change to modified accrual accounting is for budgeting purposes and Metropolitan will continue to calculate compliance with its rate covenant, limitations on additional bonds and other financial covenants in the Revenue Bond Resolutions in accordance with their terms.

The projections are based on assumptions concerning future events and circumstances that may impact revenues and expenses and represent management's best estimates of results at this time. See the

footnotes to the table below entitled “HISTORICAL AND PROJECTED REVENUES AND EXPENSES” and “MANAGEMENT’S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES” for relevant assumptions, including projected water transactions and the average annual increase in the effective water rate, and “MANAGEMENT’S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES” for a discussion of potential impacts. Some assumptions inevitably will not materialize, and unanticipated events and circumstances may occur. Therefore, the actual results achieved during the projection period will vary from the projections and the variations may be material. The budget and projection information, and all other forward-looking statements in this Appendix A, are based on current expectations and are not intended as representations of facts or guarantees of future results.

The COVID-19 outbreak is a significant recent development that is currently materially adversely affecting global, national, State, and local economic activity and prospects. Because of the unprecedented nature of the COVID-19 pandemic, historical data may not be an accurate predictor of future performance. Accordingly, any trends that may be suggested by historical data and budgets or projections described herein which pre-date the onset of the COVID-19 emergency or do not include information regarding its impact should be considered in light of a possible or probable negative impact of COVID-19. Moreover, the COVID-19 pandemic is ongoing and possible future impacts involve many developing and unknown outcomes, several of which are identified in the discussion included under “INTRODUCTION- COVID-19 Pandemic.”

As discussed under “INTRODUCTION–COVID-19 Pandemic,” Metropolitan modified certain assumptions made in its preliminary biennial budget as initially presented to the Board in February 2020 following the onset of the COVID-19 outbreak to consider certain then-anticipated effects of COVID-19, primarily potential effects on the regional economy, financial impacts to member agencies and impacts on construction schedules and timing of capital expenditures. The biennial budget for fiscal years 2020-21 and 2021-22, and water rates and charges for calendar years 2021 and 2022 as adopted by the Board on April 14, 2020, reflect these adjustments. In recognition of the changed circumstances and the ongoing uncertainties related to COVID-19 (including those referenced above), as was contemplated in connection with its approval of the biennial budget for fiscal years 2020-21 and 2021-22, Metropolitan’s Board reviewed the adopted budget and rates in September 2020 to consider further impacts resulting from the COVID-19 crisis.

As noted herein, the financial projection for fiscal year 2020-21 reflects revised projections based on results through November 2020, and the financial projections for fiscal years 2021-22 through 2024-25 reflect the biennial budget for fiscal years 2020-21 and 2021-22 and ten-year financial forecast provided therein. The financial projections include Metropolitan’s share of the forecasted costs associated with the planning of a single tunnel Bay-Delta conveyance project. See “METROPOLITAN’S WATER SUPPLY–State Water Project –Bay-Delta Proceedings Affecting State Water Project – Bay-Delta Planning Activities; Delta Conveyance” in this Appendix A.

Metropolitan’s resource planning projections are developed using a comprehensive analytical process that incorporates demographic growth projections from recognized regional planning entities, historical and projected data acquired through coordination with local agencies, and the use of generally accepted empirical and analytical methodologies. See “METROPOLITAN’S WATER SUPPLY–Integrated Water Resources Plan” in this Appendix A. Due to the variability of supplemental wholesale water transactions and unpredictability of future hydrologic conditions, projections of the volume of annual water transactions are based on projections in Metropolitan’s latest Board adopted Integrated Resources Plan, the 2015 IRP Update and recently recalibrated by Metropolitan’s Water Resource Management for the biennial budget for fiscal years 2020-21 and 2021-22 and ten-year financial forecast provided therein.

Nevertheless, Metropolitan’s assumptions have been questioned by directors representing SDCWA on Metropolitan’s Board. Metropolitan has reviewed SDCWA’s concerns and, while recognizing that

assumptions may vary, believes that the estimates and assumptions that support Metropolitan's projections are reasonable based upon history, experience and other factors as described herein.

Metropolitan's projections of the level of water transactions are the result of a comprehensive retail demand, conservation, and local supply estimation process, including supply projections from member agencies and other water providers within Metropolitan's service area. Retail demands for water are estimated with a model driven by projections of relevant demographics provided by SCAG and SANDAG. Retail demands are adjusted downward for conservation savings and local supplies, with the remainder being the estimated demand for Metropolitan supplies. Conservation savings estimates include all conservation programs in place to date as well as estimates of future conservation program goals outlined in the 2015 IRP Update. See "CONSERVATION AND WATER SHORTAGE MEASURES" in this Appendix A. Local supplies include water produced by local agencies from various sources including but not limited to groundwater, surface water, locally-owned imported supplies, recycled water, and seawater desalination (see "REGIONAL WATER RESOURCES" in this Appendix A). For additional description of Metropolitan's water transactions projections, see "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A.

The water transactions projections used to determine water rates and charges assume an average year hydrology. Actual water transactions are likely to vary from projections. As shown in the chart entitled "Historical Water Transactions" below, transactions can vary significantly from average and demonstrates the degree to which Metropolitan's commitments to meet supplemental demands can impact transactions. In years when actual transactions exceed projections, the revenues from water transactions during the fiscal year will exceed budget, potentially resulting in an increase in financial reserves. In years when actual transactions are less than projections, Metropolitan uses various tools to manage reductions in revenues, such as reducing expenses below budgeted levels, reducing funding of capital from revenues, and drawing on reserves. See "METROPOLITAN REVENUES—Financial Reserve Policy" in this Appendix A. Metropolitan considers actual transactions, revenues and expenses, and financial reserve balances in setting rates for future fiscal years.

Projections in the following table reflect revised projections for fiscal year 2020-21 based on results through November 2020. Financial projections for fiscal years 2021-22 through 2024-25 reflect the biennial budget for fiscal year 2020-21 and 2021-22 and ten-year financial forecast provided therein. This includes the issuance of \$585 million of bonds for fiscal years 2020-21 through 2024-25 to finance the CIP. See "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES" and "CAPITAL INVESTMENT PLAN—Capital Investment Plan Financing" in this Appendix A.

Water transactions with member agencies were 1.37 million acre-feet in fiscal year 2019-20. Water transactions with member agencies are projected to be 1.48 million acre-feet for fiscal year 2020-21, 1.60 million acre-feet for fiscal years 2021-22 and 2022-23, 1.64 million acre-feet for fiscal year 2023-24, and 1.69 million acre-feet for fiscal year 2024-25. Rates and charges increased by 3.0 percent on January 1, 2021 and will increase by 4.0 percent on January 1, 2022. Rates and charges are projected to increase 5.0 percent for each of calendar years 2023 and 2024, and 4.0 percent for calendar year 2025. Actual rates and charges to be effective in 2023 and thereafter are subject to adoption by Metropolitan's Board.

The projections were prepared by Metropolitan and have not been reviewed by independent certified public accountants or any entity other than Metropolitan. Dollar amounts are rounded.

**HISTORICAL AND PROJECTED REVENUES AND EXPENSES<sup>(a)</sup>**  
**Fiscal Years Ended June 30**  
**(Dollars in Millions)**

	Actual				Projected				
	2017	2018	2019	2020	2021	2022	2023	2024	2025
Water Revenues <sup>(b)</sup>	\$1,151	\$1,285	\$1,149	\$1,188	\$1,328	\$1,476	\$1,542	\$1,667	\$1,793
Additional Revenue Sources <sup>(c)</sup>	184	172	170	165	165	175	183	189	202
<b>Total Operating Revenues</b>	<b>1,335</b>	<b>1,457</b>	<b>1,319</b>	<b>1,353</b>	<b>1,493</b>	<b>1,651</b>	<b>1,725</b>	<b>1,856</b>	<b>1,995</b>
O&M, CRA Power and Water Transfer Costs <sup>(d)</sup>	(559)	(568)	(569)	(642)	(710)	(750)	(796)	(847)	(877)
Total SWC OMP&R and Power Costs <sup>(e)</sup>	(368)	(395)	(347)	(384)	(424)	(513)	(546)	(507)	(529)
<b>Total Operation and Maintenance</b>	<b>(927)</b>	<b>(963)</b>	<b>(916)</b>	<b>(1,026)</b>	<b>(1,134)</b>	<b>(1,263)</b>	<b>(1,342)</b>	<b>(1,354)</b>	<b>(1,406)</b>
<b>Net Operating Revenues</b>	<b>\$ 408</b>	<b>\$ 494</b>	<b>\$ 403</b>	<b>\$ 327</b>	<b>\$ 359</b>	<b>\$ 388</b>	<b>\$ 383</b>	<b>\$ 502</b>	<b>\$ 589</b>
Miscellaneous Revenue <sup>(f)</sup>	18	27	22	14	8	26	27	27	28
Transfer from Reserve Funds <sup>(g)</sup>	33	1	--	--	--	--	--	--	--
Sales of Hydroelectric Power <sup>(h)</sup>	21	24	18	16	15	22	23	14	14
Interest on Investments <sup>(i)</sup>	4	8	34	20	18	18	18	18	19
<b>Adjusted Net Operating Revenues<sup>(j)</sup></b>	<b>484</b>	<b>554</b>	<b>477</b>	<b>377</b>	<b>400</b>	<b>454</b>	<b>451</b>	<b>561</b>	<b>650</b>
Senior and Subordinate Obligations <sup>(k)</sup>	(308)	(340)	(333)	(272)	(279)	(298)	(306)	(323)	(320)
<b>Funds Available from Operations</b>	<b>\$ 176</b>	<b>\$ 214</b>	<b>\$ 144</b>	<b>\$ 105</b>	<b>\$ 121</b>	<b>\$ 156</b>	<b>\$ 145</b>	<b>\$ 238</b>	<b>\$ 330</b>
<b>Debt Service Coverage on all Senior and Subordinate Bonds<sup>(l)</sup></b>	<b>1.57</b>	<b>1.63</b>	<b>1.43</b>	<b>1.39</b>	<b>1.43</b>	<b>1.52</b>	<b>1.47</b>	<b>1.74</b>	<b>2.03</b>
<b>Funds Available from Operations</b>	<b>\$ 176</b>	<b>\$ 214</b>	<b>\$ 144</b>	<b>\$ 105</b>	<b>\$ 121</b>	<b>\$ 156</b>	<b>\$ 145</b>	<b>\$ 238</b>	<b>\$ 330</b>
Other Revenues (Expenses)	(4)	(5)	(6)	(6)	(7)	(7)	(7)	(8)	(8)
Pay-As-You Go Construction	(132)	(98)	(128)	(39)	(110)	(135)	(180)	(180)	(210)
Pay-As-You Go Funded from Replacement & Refurbishment Fund Reserves	1	1	--	1	--	--	--	--	--
<b>Total SWC Capital Costs Paid from Current Year Operations</b>	<b>(45)</b>	<b>(21)</b>	<b>(4)</b>	<b>(1)</b>	<b>1</b>	<b>(10)</b>	<b>12</b>	<b>(8)</b>	<b>(24)</b>
<b>Remaining Funds Available from Operations</b>	<b>(4)</b>	<b>91</b>	<b>6</b>	<b>60</b>	<b>5</b>	<b>4</b>	<b>(30)</b>	<b>42</b>	<b>88</b>
Fixed Charge Coverage <sup>(m)</sup>	1.37	1.53	1.42	1.38	1.44	1.47	1.53	1.69	1.89
Property Taxes	116	131	145	147	140	140	140	140	140
General Obligation Bonds Debt Service	(22)	(20)	(14)	(13)	(7)	(8)	(2)	(2)	(2)
SWC Capital Costs Paid from Taxes	(94)	(111)	(131)	(134)	(133)	(132)	(138)	(138)	(138)
<b>Net Funds Available from Current Year</b>	<b>\$ (4)</b>	<b>\$ 91</b>	<b>\$ 6</b>	<b>\$ 60</b>	<b>\$ 5</b>	<b>\$ 4</b>	<b>\$ (30)</b>	<b>\$ 42</b>	<b>\$ 88</b>

Source: Metropolitan.

(Footnotes on next page)



(Footnotes to table on prior page)

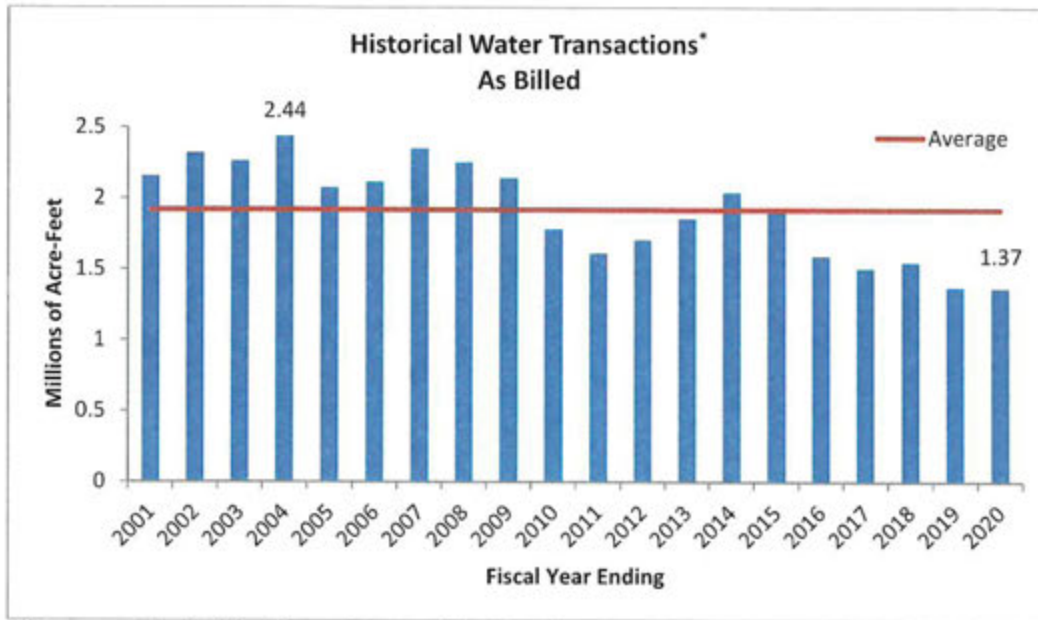
- (a) Unaudited. Prepared on a modified accrual basis. Projected revenues and expenses in fiscal year 2020-21 are based on results through November 2020 and revised from the projections provided in the adopted biennial budget for fiscal years 2020-21 and 2021-22. Projections for fiscal year 2021-22 through fiscal year 2024-25 are based on assumptions and estimates used in the biennial budget for fiscal years 2020-21 and 2021-22 and ten-year financial forecast provided therein, and reflect the projected issuance of additional bonds. See "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A.
- (b) Water Revenues include revenues from water sales, exchanges, and wheeling. During the fiscal years ended June 30, 2018 through June 30, 2020, annual water transactions with member agencies (in acre-feet) were 1.55 million, 1.37 million, and 1.37 million, respectively. See the table entitled "Summary of Water Transactions and Revenues" under "METROPOLITAN REVENUES—Water Revenues" in this Appendix A. The water transactions projections (in acre-feet) are 1.48 million acre-feet for fiscal year 2020-21, 1.60 million acre-feet for fiscal years 2021-22 and 2022-23, 1.64 million acre-feet for fiscal year 2023-24, and 1.69 million acre-feet for fiscal year 2024-25. Projections reflect adopted overall rate and charge increases of 3.0 percent effective on January 1, 2021 and 4.0 percent effective on January 1, 2022. Rates and charges are projected to increase an average of 5.0 percent in each of calendar years 2023 and 2024, and an average of 4.0 percent for calendar year 2025, subject to adoption by Metropolitan's Board. See "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A.
- (c) Includes revenues from water standby, readiness-to-serve, and capacity charges. The term Operating Revenues excludes *ad valorem* taxes. See "METROPOLITAN REVENUES—Other Charges" in this Appendix A.
- (d) Water Transfer Costs and Regional Recycled Water Program planning costs (described under "REGIONAL WATER RESOURCES—Local Water Supplies – Recycled Water-Metropolitan Regional Recycled Water Program") are included in operation and maintenance expenses for purposes of calculating the debt service coverage on all Obligations.
- (e) Includes on- and off-aqueduct power and operation, maintenance, power and replacement costs payable under the State Water Contract and Bay-Delta conveyance planning costs. See "METROPOLITAN EXPENSES—State Water Contract Obligations" in this Appendix A. See also "METROPOLITAN'S WATER SUPPLY—State Water Project –Bay-Delta Proceedings Affecting State Water Project – Bay-Delta Planning Activities; Delta Conveyance" in this Appendix A.
- (f) May include lease and rental net proceeds, net proceeds from sale of surplus property, reimbursements, and historically, federal interest subsidy payments for Build America Bonds.
- (g) Reflects transfers from the Water Management Fund, the Water Stewardship Fund, and the Water Rate Stabilization Fund, of \$33 million in fiscal year 2016-17, and \$1 million in fiscal year 2017-18, to fund a like amount of costs for conservation and supply programs. See "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A.
- (h) Includes CRA power sales.
- (i) Does not include interest applicable to Bond Construction Funds, the Excess Earnings Funds, other trust funds and the Deferred Compensation Trust Fund.
- (j) Adjusted Net Operating Revenues is the sum of all available revenues that the revenue bond resolutions specify may be considered by Metropolitan in setting rates and issuing additional Senior Revenue Bonds and Senior Parity Obligations and Subordinate Revenue Bonds and Subordinate Parity Obligations.
- (k) Includes debt service on outstanding Senior Revenue Bonds, Senior Parity Obligations, Subordinate Revenue Bonds, Subordinate Parity Obligations, and additional Revenue Bonds (projected). Assumes issuance of approximately \$255 million in additional Revenue Bonds in fiscal year 2020 21, approximately \$120 million in each of fiscal years 2022 23 and 2023-24, and approximately \$90 million in fiscal year 2024 25. Fiscal year 2017-18 debt service increased by \$15.3 million for debt service prepaid through bond refunding transactions in June 2018, rather than on July 1, 2018 and fiscal year 2018-19 debt service is therefore reduced by \$15.3 million. Fiscal year 2018-19 debt service increased by \$28.5 million for debt service prepaid in June 2019, rather than on July 1, 2019 and fiscal year 2019-20 debt service is therefore reduced by \$28.5 million. See "CAPITAL INVESTMENT PLAN—Capital Investment Plan Financing" in this Appendix A.
- (l) Adjusted Net Operating Revenues, divided by the sum of debt service on outstanding Senior Revenue Bonds, Senior Parity Obligations, Subordinate Revenue Bonds and Subordinate Parity Obligations, including the subordinate lien California Safe Drinking Water Revolving Fund Loan (prior to its discharge in 2017) and projected Revenue Bonds. See "METROPOLITAN EXPENSES—Outstanding Senior Revenue Bonds and Senior Parity Obligations" and "—Outstanding Subordinate Revenue Bonds and Subordinate Parity Obligations" in this Appendix A.
- (m) Adjusted Net Operating Revenues, divided by the sum of State Water Contract capital costs paid from current year operations and debt service on outstanding Senior Revenue Bonds, Senior Parity Obligations, Subordinate Revenue Bonds and Subordinate Parity Obligations, including the subordinate lien California Safe Drinking Water Revolving Fund Loan (prior to its discharge in 2017) and additional Revenue Bonds (projected).

## MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES

### Water Transactions Projections

The water transactions with member agencies in the table above for fiscal year 2019-20 were 1.37 million acre-feet. The water transactions forecast is 1.48 million acre-feet for fiscal year 2020-21 (reflecting the revised projections based on results through November 2020), and 1.60 million acre-feet for fiscal years 2021-22 and 2022-23, 1.64 million acre-feet for fiscal year 2023-24, and 1.69 million acre-feet for fiscal year 2024-25, consistent with the biennial budget and ten-year financial forecast. For purposes of comparison, Metropolitan's highest level of water transactions during the past 20 fiscal years was approximately 2.44 million acre-feet in fiscal year 2003-04 and the lowest was 1.37 million acre-feet in fiscal

year 2019-20. The chart below shows the volume of water transactions with member agencies over the last 20 fiscal years.



\*Water transactions include sales, exchanges, and wheeling with member agencies.

### Water Revenues

Metropolitan relies on revenues from water transactions for about 75 percent of its total revenues. In adopting the budget and rates and charges for each fiscal year, Metropolitan’s Board reviews the anticipated revenue requirements and projected water transactions to determine the rates necessary to produce the required revenues to be derived from water transactions during the fiscal year. Metropolitan sets rates and charges estimated to provide operating revenues sufficient, with other sources of funds, to provide for payment of its expenses. See “HISTORICAL AND PROJECTED REVENUES AND EXPENSES” in this Appendix A.

Metropolitan’s Board has adopted annual increases in water rates each year beginning with the rates effective January 1, 2004. See “METROPOLITAN REVENUES–Rate Structure” and “–Classes of Water Service” in this Appendix A. On April 14, 2020, the Board adopted average increases in rate and charges of 3.0 percent, to become effective on January 1, 2021, and 4.0 percent, to become effective on January 1, 2022. Rates and charges are projected to increase 5.0 percent for each of calendar years 2023 and 2024, and 4.0 percent for calendar year 2025. Actual rates and charges to be effective in 2023 and thereafter are subject to adoption by Metropolitan’s Board.

### Projected Fiscal Year 2020-21 Results

Projections for fiscal year 2020-21, in the table above, are revised from the projections adopted in the fiscal year 2020-21 and 2021-22 biennial budget and based on results through November 2020. Financial projections for fiscal years 2021-22 through 2024-25 are reflected in the fiscal year 2020-21 and 2021-22 biennial budget and ten-year financial forecast provided therein. The fiscal year 2020-21 and 2021-22 biennial budget and rates set the stage for predictable and reasonable rate increases over the ten-year planning period, with Board adopted overall rate increases of 3.0 percent for calendar year 2021 and 4.0 percent for calendar year 2022. The fiscal year 2020-21 and 2021-22 biennial budget and ten-year financial forecast includes rate increases of 5.0 percent for each of calendar years 2023 and 2024, and

4.0 percent for calendar year 2025. Actual rates and charges to be effective in 2023 and thereafter are subject to adoption by Metropolitan's Board as part of the biennial budget process, at which point the ten-year forecast will be updated as well. Increases in rates and charges reflect the impact of reduced water transactions projections, increasing operations and maintenance costs, and increasing State Water Project costs, when compared to prior fiscal years.

Operation and maintenance expenses in fiscal year 2020-21 are projected to be \$1,134 million, which represents approximately 68.1 percent of total costs. These expenses include the costs of labor, electrical power, materials and supplies of both Metropolitan and its contractual share of the State Water Project. Metropolitan's operation and maintenance expenses are projected to be \$96 million under budget in fiscal year 2020-21. Comparatively, operations and maintenance expenses in fiscal year 2019-20 were \$1,026 million, which represents approximately 69.0 percent of total costs. Overall, projected expenses for the twelve months ending June 30, 2021 are \$1.7 billion. This is \$112 million, or 6.3 percent, less than budgeted expenses.

Fiscal year 2020-21 revenue bond debt service coverage is projected to be 1.43x and fixed charge coverage to be 1.44x. Fiscal year 2020-21 capital expenditures, currently estimated at \$304.6 million, will be partially funded by the proceeds of bonds issued for Fiscal Year 2020-21 for such purpose and the remainder from pay-as-you-go funding. Metropolitan's unrestricted reserves are projected to be approximately \$429 million at June 30, 2021. See "METROPOLITAN REVENUES—Financial Reserve Policy" in this Appendix A. This amount does not include funds held in the Exchange Agreement Set-Aside Fund.

As discussed under "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" and noted above, projections for fiscal year 2020-21 are based on results through November 2020. Metropolitan's biennial budget for fiscal years 2020-21 and 2021-22, adopted by the Board on April 14, 2020, and the financial projections for fiscal years 2020-21 through 2024-25 included in the ten-year financial forecast provided therein, reflect adjustments made to the underlying assumptions to consider certain then-identified potential effects of the COVID-19 outbreak. Metropolitan is continuing to monitor the pandemic but is not able to fully predict the effect it will have on Metropolitan's financial performance or operations. Metropolitan's financial results during the fiscal years 2020-21 through 2024-25 projection period may be impacted by subsequent developments relating to the COVID-19 pandemic and its consequences. Metropolitan's Board action on April 14, 2020 to adopt the biennial budget for fiscal years 2020-21 and 2021-22, and water rates and charges for calendar years 2021 and 2022, included a review of the adopted budget and rates in September 2020 to consider further impacts resulting from the COVID-19 crisis. In September 2020, the Board determined to maintain the previously adopted rates and charges for calendar years 2021 and 2022. Among other things, at that time, the Board took certain other actions, including approving cost containment measures for fiscal years 2020-21 and 2021-22, and directing staff to develop a payment deferral program for member agencies that record and report significant customer payment delinquencies and likewise grant deferrals to their customers; evaluate potential new revenue-generating programs; and place a moratorium on on-emergency unbudgeted spending.

See also the "Management's Discussion and Analysis" contained in APPENDIX B—"THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA INDEPENDENT AUDITORS' REPORT AND BASIC FINANCIAL STATEMENTS FOR FISCAL YEARS ENDED JUNE 30, 2020 AND JUNE 30, 2019 AND BASIC FINANCIAL STATEMENTS FOR THE THREE MONTHS ENDED SEPTEMBER 30, 2020 AND 2019 (UNAUDITED)."

## Appendix G

### Water Supply Assessment Checklist

### Water Supply Assessment Checklist

Water Code Section	Water Supply Assessment Content	Page # in WSA
10910(c)(2)	Incorporate data from UWMP.	1-37
10910(d)(1)	Identification of existing water supply entitlements, water rights, or water service contracts relevant to identified water supply for proposed project, and description of quantity of water received in prior years.	22-37
10910(d)(2)(A)	Written contracts or other proof of entitlement to an identified water supply.	22-37
10910(d)(2)(B)	Capital outlay program for financing the delivery of a water supply that has been adopted.	36
10910(d)(2)(C)	Federal, state, and local permits for construction of necessary infrastructure associated with delivering the water supply.	11-36
10910(d)(2)(D)	Any necessary regulatory approval to deliver/convey the water supply.	13-36
10910(f)(1)	Review of any information contained in the UWMP relevant to the identified water supply for the proposed project.	1-37
10910(f)(2)	Description of any groundwater basin(s) from which proposed project will be supplied. For basins with adjudicated groundwater pumping rights, include a copy of the order/decreed adopted by the court or the board and a description of quantity of groundwater public water system has the legal right to pump under the order/decreed.	19-21, 24-26 Appendix D
10910(f)(3)	Description and analysis of amount and location of groundwater pumped for the past 5 years from any groundwater basin from which the proposed project will be supplied.	24-26
10910(f)(4)	Description and analysis of amount and location of groundwater that is projected to be pumped from any basin to provided water to the proposed project.	19-21, 24-26
10910(f)(5)	Analysis of sufficiency of groundwater from the basins from which the proposed project will be supplied to meet projected water demand of the proposed project.	19-21, 24-26