FOURTH & CENTRAL
UTILITY INFRASTRUCTURE TECHNICAL REPORT: WATER, WASTEWATER, AND ENERGY
400 CENTRAL AVENUE, LOS ANGELES
MAY 9, 2023

PREPARED BY:

KPFF Consulting Engineers

700 S Flower Street, Suite 2100

Los Angeles, CA 90017

(213) 418-0201

Table of Contents

1. INTRODUCTION 1
   1.1. PROJECT DESCRIPTION 1
   1.2. SCOPE OF WORK 1
2. REGULATORY FRAMEWORK 1
   2.1. WATER 1
   2.2. WASTEWATER 2
   2.3. ENERGY 2
3. ENVIRONMENTAL SETTING 6
   3.1. WATER 6
   3.2. WASTEWATER 6
   3.3. ENERGY 7
4. SIGNIFICANCE THRESHOLDS 8
   4.1. WATER 8
   4.2. WASTEWATER 9
   4.3. ENERGY 9
5. METHODOLOGY 10
   5.1. WATER 10
   5.2. WASTEWATER 11
   5.3. ENERGY 11
6. PROJECT IMPACTS 11
   6.1. CONSTRUCTION 11
      6.1.1. WATER 11
      6.1.2. WASTEWATER 12
      6.1.3. ENERGY 12
   6.2. OPERATION 13
      6.2.1. WATER 13
      6.2.2. WASTEWATER 16
      6.2.3. ENERGY 17
7. LEVEL OF SIGNIFICANCE 18

Appendix

Exhibit 1- LADWP Information of Fire Flow Availability Results

Exhibit 2- LADWP Water Upgrades and Cost Estimate

Exhibit 3- LADWP SAR Results: Central Avenue, Alameda Street.

Exhibit 4- Approved LADWP WSA

Exhibit 5- City of Los Angeles "Sewer Capacity Availability Request" (SCAR) Results

Exhibit 6- City of Los Angeles Sewer "Will Serve" Letter

Exhibit 7- LADWP Power "Will Serve" Letter

Exhibit 8- SoCal Gas "Will Serve" Letter

Exhibit 9- Fourth & Central Operational Energy Memorandum by ESA

Figures

Figure 1 – Existing Utility Exhibit

1. INTRODUCTION

1.1. PROJECT DESCRIPTION

The Fourth & Central Project (Project) would generally be located at 400 South Central Avenue and consists of the redevelopment of three distinct sites (North, South, and West Sites) of approximately 7.6-acre (333,602 square foot) for 10 distinct buildings across all sites to serve as residential, office, restaurant/retail, and hotel uses. The Project buildings would be an all-electric design with no natural gas building infrastructure. The Project would require demolition of the existing surface parking and cold storage facilities from the West and South Sites, respectively and adaptively reuse a portion of six-story cold storage building on the North Site. The Project would include: 1,521 residential units, including affordable housing units, totaling approximately 1,687,189 sf; approximately 420,394 sf of office uses; approximately 68,852 sf of restaurant uses; 61,217 sf of residential amenities; 45,266 sf of retail uses; and 68 hotel rooms (74,484 sf of hotel floor area). The overall floor area also includes approximately 237,127 sf of "covered open space," which includes outside areas that have an over-hang or roof, such as building entrances and the covering over the hotel courtyard. The Project would include approximately 105,218 sf of publicly accessible open space, including paseos passing between S. Central Avenue and S. Alameda Street, plazas, and pocket parks within the North and South Sites. The proposed buildings would range in height from 2 to 44 stories, with a maximum height of approximately 497 feet. The Project would provide 2,475 vehicle parking spaces within subterranean parking (up to 4 levels) and podium parking, which accounts for reduced parking requirements from the inclusion of 742 bicycle parking spaces.

Overall, construction would include up to approximately 651,000 cubic yards (CY) of grading (cut), including 105,000 CY within the North Site, 534,000 CY in the South Site and 12,000 CY in the West Site, all of which would be exported from the Project Site. On the North Site, excavations would extend to approximately 57 feet below the ground surface (bgs) for the lowest foundations and approximately 64 feet bgs in isolated areas for elevator pits. On the South Site, excavations would extend to approximately 53 feet bgs for the lowest foundations and approximately 60 feet bgs in isolated areas for elevator pits. On the West Site, excavations would extend to approximately 22 feet bgs for the lowest foundations and approximately 29 feet bgs in isolated areas for elevator pits.

1.2. SCOPE OF WORK

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:

- Metropolitan Water District (MWD) official reports and policies as outlined in its Regional Urban Water Management Plan, Water Surplus and Drought Management Plan, Water Supply Allocation Plan, and Integrated Resources Plan.

- California Code of Regulations, 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.
- 2022 California Green Building Standards Code, CCR, Title 24, Part 11, adopted on January 1, 2023, 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.
- LADWP's 2020 UWMP outlines the City's long-term water resources management strategy. The 2020 UWMP was approved by the LADWP Board of Water and Power Commissioners in March 2021.
- 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.

Because the Project meets at least one of the criteria above, a WSA is required. A WSA was prepared for the Project and approved by LADWP after it determined there are adequate water supplies to meet the projected water demand associated with the Project. The Project's WSA approval letter can be found in Exhibit 4.

2.2. WASTEWATER

The City of Los Angeles (City) 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 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, an SSMP was prepared for the Hyperion Sanitary Sewer System pursuant to the State Water Resources Control Board's (SWRCB) May 2, 2006 Statewide General Waste Discharge Requirements.[1]

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 projects 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 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 planning period of 100 years.

In 2006 the City approved the *Integrated Resources Plan* (IRP), which incorporates a Wastewater Facilities Plan.[2] 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 2018, the City approved the *One Water LA 2040 Plan* which builds on the success of the Water IRP and extends the planning

---

1 City of Los Angeles Department of Public Works, Bureau of Sanitation, Sewer System Management Plan Hyperion Sanitary Sewer System, January 25, 2019.

2 City of Los Angeles, Department of Public Works, LA Sewers Website, Integrated Resources Plan Facilities Plan, Summary Report, December 2006.

horizon to year 2040.[3] 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.

2.3. ENERGY

2.3.1. ELECTRICITY

The *2017 Power Strategic Long-Term Resource Plan* (SLTRP)[4] document serves as a comprehensive 20-year roadmap that guides the LADWP power system in its efforts to supply reliable electricity in an environmentally responsible and cost-effective manner. The 2016 Power Integrated Resource Plan (IRP)[5], included a public outreach process and Advisory Committee that, along with a series of public outreach workshops, played an integral role in the development of the resource cases that were evaluated and in the final selection of the recommended resource case. Strong interest in the City Council's 100 percent renewable energy motion was communicated during 2016 year's public outreach process. In response, LADWP formed research partnerships and developed a robust stakeholder process in order to investigate the investments necessary to achieve a 100 percent clean energy future. Future SLTRPs will consider incorporating the findings of this study that are recommended within the 2050 timeframe. The 2017 SLTRP re-examines and expands its analysis on the 2016 IRP resource cases with updates in line with latest regulatory framework, and updates to case scenario assumptions that include a 65 percent Renewable Portfolio Standard (RPS), advanced energy efficiency, and higher levels of local solar, energy storage, and transportation electrification.

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. The 2017 SLTRP attempts to incorporate the latest interpretation of these major regulations and state laws.

2.3.2. NATURAL GAS

The *2022 California Gas Report*[6] 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 Decision D.95-01-039. The projections in the California Gas Report are for long-term planning and do not necessarily reflect the day-to-day operational plans of the utilities.

Utility-served, statewide natural gas demand is projected to decrease at an annual average rate of 1.1 percent per year through 2035. The decline is 0.1 percent faster than what had been projected in the 2020 California Gas Report. More aggressive energy efficiency and fuel substitution have accelerated the decline in forecasted throughput for the 2022 California Gas Report relative to the 2020 findings. In this report, fuel substitution refers to the conversion of all or a portion of existing

---

3 City of Los Angeles, Department of Public Works, LA Sanitation, One Water LA 2040 Plan, Executive Summary, April 2018.

4 LADWP, 2017 Final Power Strategic Long-Term Resource Plan, December 2017.

5 LADWP, 2016 Final Power Integrated Resource Plan, December 2016.

6 California Gas and Electric Utilities, 2022 California Gas Report, 2022.

energy uses from one fuel type to another with the goal of reducing greenhouse gas emissions such as replacing a gas water heater with an electric water heater.

The projected decline comes from less gas demand in the major market segment areas of residential, electric generation, commercial and wholesale markets. Total Statewide residential gas demand is projected to decrease at an annual average rate of 2.4 percent per year, a faster decline than the 1.7 percent annual rate of decline that had been forecasted in the 2020 California Gas Report. Electric generation demand is projected to decrease at an annual rate of 1.1 percent per year, which is a slightly less rapid rate than the 1.5 percent annual decline that had been forecasted in 2020. The statewide commercial demand is projected to decrease at an annual average rate of 1.8 percent per year, which is slightly more accelerated than the 1.5 percent annual decline from the 2020 California Gas Report. The aggregate statewide wholesale market segment is expected to decline at an annual average rate of 0.25 percent per year. The segments where growth in demand is expected are the natural gas vehicle (NGV) sector and the industrial market segments. The industrial market segment and the NGV sectors are expected to grow at an annual average rate of 0.16 percent and 2.3 percent per year over the forecast period.

There are several drivers of these declines across many of the key energy sectors. Aggressive energy efficiency programs and fuel substitution are expected to dampen gas demand in these sectors. Statewide efforts to minimize greenhouse gas (GHG) emissions are depressing electric generation demand through aggressive programs that pursue demand side reductions and the acquisition of preferred power generation resources that produce few or no carbon emissions. Nevertheless, for the foreseeable future, gas-fired generation and gas storage will continue to be important technologies that support long-term electric demand growth and growing integration of intermittent renewable resource generation.

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.[7]

On December 7th, 2022, the Los Angeles City Council approved ordinance 187714 requiring that all new buildings within city limits be constructed all-electric for building permits submitted after April 1, 2023 and June 1, 2023 for affordable housing projects. The ordinance will effectively reduce carbon emissions by reducing natural gas consumption and move towards more renewable energy sources.

[7] California Gas and Electric Utilities, 2022 California Gas Report, 2022.

3. ENVIRONMENTAL SETTING

3.1. WATER

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

3.1.1. REGIONAL

Primary sources of water for the LADWP service area are the Los Angeles Aqueducts (LAA), local groundwater, State Water Project (supplied by MWD), and Colorado River Aqueduct (supplied by MWD). Expansion in recycled water, or water reuse, is anticipated to play a significant role in the local supply strategy. Supplies from the LAA, State Water Project, and Colorado River Aqueduct are classified as imported because they are sourced from outside LADWP's service area. Many of LADWP's traditional water supply sources are becoming increasingly constrained due to hydrologic variability, environmental regulations, and groundwater basin contamination. To mitigate these impacts on supply resources, LADWP is continuing on the path towards sustainability by investing in conservation, water use efficiency, water recycling, stormwater capture, and local groundwater development and remediation, while also protecting its imported water supplies.[8]

3.1.2. LOCAL

LADWP maintains water infrastructure around the Project Site. Based on available record data and a water service map provided by LADWP, offsite underground water facilities in the Project vicinity (see Figure 1) consist of the following:

- **4th Street:** A 6-inch cast iron water main running through 4th Street.
- **Central Avenue:** There are two water mains in Central Avenue, one 30-inch cast iron pipe and one 16-inch cast iron pipe.
- **Gladys Avenue:** A 4-inch cast iron water main in Gladys Avenue.
- **Alameda Street:** A 12-inch cast iron water main in Alameda Street.

3.1.3. ON SITE

As described above, the Project Site is occupied by cold storage facilities that include warehouse and wholesale commercial buildings and associated office space, truck loading docks, and surface parking. The existing buildings on the Project Site total approximately 360,734 sf of floor area. Due to the increased project water demand, and the age, size and location of existing water laterals infrastructure, the existing water services are expected to be upgraded.

3.2. WASTEWATER

3.2.1. REGIONAL

[8] LADWP, 2020 Urban Water Management Plan, 2020.

The Los Angeles Bureau of Sanitation (LASAN) operates and maintains the wastewater treatment, reclamation and collection facilities serving most of the City incorporated areas as well as several other cities and unincorporated areas in the Los Angeles basin and San Fernando Valley. As stated above, the collection infrastructure consists of over 6,600 miles of local, trunk, mainline and major interceptor sewers, five major outfall sewers, and 46 pumping plants. The wastewater generated by the Project will ultimately flow 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 300 mgd.[9]

3.2.2. LOCAL

Sanitary sewer service to the Project Site from the surrounding streets is provided by the LASAN. There are multiple sanitary sewer mains surrounding the Project Site with estimated capacities from the online Navigate LA database. A 10-inch vitrified clay pipe (VCP) sewer main in Central Avenue and has a calculated capacity of 1.44 cfs. Two existing 20-inch VCP sewer mains in Alameda Street flows south and have a calculated capacity of 7.53 cfs and 8.17 cfs. These sewer mains connect to a network of sewer lines which ultimately convey wastewater to the HTP System.

3.2.3. ON SITE

There are several existing sewer laterals that connect to the existing buildings, due to the age, size and locations it is anticipated that all laterals will be upgraded to meet the demand of the Project.

3.3. ENERGY

3.3.1. ELECTRICITY

LADWP is responsible for providing power supply to the City while complying with Local, 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's 1.4 million residential and business customers as well as over 5,000 customers in the Owens Valley. LADWP has over 7,460 megawatts (MW) of generation capacity from a diverse mix of energy sources including renewable energy, natural gas, nuclear, hydropower, coal and other sources. The distribution network includes 6,800 miles of overhead distribution lines and 3,597 miles of underground distribution cables.

3.3.1.2. LOCAL

Based on available record drawings on Navigate LA and site observations by KPFF Consulting Engineers on July 9, 2020, existing LADWP power infrastructure around the Project Site includes overhead power on 4th Street, Central Avenue, Gladys Avenue and Alameda Street.

[9] City of Los Angeles Department of Public Works, Bureau of Sanitation, Sewer System Management Plan Hyperion Sanitary Sewer System, January 25, 2019.

3.3.1.3. ON-SITE

As described above, the Project Site is occupied by cold storage facilities that include warehouse and wholesale commercial buildings and associated office space, truck loading docks, and surface parking. The existing buildings on the Project Site total approximately 360,734 sf of floor area. Based on the available record drawings and site observations the current buildings are powered by overhead power.

3.3.2. NATURAL GAS

Southern California Gas Company (SoCalGas) 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.

3.3.2.1. REGIONAL

SoCalGas is the principal distributor of natural gas in Southern California, providing retail and wholesale customers with transportation, exchange and 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 and electric generation customers in Southern California. SoCalGas's natural gas system is the nation's largest natural gas distribution utility and serves a 20,000 square-mile area in Central and Southern California. The system supplies natural gas to 21.6 million customers through 5.9 million meters in more than 500 communities.

3.3.2.2. LOCAL

Based on substructure maps provided by the SoCalGas, existing SoCalGas infrastructure around the Project Site includes a 4-inch gas main in Central Avenue, a 6-inch and 10-inch gas main in Alameda Street, and a 0.75-inch gas main in Gladys Avenue.

3.3.2.3. ON-SITE

As described above, the Project Site is occupied by cold storage facilities that include warehouse and wholesale commercial buildings and associated office space, truck loading docks, and surface parking. The existing buildings on the Project Site total approximately 360,734 sf of floor area. Given that the Project will be all-electric the existing gas lateral connections will no longer be needed and will be capped and abandoned or removed.

4. SIGNIFICANCE THRESHOLDS

4.1. WATER

Appendix G of the 2019 CEQA Guidelines provides a set of sample questions that address impacts with regards to water. 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?

- Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

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

4.2. WASTEWATER

Appendix G of the 2019 CEQA Guidelines provides a set of sample questions that address impacts with regards to 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?

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

4.3. ENERGY

Appendix F of the 2019 CEQA Guidelines states that the potentially significant energy implications of a project, as well as its measures to reduce inefficient, wasteful, and unnecessary consumption of energy as noted in PRC Section 21100(b)(3), 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.

Mitigation measures, as noted in PRC Section 21100(b)(3), may include:

- Potential measures to reduce wasteful, inefficient and unnecessary consumption of energy during construction, operation, maintenance and/or removal;
- The potential of siting, orientation, and design to minimize energy consumption, including transportation energy, increase water conservation and reduce solid waste;
- The potential for reducing peak energy demand;
- Alternate fuels (particularly renewable ones) or energy systems;
- Energy conservation which could result from recycling efforts.

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 Appendix G of the State CEQA Guidelines. This methodology involves a review of the project's environmental setting, project impacts, cumulative impacts, and mitigation measures, if required.

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

The proposed water consumption is based on the WSA prepared by LADWP. The proposed fire water demand is based upon the maximum flow allowable through seven new 8-inch LADWP fire service meters on Central Avenue and three 8-inch fire service meters on Alameda Street.

LADWP performed a hydraulic analysis of their water system to determine if adequate fire flow is available from the fire hydrants surrounding the Project Site. LADWP's approach consists of analyzing their water system model in the vicinity of the Project Site. Based on the results, LADWP determines whether they can meet the Project fire hydrant flow needs based on existing infrastructure. Refer to section 6.2.1.2 and Exhibit 1 for the results of the Information of Fire Flow Availability Request (IFFAR).

In addition, LADWP performed a flow test to determine if sufficient water conveyance is available for the Project. LADWP's approach provides 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. Refer to section 6.2.1.2 and Exhibit 3 for the results of the Service Advisory Requests (SAR) for the Project.

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 Appendix G of the State CEQA Guidelines. This methodology involves a review of the project's environmental setting, project impacts, cumulative impacts, and mitigation measures, if required.

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

The LASAN, 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. The Bureau of Sanitation'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 5 for results of the LASAN preliminary analysis.

5.3. ENERGY

This report analyzes the potential impacts of the Project on existing energy infrastructure by comparing the estimated energy demand with the available capacity. Refer to section 6.2.3.1 and 6.2.3.2 and the will-serve letters from LADWP and SoCalGas (Exhibits 7 and 8) for the results.

In addition, potential energy impacts were analyzed by evaluating the energy demand and energy conserving features of the Project to determine whether the Project would involve the wasteful, inefficient, and unnecessary use of energy resources.

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 5,000 to 10,000 gallons per day (gpd). Because there is capacity in the existing water infrastructure as shown in the SAR and WSA (Exhibit 3 and 4) for the Project operation, estimated 572,911 gpd, 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 be less than significant.

The Project will require construction of new, on-site water distribution lines to serve the new buildings. Construction impacts associated with the installation of water distribution lines would primarily involve trenching in order to place the lines below surface. Installation of new water infrastructure will be limited to on-site water distribution, and minor off-site work associated with connections to the public main. No upgrades to public water mains are anticipated. 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 result in a temporary increase in wastewater generation as a result of construction workers on-site. Wastewater generation would occur incrementally throughout construction of the Project. However, such use would be temporary and nominal when compared with the Project Site wastewater generation in the existing condition. In addition, construction workers would typically utilize portable restrooms, which would not contribute to wastewater flows to the City's wastewater system. In the event there is an increase in wastewater flow during construction, this increase would be limited. Because there is capacity in the existing sewer infrastructure as shown in the SCAR (Exhibit 5) for the Project, this potential and limited increase is within the capacity of the existing wastewater facilities. Therefore, the Project construction impacts to the wastewater system would be less than significant.

The Project will require construction of new and upgraded on-site infrastructure to serve the new buildings. Construction impacts associated with wastewater infrastructure would primarily be confined to trenching for miscellaneous utility lines and 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 sewer main. Although no upgrades to the public sewer main are anticipated, minor off-site work is required in order to connect to the public sewer main. When considering impacts resulting from the installation of any required wastewater infrastructure, all impacts are of a short-term duration 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 Project. Typical uses include temporary power for lighting, equipment, construction trailers, etc. The demand would be supplied from existing electrical services within the Project Site, a new temporary service, or temporary mobile generators, which would not affect services to surrounding areas. The use of renewable energy sources during construction is not anticipated. Overall, demolition and construction activities would require minimal electrical 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.

Due to the type of equipment and vehicles that are used during construction, no natural gas usage is expected to occur. 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 upgrades would primarily be confined to trenching. Infrastructure improvements will comply with all applicable LADWP, and City requirements, which would ensure there is no impact to the existing electric system. Therefore, Project impacts on electric infrastructure associated with construction activities would be less than significant.

Construction impacts associated with the Project's gas would primarily be confined to trenching to cap the existing laterals and services. Infrastructure improvements will comply with all applicable SoCalGas, and City requirements, which would ensure there is no impact to the existing gas system. Therefore, Project impacts on gas 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 estimated operational demands for both fire suppression and domestic water are considered. Although domestic water demand is the Project's main contributor to water consumption in the long term, fire flow demands have a much greater instantaneous impact on infrastructure, and therefore are the primary means for analyzing infrastructure capacity. Conservative analysis for both fire suppression and domestic water flows has been completed by LADWP for the Project. See Exhibit 1 and Exhibit 3 for the results of the IFFAR and SAR, respectively.

6.2.1.2. FIRE WATER DEMAND

FIRE SPRINKLER SERVICE FLOWS

> 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 Los Angeles Fire Department review and approval during the design and permitting phase of the Project. Fire service flows to serve sprinkler systems in the new buildings has been estimated as the maximum allowable fire flow through new LADWP fire services. Based on Section 94.2020.0 of the LAMC that adopts by reference NFPA 14-2013 including Section 7.10.1.1.5 of the NFPA, the maximum allowable fire sprinkler demand for a fully or partially sprinklered building would be 1,250 gpm.

In addition, several LADWP SARs were submitted in order to determine if the existing public infrastructure could meet the private water demands of the Project. The SARs for the water mains adjacent to the Project (Exhibit 3) shows a static pressure of 61-64 pounds per square inch with a flow of 2,500 gpm can be delivered to the Project Site on Central Avenue with a residual pressure of 54-59 pounds per square inch. The SARs for the 12-inch water main along Alameda Street shows a static pressure of 62-64 pounds per square inch and that a flow of 2,500 gpm can be delivered to

the Project Site with a residual pressure of 52-55 pounds per square inch. Thus, the fire service flows shown in the SARs are compliant with the Fire Code. Fire service flows are different from fire hydrant flows, which are discussed below.

FIRE HYDRANT FLOWS

Based on fire flow standards set forth in Section 57.507.3 of the LAMC, the Project falls within the High Density Industrial and Commercial category, which has a required fire hydrant flow of 12,000 gpm available to any block from hydrants flowing simultaneously with a residual pressure of 20 pounds per square inch. This demand translates to a required hydrant flow of approximately 1,500 gpm each from the 8 existing fire hydrants. The completed IFFAR, attached as Exhibit 1, indicates that the closest 8 hydrants can provide 11,750 gpm. Thus, the Project Site currently does not have adequate fire hydrant flow available to demonstrate compliance with Section 57.507.3 of the LAMC. Accordingly, the existing shortage of fire hydrant flow required for the Project is considered to be a potentially significant impact, refer to section 6.2.1.3. below for the required water upgrades.

6.2.1.3. WATER IMPROVEMENTS

Analysis for both the Project's fire suppression and domestic water demands has been completed by LADWP in conjunction with existing conditions and forecasted growth. See Exhibit 1 for the results of the IFFAR and Exhibit 2 for the required water upgrades and Exhibit 3 for the SAR results, which demonstrate that adequate fire flow infrastructure capacity currently does not exist for the two hydrants (FH 9377 and FH 16418) located on Central Avenue and 4th Street.

Per LADWP's analysis, the Project will be required to construct the following improvements to the water infrastructure within the public right-of-way to ensure adequate water flow, pressure, and capacity will be available:

- Upgrade approximately 110 linear feet of the existing 6-inch line in 4th Street to an 8-inch line;
- Relocate the hydrant (FH 16418) to the north due to the proposed 4th Street dedication and reconnect it to the upsized 8-inch line; and
- Reconnect the hydrant (FH 9377) on the south to the upsized 8-inch line.

Construction impacts associated with the installation of water lines below surface would primarily involve trenching in order to place the water distribution lines below surface and reconnect water services.

With upgrades to the water line in 4th Street and relocated fire hydrants as required by LADWP to ensure the combined fire hydrant flow to the Project Site meets the 12,000-gpm minimum requirement required by Section 57.507.3 of the LAMC. With compliance with LAFD and LADWP requirements, fire flow impacts would be less than significant to water infrastructure.

6.2.1.4. DOMESTIC WATER DEMAND

Water consumption estimates have been prepared based on the WSA as approved by LADWP. Refer to the below table 1 from the approved WSA in exhibit 4.

TABLE I

FOURTH AND CENTRAL PROJECT CALCULATED TOTAL ADDITIONAL WATER DEMAND

Existing Use to be Removed[1]	Quantity	Unit			Existing Water Use to be Removed (gpd)	(af/y)
Cold Storage Facilities - Warehouse and associated offices[2]	360,734	sf			12,700	**14**
Existing to be Removed Total						

Proposed Use[1]	Quantity	Unit	Water Use Factor[3] (gpd/unit)	Base Demand (gpd)	Required Ordinances Water Savings[4] (gpd)	Proposed Water Demand (gpd)	(af/y)
Residential Studio - Building 2, 5, 7, 9, 10	428	du	75	32,100			
Residential 1 Bedroom - Building 2, 5, 6,7, 9, 10	720	du	110	79,200			
Residential 2 Bedroom - Building 2, 5,6, 7, 9, 10	323	du	150	48,450			
Residential 3 bedroom - Building 2	42	du	190	7,980			
Residential Live/Work - Building 7, 9	8	du	185	1,480			
Total Residential Units	1,521	du					
Base Demand Adjustment[5]				18,639			
Residential Units Total				**187,849**	**46,080**	**141,769**	**158.8**
Hotel - Building 6	68	room	120.00	8,160			
Base Demand Adjustment[5]				739			
Hotel Rooms Total				**8,899**	**971**	**7,928**	**8.88**
Gymnasium (Building 1,2,5,6,7,9,10)	11,000	sf	0.20	2,200			
Health Club (Building 1, 2, 5, 6,7,9,10)	8,000	sf	0.65	5,200			
Community room/Conference Rooms (Building 1, 2, 5,6,9,10)	41,360	sf	0.12	4,963			
Pet Grooming (Building 1,2,5,6,7,9,10)	3,500	sf	0.43	1,488			
Rooftop Terrace/Lounge Area with pool (Building 2,5,6,7,9)[o]	54,608	sf	0.05	2,730			
Residential Amenities							
Retail (Building 1, 2, 3, 4, 5, 6, 7, 8, 9)	45,266	sf	0.025	1,132			
Office (Building 3, 4, 8)	411,113	sf	0.12	49,334			
Restaurant (Building 1, 2,3, 4, 5, 6, 7,8 9 - seating area[7])	4,553	seats	30.00	136,598			
Hotel Bar (Building 6) [8]	36	seats	30.00	1,094			
Car Wash (Building 1,5,6,7,8,9,10)[9]	42	cars	40.00	1,680			
Base Demand Adjustment[5]				269			
Residential Amenities and Commercial Total				**206,687**	**6,427**	**200,260**	**224.34**
Landscaping and Pools[10]	60,189	sf		**5,995**	**2,864**	**3,131**	**3.51**
Covered Parking[11]	1,014,982	sf	0.02	**667**	**0**	**667**	**0.75**
Cooling Tower[12]	4,000	ton	19.31	**77,220**	**15,444**	**61,776**	**69.20**
		Proposed Subtotal		**487,317**	**71,786**	**415,531**	**465.49**
					Less Existing to be Removed Total	**-12,700**	**-14**
					Less Additional Conservation[13]	**-10,634**	**-12**
					Net Additional Water Demand	**392,197** Gpd	**439** af/y

[2] The existing cold storage facilities, which are warehouse and wholesale commercial buildings, will be demolished at the property. The Project intends to adaptively reuse the six-story building on the North Site, if feasible. Historical consumption was retrieved from water billing records from April 2017 to March 2022.

[3] 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.

[4] 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.

[5] 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.

[6] Rooftop Terrace/Lounge Area with pool is a residential amenity that contains an outdoor kitchen.

[7] Restaurant Space. Total Indoor and Outdoor Restaurant Floor Area is 68,299 sf. Indoor Restaurant Area is 55,822 sf and Outdoor Restaurant Area is 12,477 sf.

[8] Hotel Bar Floor Area is 547 sf.

[9] Car Wash Actual Water Use is 100 gallons/day as provided in the WSA Request Letter by the Applicant. AB 2230 (2012) requires 40 percent of the amount of water to be potable. Each Car Wash area is 600 sf; therefore, total floor area of car wash is 4,200 SF.

[10] Landscaping & pool/spa water use is estimated per California Code of Regulations Title 23. Division 2. Chapter 2.7. Model Water Efficient Landscape Ordinance. Residential pool areas is 5,261 sf. Total landscaping is 54,928 sf.

[11] 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. Covered parking includes Bicycle Parking/Repair area, and excludes car wash area of 4200 sf.

[12] The proposed project will use cooling towers for 8 of the 10 buildings. The cooling tower's total load is 4000 ton.

[13] 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

The approved WSA and SARs confirm that sufficient capacity is available for the Project. The Project proposes to connect to the existing mains in Central Avenue and Alameda Street.

6.2.2. WASTEWATER

6.2.2.1. SEWER GENERATION

The base estimated sewer flows were based on the BOS sewerage generation factors for commercial categories and are summarized in Table 2 below.

Table 2 – Estimated Proposed Wastewater Generation

Facility	Average Daily Flow (gpd)[(a)]	Unit	Quantity	Average Daily Wastewater (gpd)
Office Bldg. w/Cooling Tower	170	KGSF	403,715	68,632
Residential: Apt - Bachelor (a)	75	DU	436	32,700
Residential: Apt - 1 BDR (a) (o)	110	DU	720	79,200
Residential: Apt - 2 BDR (a) (o)	150	DU	323	48,450
Residential: Apt - 3 BDR (a) (o)	190	DU	42	7,980
Restaurant: Full Service Indoor Seat (a)	30	Seat	3,722	111,660
Restaurant: Full Service Outdoor Seat	30	Seat	833	24,990
Gymnasium: Basketball, Volleyball (k)	200	KGSF	11,000	2,200
Hotel: Use Guest Rooms Only (a)	120	Room	68	8,160

Bar: Cocktail, Fixed Set (a) (c)	15	Seat	37	555
Retail Area (less than 100,000 SF)	50	KGSF	45,266	1,132
Health Club/Spa (k)	650	KGSF	8,000	5,200
Lobby Retail Area (l)	50	KGSF	16,232	812
Car Wash: Hand Wash (b)	100	Actual	42	4,200
Bike Parking / Repair - Auto Parking	20	KGSF	1,200	24
Conference Room of Office Bldg.	120	KGSF	41,360	4,963
Pet Grooming (Barber Shop)	120	KGSF	3,500	420
Lounge (l)	50	KGSF	98,481	4,924
Pool	-	Total	182,077	182,077
			Proposed Total Flow	**588,278**

(a) The average daily flow based on BOS sewerage generation factors.

(b) Average daily water demand = Average daily flow x Quantity **(Exhibit 5 – Approved SCAR results are considered for the most conservative option).**

A SCAR was submitted to determine whether the existing public sewer infrastructure can accommodate the Project. The SCAR submitted shows an average wastewater flow of up to 588,278 gpd of which 65% will discharge to Central Avenue (382,381 gpd) and 35% will discharge to Alameda Street (205,897 gpd). As further discussed below, the existing design capacity of the Hyperion Service Area is approximately 550 mgd (consisting of 450 mgd at the Hyperion Treatment Plant, 80 mgd at the Donald C. Tillman Water Reclamation Plant, and 20 mgd at the Los Angeles–Glendale Water Reclamation Plant).[10] The Project's estimated increase in wastewater generation is approximately 0.588 MGD, which is less than one percent of the Hyperion Treatment Plant's capacity. Consequently, impacts on wastewater treatment capacity would be less than significant.

6.2.2.2. INFRASTRUCTURE CAPACITY

Based on information on NavigateLA, the capacity of the 10-inch VCP sewer main in Central Avenue is 1.44 cfs, and up to 382,381 gpd can enter the main per the SCAR, this is roughly 41.1% of the capacity of the sewer main in Central Avenue that the Project can discharge. The closest 20-inch VCP sewer main in Alameda Street flows south and has a calculated capacity of 7.53 cfs, and up to 205,897 gpd can enter the main per the SCAR, this is roughly 4.23% of the capacity of the main that is allowed to be discharged. The City of Los Angeles, Bureau of Engineering has also provided a "will serve" letter to discharge to the 10-inch line in Central Avenue and 20-inch in Alameda Street, see Exhibit 6. With the approved SCAR and adequate capacity in the adjacent sewer mains the Project's impact on the wastewater infrastructure would be less than significant.

[10] 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=oep8lwkld_4&_afrLoop=28344654751341747#! accessed February 16, 2023.

6.2.3. ENERGY

6.2.3.1. ELECTRICITY

The Project will increase the demand for electricity resources. Based on the Fourth & Central Operational Energy Memorandum by ESA[11], the estimated electrical load for the Project is 29,589.6 MWh/year, the existing uses-related electrical demand estimated at 6,542.8 MWh/year. Therefore, the Project-related net increase in annual electricity demand was estimated to be 23,046.8 MWh/year. 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, the estimated power requirement for this 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 (see Exhibit 7), therefore, impacts related to electrical services would be less than significant.

6.2.3.2. NATURAL GAS

The Project will increase the demand for natural gas resources. Based on the Fourth & Central Operational Energy Memorandum by ESA, the Project buildings would be an all-electric design with no natural gas building infrastructure, however a small portion of the on-road vehicles that may travel to and from the Project Site would be natural gas fueled, according to assumptions in the regional vehicle fleet and fuel data from the California Air Resources Board on-road vehicle emissions factor (EMFAC) model. Natural gas-fueled vehicles may be passenger vehicles, delivery trucks, refuse trucks, and other similar types of vehicles. The Project does not include the construction or operation of any new vehicle fueling stations. As shown in the Energy Memorandum, the Project-related annual natural gas consumption associated with on-road vehicles was estimated to be 2,830,007 cubic feet. The existing uses-related annual natural gas consumption found in the provided utility data was 407,786 cubic feet. Therefore, the Project-related increase in annual natural gas consumption was estimated to be 2,422,221 cubic feet, solely attributed to on-road vehicles.

Since the project will be all-electric and no natural gas infrastructure is anticipated to be used, the impacts related to gas services would be less than significant.

7. LEVEL OF SIGNIFICANCE

Based on the analysis contained in this report, no significant impacts have been identified for wastewater, or energy for this Project. While the SAR indicated adequate domestic and fire sprinkler service water pressure and flows are available to serve the Project, the IFFAR indicated that the Project Site currently does not have adequate fire hydrant flow available to demonstrate compliance with Section 57.507.3 of the LAMC, therefore impacts to water infrastructure are considered to be potentially significant and would require upgrades to the water main to satisfy the flow requirements. With the upgrades to the water line in 4th Street and the relocated fire hydrants as required by LADWP to ensure the combined fire hydrant flow to the Project Site meets the 12,000-gpm minimum requirement required by Section 57.507.3 of the LAMC. With compliance with LAFD and LADWP requirements, fire flow impacts would be less than significant to water infrastructure.

[11] Fourth & Central Operational Energy Memorandum by ESA dated February 16, 2023.

APPENDIX

EXHIBIT 1

City of Los Angeles

Los Angeles Department of Water and Power - Water System

INFORMATION OF FIRE FLOW AVAILABILITY

Water Service Map No.: 128-213 126-213

LAFD Fire Flow Requirement: 12,000 GPM available from any block flowing simultaneously

LAFD Signature:

Date Signed: 11/17/2022

Applicant: Rickard Severinsson

Company Name: KPFF Consulting Engineers

Address: 700 S Flower Street, Suite 2100, Los Angeles 90017

Telephone: (213) 418-0201

Email Address: rickard.severinsson@kpff.com

1 OF 3

	FH-9031	FH-16418	FH-9445
Location:	Central & Gladys	Central & 4th Street	Alameda & 4th Street
Distance from Neareast Pipe Location (feet):	28	25	21
Hydrant Size:	4D	4D	4D
Water Main Size (in):	16	6	12
Static Pressure (psi):	94	94	95
Residual Pressure (psi):	64	64	65
Flow at 20 psi (gpm):	1500	1350	1500

NOTE: Data obtained from hydraulic analysis using peak hour.

Remarks:

ECMR No. WO2022112018

IFFAR not approved. F-16418 and F-9377 cannot provide adequate flow at 20 psi

Main upgrade required to provide 12,000 GPM from 8 hydrants.

Water Purveyor: **Los Angeles Department of Water & Power** *Date:* 12/9/22

Signtature: *Title:* Civil Engineering Associate II

Requests must be made by submitting this completed application, along with a $271.00 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

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

EXHIBIT 1

City of Los Angeles

Los Angeles Department of Water and Power - Water System

INFORMATION OF FIRE FLOW AVAILABILITY

Water Service Map No.: 126-213 128-213

LAFD Fire Flow Requirement: 12,000 GPM available from any block flowing simultaneously

LAFD Signature: _____

Date Signed: 11/17/2022

Applicant: Rickard Severinsson

Company Name: KPFF Consulting Engineers

Address: 700 S Flower Street, Suite 2100, Los Angeles 90017

Telephone: (213) 418-0201

Email Address: rickard.severinsson@kpff.com

	FH-3841	FH-9377	FH-3837
Location:	Alameda (Midblock)	Central & 4th Street	Central & 5th Street
Distance from Neareast Pipe Location (feet):	27	13	38
Hydrant Size:	4D	2 1/2 x 4D	2 1/2 x 4D
Water Main Size (in):	8	6	8
Static Pressure (psi):	96	94	94
Residual Pressure (psi):	66	64	64
Flow at 20 psi (gpm):	1500	1400	1500

2 of 3

NOTE: Data obtained from hydraulic analysis using peak hour.

Remarks: ECMR No. W2022112018

Water Purveyor: **Los Angeles Department of Water & Power** *Date:* _____

Signtature: _____ *Title:* _____

Requests must be made by submitting this completed application, along with a $271.00 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

NOV 22 2022

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

EXHIBIT 1

City of Los Angeles

Los Angeles Department of Water and Power - Water System

INFORMATION OF FIRE FLOW AVAILABILITY

126-216
Water Service Map No.: 128-213

LAFD Fire Flow Requirement: 12,000 GPM available from any block flowing simultaneously

LAFD Signature: _____

Date Signed: 11/17/2022

Applicant: Rickard Severinsson
Company Name: KPFF Consulting Engineers
Address: 700 S Flower Street, Suite 2100, Los Angeles 90017
Telephone: (213) 418-0201
Email Address: rickard.severinsson@kpff.com

	FH-9063	FH-9381	
Location:	Northeast corner of Alameda St and 5th St	Southwest corner of 4th St and Central Avenue	
Distance from Neareast Pipe Location (feet):	21	25	
Hydrant Size:	2 1/2 X 4D	4D	
Water Main Size (in):	12	16	
Static Pressure (psi):	96	94	
Residual Pressure (psi):	66	64	
Flow at 20 psi (gpm):	1500	1500	

3 of 3

NOTE: Data obtained from hydraulic analysis using peak hour.

Remarks: ECMR No. W2022112018

Water Purveyor: **Los Angeles Department of Water & Power** *Date:* _____

Signtature: _____ *Title:* _____

Requests must be made by submitting this completed application, along with a $271.00 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 DE

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

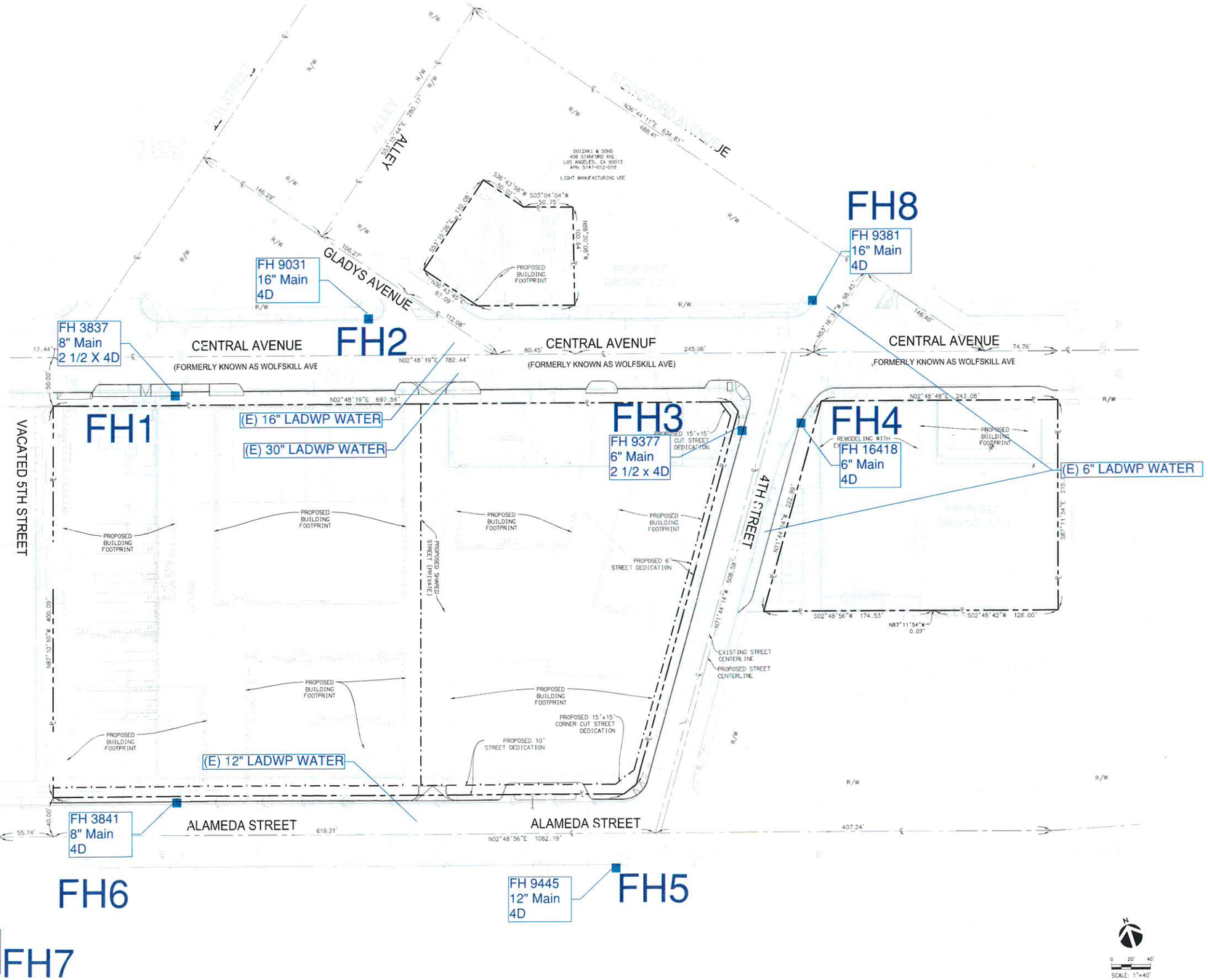
FIRE HYDRANT EXHIBIT

EXHIBIT 1

kpff 11/09/2022

LEGEND

(E) FIRE HYDRANTS



kpff
700 South Flower Street
Suite 2100
Los Angeles, CA 90017
O: 213.418.0201
F: 213.266.5294
www.kpff.com

CONSULTANTS

STAMP

REVISIONS

DATE	ISSUED FOR

DATE	04.07.21
PROJECT NUMBER	2000776
DESIGNED BY	RS
DRAWN BY	DJ
CHECKED BY	RS
SCALE	AS SPECIFIED

KEY MAP

PROJECT DESCRIPTION
FOURTH AND CENTRAL

LOS ANGELES, CA

DRAWING TITLE
STREET SECTIONS
PLAN VIEW

SHEET NUMBER (EXHIBIT NUMBER)
C1

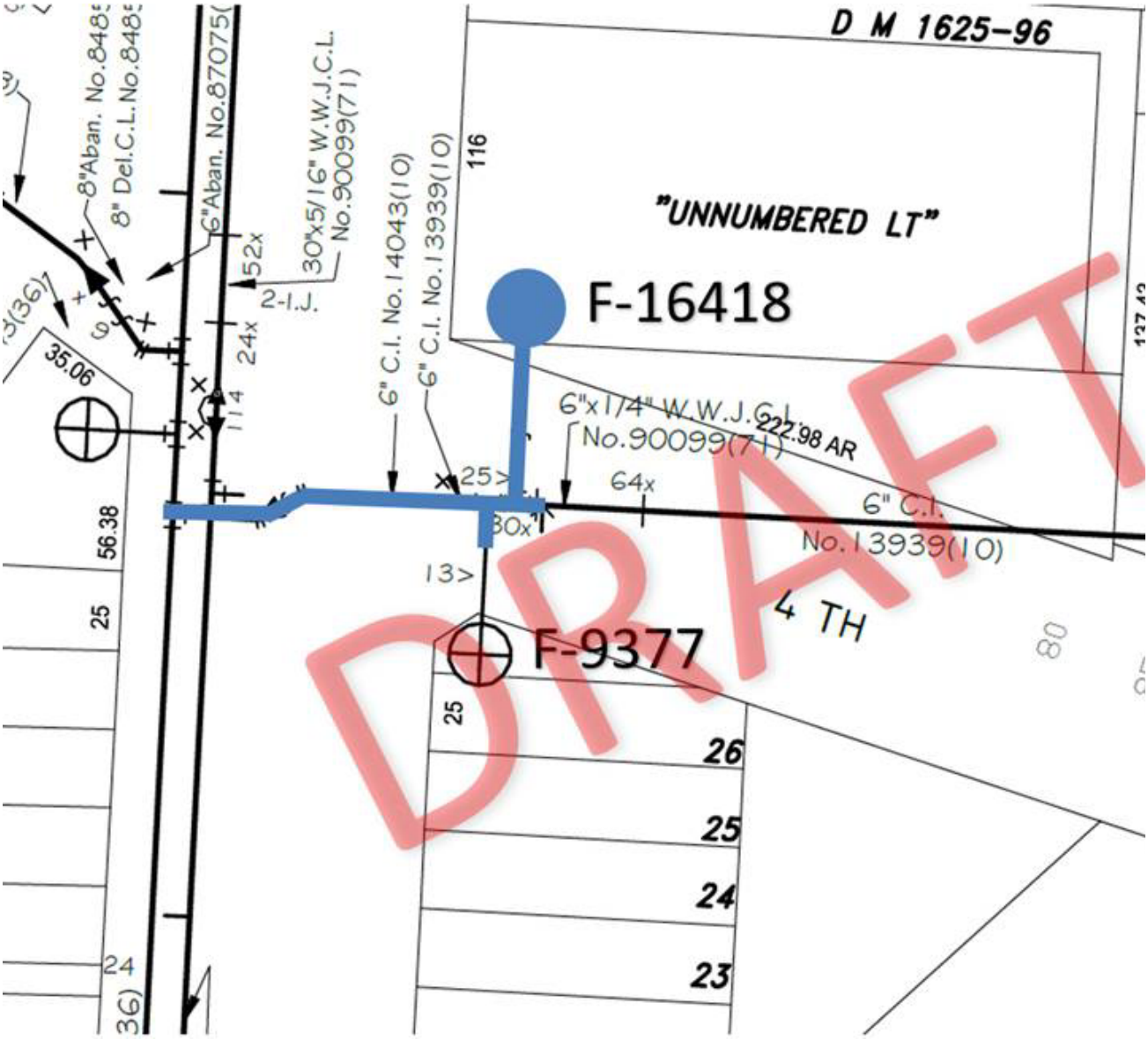
EXHIBIT 2 - LADWP Water Upgrades and Cost Estimate

Rickard Severinsson

From: Thi, David <David.Thi@ladwp.com>
Sent: Thursday, December 29, 2022 9:05 AM
To: Rickard Severinsson; Lam, Martin
Cc: Jeff Mindes
Subject: RE: [EXTERNAL] RE: IFFAR - 400 S Central Ave

Hello Rickard,

Below is a rough sketch of the work needed to approve your IFFAR: approximately 110 feet of main upgrade to 8-inch, a hydrant reconnect and a hydrant relocation.



Thank you,

David Thi, P.E.
Central District Civil Engineering Associate II
Water Distribution Engineering
Los Angeles Department of Water and Power
Phone: (213) 367-1093
david.thi@ladwp.com
Water Distribution Standards Link

From: Rickard Severinsson <rickard.severinsson@kpff.com>
Sent: Tuesday, December 27, 2022 4:32 PM
To: Thi, David <David.Thi@ladwp.com>; Lam, Martin <Martin.Lam@ladwp.com>
Cc: Jeff Mindes <Jeff.mindes@continuumpartners.com>
Subject: RE: [EXTERNAL] RE: IFFAR - 400 S Central Ave

Thanks David,

Would it be possible to also attach an exhibit showing the main location that we can reference in the draft EIR ?

Thanks,

Rickard Severinsson, E.I.T.
Project Manager

O 213.418.0201 D 213.266.5277
700 South Flower Street, Suite 2100
Los Angeles, CA 90017
rickard.severinsson@kpff.com

Civil | Structural | Survey | Protective Design | Transportation & Infrastructure

---

From: Thi, David <David.Thi@ladwp.com>
Sent: Tuesday, December 27, 2022 9:27 AM
To: Lam, Martin <Martin.Lam@ladwp.com>; Rickard Severinsson <rickard.severinsson@kpff.com>
Cc: Jeff Mindes <Jeff.mindes@continuumpartners.com>
Subject: RE: [EXTERNAL] RE: IFFAR - 400 S Central Ave

Hello Rickard and Jeff,

Attached is the cost estimate for the 8-inch main upgrade required for your IFFAR.
The main upgrade is from the 16” main along S Central Ave and goes along E 4th St.

Thank you,

David Thi, P.E.
Central District Civil Engineering Associate II
Water Distribution Engineering
Los Angeles Department of Water and Power
Phone: (213) 367-1093
david.thi@ladwp.com

Water Distribution Engineering

ESTIMATE REQUEST

Date December 19, 2022

JOB TITLE : **400 S Central Ave**

Work Description :

Fire Hydrant ☐ Main ☑ Service ☐ Other ☐

Upgrade 8" main for IFFAR at 400 S Central Ave

Applicant : Ricakrd Severinsson

Address : 700 South Flower Street, Suite 2100, Los Angeles CA 90017

Phone : 213-418-0201 Fax :

See Attachment ☐

Requested By :

Phone :

Estimate of Cost : $ 125,539.44

Engineering Remarks :

110 feet of 8-inch DI	$	54,450.00
SDRF (Select, 110 feet x 2 feet)	$	27,993.60
F-16418 (Non-Standard, Relocation)	$	15,580.00
SDRF (Select, 26 feet x 2 feet)	$	8,398.08
F-9377 (Non-Standard, Reconnect)	$	9,675.00
SDRF (Select, 7 feet x 2 feet)	$	3,965.76
TCP Phase 3	$	5,477.00

Estimated By : D.Thi Approved By : D.Thi

Comments :

Tract No.

CFN

2017-XXX

Rev. 2/00 AP

EXHIBIT 3

City of Los Angeles

Los Angeles Department of Water and Power - Water System

SAR 1A

Fire Service Pressure Flow Report

SAR NUMBER **102282**

SERVICE NUMBER **638165**

For: **715 E 4TH ST** Approved Date: **3-6-2023**

Proposed Service **8 INCH** off of the

16 inch main in **CENTRAL AVE** on the **EAST** side approximately

85 feet **NORTH** of **NORTH** of **4TH ST** The System maximum pressure is

95 psi based on street curb elevation of **260** feet above sea level at this location.

The distance from the DWP street main to the property line is **76** 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	64				
875	63				
1270	62				
1580	61				
1850	60				
2085	59				
2300	58				
2500	57				

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 8-inch FS + 4-inch 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 03-06-23. 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**

SAMUEL OLIDEN	SAMUEL OLIDEN	128-213
Prepared by	**Approved by**	**Water Service Map**

EXHIBIT 3

City of Los Angeles

Los Angeles Department of Water and Power - Water System

SAR 2A

Fire Service Pressure Flow Report

SAR NUMBER **102313**

SERVICE NUMBER **638166**

For: **364 S CENTRAL AVE** Approved Date: **3-6-2023**

Proposed Service **8 INCH** off of the

16 inch main in **CENTRAL AVE** on the **EAST** side approximately

190 feet **NORTH** of **NORTH** of **4TH ST** The System maximum pressure is

95 psi based on street curb elevation of **260** feet above sea level at this location.

The distance from the DWP street main to the property line is **76** 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	61				
875	60				
1270	59				
1580	58				
1850	57				
2085	56				
2300	55				
2500	54				

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

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

Notes: OK to sell 8-inch FS + 8-inch 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 03-06-23. 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**

SAMUEL OLIDEN	SAMUEL OLIDEN	128-213
Prepared by	**Approved by**	**Water Service Map**

EXHIBIT 3

City of Los Angeles

Los Angeles Department of Water and Power - Water System

SAR 3A

Fire Service Pressure Flow Report

SAR NUMBER **102283**

SERVICE NUMBER **641633**

For: **400 S CENTRAL AVE** Approved Date: **3-7-2023**

Proposed Service **8 INCH** off of the **16** inch main in **CENTRAL AVE** on the **EAST** side approximately **110** feet **SOUTH** of **SOUTH** of **4TH ST** The System maximum pressure is **95** psi based on street curb elevation of **260** feet above sea level at this location.

The distance from the DWP street main to the property line is **76** 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	63				
950	62				
1380	61				
1720	60				
2010	59				
2265	58				
2500	57				

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

Notes:

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

This SAR is valid for one year from 03-07-23. 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**

Unknown	DAVID THI	128-213
Prepared by	**Approved by**	**Water Service Map**

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

EXHIBIT 3

City of Los Angeles

Los Angeles Department of Water and Power - Water System

SAR 4A

Fire Service Pressure Flow Report

SAR NUMBER **102284**

SERVICE NUMBER **638168**

For: **410 S CENTRAL AVE** Approved Date: **3-7-2023**

Proposed Service **8 INCH** off of the **16** inch main in **CENTRAL AVE** on the **EAST** side approximately **265** feet **SOUTH** of **SOUTH** of **4TH ST** The System maximum pressure is **95** psi based on street curb elevation of **260** feet above sea level at this location.

The distance from the DWP street main to the property line is **76** 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	63				
875	62				
1270	61				
1580	60				
1850	59				
2085	58				
2300	57				
2500	56				

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 8-inch FS + 6-inch 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 03-07-23. 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**

SAMUEL OLIDEN	SAMUEL OLIDEN	128-213
Prepared by	**Approved by**	**Water Service Map**

EXHIBIT 3

City of Los Angeles

Los Angeles Department of Water and Power - Water System

SAR 5A

SAR NUMBER **102314**

Fire Service Pressure Flow Report

SERVICE NUMBER **638169**

For: **405 ALAMEDA ST** Approved Date: **3-8-2023**

Proposed Service **8 INCH** off of the

12 inch main in **ALAMEDA ST** on the **WEST** side approximately

120 feet **SOUTH** of **SOUTH** of **4TH ST** The System maximum pressure is

97 psi based on street curb elevation of **256** feet above sea level at this location.

The distance from the DWP street main to the property line is **59** 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	62				
720	61				
1050	60				
1305	59				
1525	58				
1720	57				
1895	56				
2060	55				
2215	54				
2360	53				
2500	52				

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

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

Notes: OK to sell 8-inch FS + 8-inch 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 03-08-23. 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**

SAMUEL OLIDEN	SAMUEL OLIDEN	126-213
Prepared by	**Approved by**	**Water Service Map**

EXHIBIT 3

City of Los Angeles

Los Angeles Department of Water and Power - Water System

SAR 6A

Fire Service Pressure Flow Report

SAR NUMBER **102315**

SERVICE NUMBER **638170**

For: **430 S CENTRAL AVE** Approved Date: **3-8-2023**

Proposed Service **8 INCH** off of the **16** inch main in **CENTRAL AVE** on the **EAST** side approximately **230** feet **NORTH** of **NORTH** of **5TH ST** The System maximum pressure is **95** psi based on street curb elevation of **260** feet above sea level at this location.

The distance from the DWP street main to the property line is **76** 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	63				
1185	62				
1720	61				
2140	60				
2500	59				

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 8-inch FS + 6-inch 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 03-08-23. 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**

SAMUEL OLIDEN	SAMUEL OLIDEN	128-213
Prepared by	**Approved by**	**Water Service Map**

EXHIBIT 3

City of Los Angeles

Los Angeles Department of Water and Power - Water System

SAR 7A

SAR NUMBER **102316**

Fire Service Pressure Flow Report

SERVICE NUMBER **638172**

For: **455 ALAMEDA ST** Approved Date: **3-9-2023**

Proposed Service **8 INCH** off of the

12 inch main in **ALAMEDA ST** on the **WEST** side approximately

335 feet **NORTH** of **NORTH** of **5TH ST** The System maximum pressure is

97 psi based on street curb elevation of **256** feet above sea level at this location.

The distance from the DWP street main to the property line is **59** 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	64				
765	63				
1110	62				
1380	61				
1615	60				
1820	59				
2010	58				
2185	57				
2345	56				
2500	55				

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

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

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

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

This SAR is valid for one year from 03-09-23. 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	**DAVID THI**	**126-213**
Prepared by	**Approved by**	**Water Service Map**

EXHIBIT 3

City of Los Angeles

Los Angeles Department of Water and Power - Water System

SAR 8A

Fire Service Pressure Flow Report

SAR NUMBER **102317**

SERVICE NUMBER **638173**

For: **475 ALAMEDA ST** Approved Date: **3-9-2023**

Proposed Service **8 INCH** off of the **12** inch main in **ALAMEDA ST** on the **WEST** side approximately **550** feet **SOUTH** of **SOUTH** of **4TH ST** The System maximum pressure is **97** psi based on street curb elevation of **256** feet above sea level at this location.

The distance from the DWP street main to the property line is **59** 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	64				
765	63				
1110	62				
1380	61				
1615	60				
1820	59				
2010	58				
2185	57				
2345	56				
2500	55				

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

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

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

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

This SAR is valid for one year from 03-09-23. 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	**DAVID THI**	**126-213**
Prepared by	**Approved by**	**Water Service Map**

EXHIBIT 3

City of Los Angeles

Los Angeles Department of Water and Power - Water System

SAR 9A

SAR NUMBER **102318**

Fire Service Pressure Flow Report

SERVICE NUMBER **638174**

For: **440 S CENTRAL AVE** Approved Date: **3-9-2023**

Proposed Service **8 INCH** off of the

16 inch main in **CENTRAL AVE** on the **EAST** side approximately

70 feet **NORTH** of **NORTH** of **5TH ST L/W** The System maximum pressure is

95 psi based on street curb elevation of **260** feet above sea level at this location.

The distance from the DWP street main to the property line is **76** 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	63				
875	62				
1270	61				
1580	60				
1850	59				
2085	58				
2300	57				
2500	56				

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 8-inch fire service and a 6-inch domestic combo 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 03-09-23. 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	DAVID THI	126-213
Prepared by	**Approved by**	**Water Service Map**

EXHIBIT 3

City of Los Angeles

Los Angeles Department of Water and Power - Water System

SAR 10A

Fire Service Pressure Flow Report

SAR NUMBER **102319**

SERVICE NUMBER **638175**

For: **425 S CENTRAL AVE** Approved Date: **3-7-2023**

Proposed Service **8 INCH** off of the **16** inch main in **CENTRAL AVE** on the **WEST** side approximately **305** feet **SOUTH** of **SOUTH** of **4TH ST** The System maximum pressure is **88** psi based on street curb elevation of **260** feet above sea level at this location.

The distance from the DWP street main to the property line is **24** 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	63				
875	62				
1270	61				
1580	60				
1850	59				
2085	58				
2300	57				
2500	56				

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

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

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

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

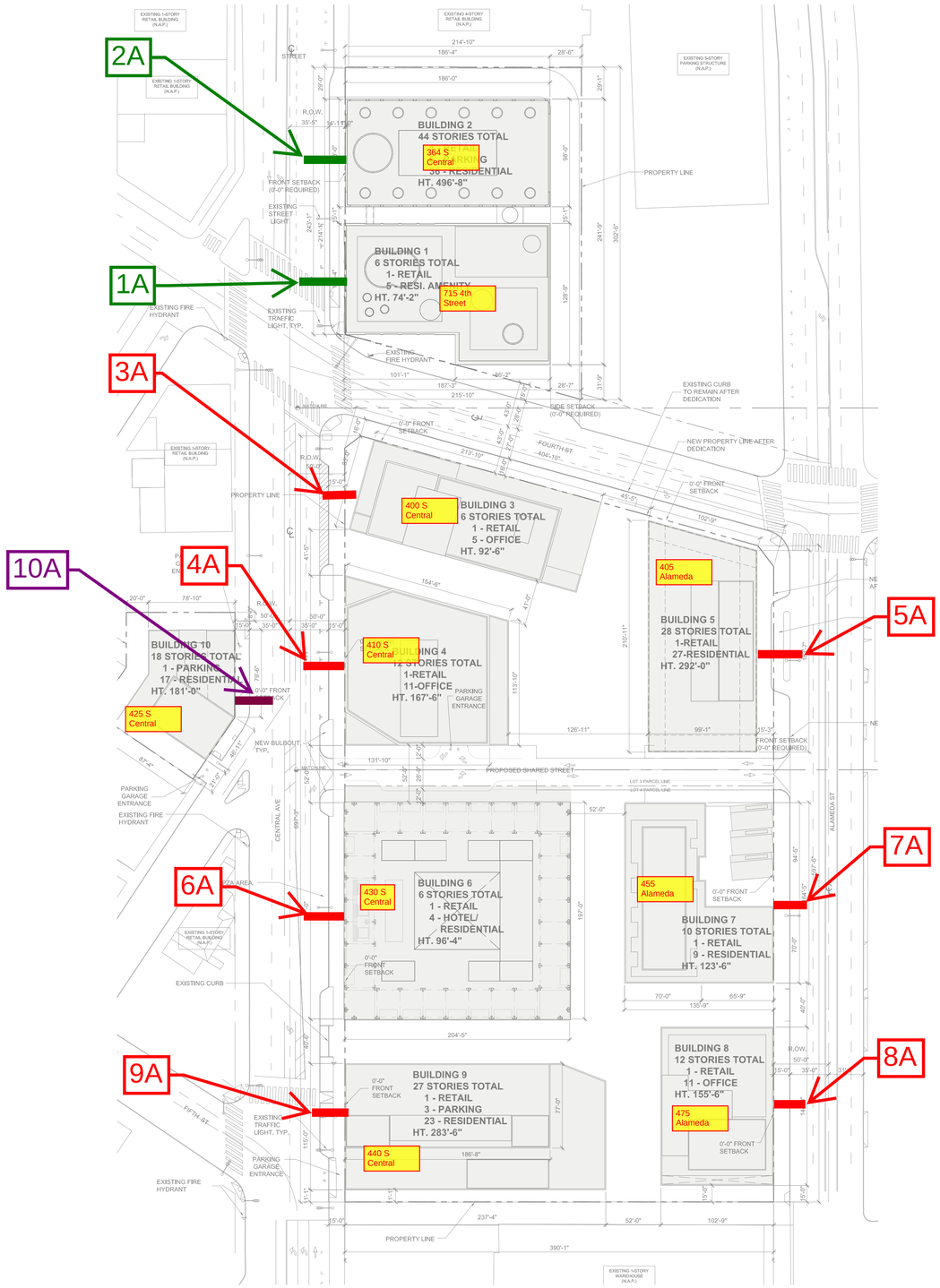
This SAR is valid for one year from 03-07-23. Once the SAR expires, the applicant needs to re-apply and pay applicable processing fee.

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

DAVID THI	**DAVID THI**	**128-213**
Prepared by	**Approved by**	**Water Service Map**

FOR REFERENCE ONLY

EXHIBIT 3



730 E 4th Street

ANTICIPATED POTABLE WATER POC SIZE AND LOAD SCHEDULE				
Building	CW POC tag	Anticipated pipe size (inch)	Anticipated flow (GPM)	Anticipated meter size (inch)
Building # 1	1A	4	200	4
Building # 2	2A	10	700	8
Building # 3	3A	4	220	4
Building # 4	4A	6	300	6
Building # 5	5A	10	680	8
Building # 6	6A	8	330	6
Building # 7	7A	8	320	6
Building # 8	8A	6	280	6
Building # 9	9A	8	500	6
Building # 10	10A	8	330	6

0 25 50 100

SCALE 1" =50'

EXHIBIT 4

Los Angeles Department of Water & Power

RESOLUTION NO. _____

BOARD LETTER APPROVAL

ANSELMO G. COLLINS
Senior Assistant General Manager
Water System

MARTIN L. ADAMS
General Manager and Chief Engineer

DATE: August 17, 2022

SUBJECT: Water Supply Assessment – Fourth and Central Project

SUMMARY

The California Water Code (CWC), Sections 10910-10915, requires LADWP to prepare a Water Supply Assessment (WSA) for the Fourth and Central Project (Project) located within the City of Los Angeles (City). LADWP staff determined the net additional water demand for the Project is 439 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 baseline water demand was reduced by 80 AFY through implementation of the conservation ordinance and code requirements, and by 12 AFY through voluntary water conservation measures applied to the Project. 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 adopt the attached Resolution authorizing the WSA for the Project.

ALTERNATIVES CONSIDERED

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

FINANCIAL INFORMATION

CP LA Cold Storage Land, LLC (Applicant) paid $17,000 to cover LADWP's expenses for preparation of this WSA.

BACKGROUND

WSAs are prepared in conformance with California law to ensure proposed projects that utilize water resources are consistent with LADWP's 2020 Urban Water Management Plan (UWMP). The UWMP serves as the master plan for the City's reliable water supply and resources management consistent with LADWP's goals and policy objectives. LADWP is committed to meeting all the City's current and future water needs while increasing supply reliability, reducing imported water purchases, and increasing locally produced water.

Each WSA performed by LADWP is carefully evaluated within the context of LADWP's most recent UWMP. The 2020 UWMP identifies water supplies to meet a 25-year period water demands under three hydrologic scenarios, which are average year, single-dry year, and multiple-dry years. Furthermore, the Metropolitan Water District of Southern California (MWD), from whom LADWP purchases its imported State Water Project 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 as described in the MWD 2020 UWMP. LADWP coordinates closely with MWD to ensure implementation of MWD's water resource development plans.

LADWP's 2020 UWMP contains a water shortage contingency plan (WSCP) that was adopted in May 2021. The WSCP complies with the CWC, which requires a WSCP in the UWMP, and is based on the City's Emergency Water Conservation Plan. The WSCP establishes six standard water supply shortage levels and corresponding shortage response actions, which the City can take in the event of a water supply shortage.

Since 1993, LADWP has used an ascending tier rate structure that is entirely volumetric-based pricing. LADWP's tiered volume water rates, which were last amended by the City's Water Rate Ordinance (Ordinance No. 184130) with the effective date of April 15, 2016, incorporate and further reinforce foundational water conservation, water use efficiency, and financial principles. A lower first tier rate is applied to water within a specified allocation and higher successive tier rate is applied to every billing unit exceeding the first-tier allocation.

Projected Water Use and Conservation

On March 31, 2022, 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 included the redevelopment of approximately 7.6 acres within the Central City Community Plan area of the City. The Project spans over three project sites. The North site is located at the Northeast corner of the Central Avenue and

4th Street. The South site is generally bounded by 4th Street to the north, Alameda Street to the east, industrial uses to the south, and Central Avenue to the west. The West site is located west of the intersection of Gladys Avenue and Central Avenue. Attached is a copy of the proposed project's maps.

The Project site currently contains cold storage facilities, warehouses, associated office spaces, and surface parking lots. The Project would remove all existing uses and adaptively reuse, if feasible, a portion of the North site six-story cold storage building. The existing water demand associated with the demolished and adaptively reused area is 14 AFY.

The Project proposes a mixed-use development within ten buildings over the three sites. The Project will include 1,521 residential units with residential amenities, which is approximately 1,731,849 square feet (SF), 411,113 sf of office space, 114,112 SF of restaurant/retail space, and 68 hotel rooms. The Project will also include covered parking, landscaping, and cooling system that will serve a majority of the buildings.

LADWP staff recommends 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, unless otherwise noted. LADWP will request Planning Department to include the implementation of the water conservation commitments as part of their California Environmental Quality Act (CEQA) 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

- ENERGY STAR Certified Commercial Clothes Washers – utilizing less than a Water Factor of 4 and a maximum capacity of 6 cubic feet
- ENERGY STAR Certified Residential Clothes Washers – Front-loading or Top-loading with Integrated Water Factor and capacity as follows:
    - Front-loading with capacity greater than 2.5 cubic feet: Integrated Water Factor (IWF) of less than 3.2
    - Top-loading with capacity greater than 2.5 cubic feet: IWF of less than 4.3
    - Either front- or top-loading with capacity of less than or equal to 2.5 cubic feet: IWF of 4.0 or less in lieu of an IWF of 4.2
- ENERGY STAR Certified Residential Dishwashers:
    - Standard with 3.2 gallons/cycle (gpc) or less in lieu of 3.5 gpc
    - Compact with less than 3.1 gpc
- Hybrid Waterless Urinals with a flush volume of 1 gallon per 72 hours in lieu of 0.125 gallons per flush (gpf),
- WaterSense-labeled High Efficiency Toilets with a flush volume of 1.1 gpf or less, in lieu of 1.28 gpf

- WaterSense-labeled Showerheads with a flow rate of 1.5 gallons per minute (gpm) or less in all residential units, in lieu of 1.8 gpm

Landscape and Irrigation

- California Friendly® plants or native plants
- Drip/ Subsurface Irrigation (Micro-Irrigation)
- Irrigation Controls programmed to real-time weather conditions
- Leak Detection System for irrigation
- Micro-Spray
- Design and use where feasible water-efficient flowing/recirculating water features such as fountains in ways to reduce evaporation and makeup water
- Proper Hydro-zoning/Zoned Irrigation-(groups plants with similar water requirements together)
- Rainwater Harvesting and Grey Water Use/Storage where and when feasible and if space is available for the system (e.g., tanks, pumps, and filtration systems). Greywater sources may include bathroom faucets, showers, clothes washers, and mechanical cooling condensate, among other allowable sources
- Xeriscaping (landscaping that reduces or eliminates the need for irrigation), while still ensuring that heat island effects are mitigated

Pool

- Meter installation on the pool make-up line to monitor water use and identify leaks in need of repair
- Pool splash troughs around the perimeter that drain back into the pool
- Pool/Spa recirculating filtration equipment
- Reuse pool backwash water for irrigation
- Water-saving pool filter

Utilities

- Individual metering and billing for water use for every commercial unit
- Individual meters for water supply and water subsystems to analyze water demand and identify additional water savings by tracking water consumption
- Allocate space and clearance to support non-potable water (purple pipe) infrastructure with a connecting port for future connection to a municipal recycled water system when made available

With these voluntary water conservation measures, which yield the savings of approximately 12 AFY, the net additional water demand is approximately 439 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:

- Catch Basin Insert - a device that can be inserted into an existing catch basin design to provide some level of runoff contaminant removal

- Catch Basin Screens
- Cistern - captures stormwater runoff as it comes down through the roof gutter system
- Infiltration Basin (drainage area of 5-50 acres) – captures first-flush stormwater, removes particulate pollutants and some soluble pollutants, and contributes toward recharging groundwater
- Infiltration Trench (drainage area of less than 5 acres) – similar to infiltration basin but used for smaller drainage areas to capture and infiltrate rainwater
- Pervious Pavements – captures runoff by allowing stormwater to pass through the pavement surface and then infiltrate into the groundwater basin

The Planning Department has indicated that the Project requires a General Plan Amendment to conform 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 the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (2020 RTP/SCS) by the Southern California Association of Governments. The City's water demand projection in 2020 UWMP was developed based on the 2020 RTP/SCS demographic projection. LADWP used a service area-wide method to develop the City's water demand projections. This methodology does not rely on individual development demands to determine area-wide growth. The 2020 UWMP concluded there are adequate water supplies to meet projected water demand through 2045. Therefore, projected water supplies available during normal, single-dry, and multiple-dry water years as included in the 25-year projection of 2020 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 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 Fourth and Central 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

- Maps of Proposed Project
- Resolution
- Water Supply Assessment

EXHIBIT 4

Fourth and Central Project Site Map



SOURCE: ESRI Imagery.

Fourth & Central Project

Figure 1
Regional and Local Vicinity Map

ESA

EXHIBIT 4

Fourth and Central Project Site Map



SOURCE: Studio One Eleven, 2021

Fourth & Central Project

Figure 2 Conceptual Site Plan

ESA

EXHIBIT 4

RESOLUTION NO. _____

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

WHEREAS, the Fourth and Central Project (Project) qualifies as a Project under CWC Section 10912, subdivision (a) (1,3,6, and 7); 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 March 31, 2022, the City of Los Angeles (City) Department of City Planning (Planning Department) requested LADWP conduct a Water Supply Assessment (WSA) for the Project, and LADWP has prepared a WSA for the Project in compliance with CWC Sections 10910-10915; and

WHEREAS, the Project would redevelop approximately 7.6 acres within the Central City Community Plan area of the City; and

WHEREAS, the applicant, CP LA Cold Storage Land, 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 439 acre-feet per year; and

WHEREAS, the Project is determined by Planning Department to be consistent with the demographic projections for the City from the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy by the Southern California Association of Governments; and

WHEREAS, LADWP anticipates that its projected water supply available during normal, single-dry, and multiple-dry water years as included in the 25-year projection contained in its adopted 2020 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

EXHIBIT 4

WHEREAS, a publicly noticed Board hearing was held with respect to this item, and the Board considered evidence presented by LADWP's Water Resources Division 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 the Resolution adopted by the Board of Water and Power Commissioners of the City of Los Angeles at its meeting held

_____

Board Secretary

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

July 13, 2022

BY Tina P. Shim

TINA P. SHIM
DEPUTY CITY ATTORNEY

EXHIBIT 4

WATER SUPPLY ASSESSMENT

FOR THE FOURTH AND CENTRAL PROJECT

Prepared by:

Water Resources Division

Prepared on

June 20, 2022

Table of Contents

Introduction 4
Findings 4
The Fourth and Central Project Description 6
The Fourth and Central Project Water Demand Estimate 7
Los Angeles Department of Water and Power – 2020 UWMP 11
Water Supplies 11
1.0 Los Angeles Aqueduct 11
2.0 Local Groundwater Supplies 12
3.0 Water Conservation 15
4.0 Stormwater Capture 16
5.0 Water Recycling 18
6.0 Metropolitan Water District of Southern California 18
7.0 Summary of Water Demand and Supply Projections for 20 years 19
Water System Financing Program 21
Conclusion 22

References

1. California Department of Water Resources California's Groundwater Bulletin 118 (Update 2003)
2. Upper Los Angeles River Area Watermaster Report for 2017/2018 (Update December 2019)
3. Los Angeles Department of Water and Power's 2020 Urban Water Management Plan
4. Metropolitan Water District of Southern California's 2020 Urban Water Management Water Plan
5. California Code of Regulations Title 23. Waters, Division 2. Department of Water Resources, Chapter 2.7. Model Water Efficient Landscape Ordinance
6. City of Los Angeles' Department of Public Works Bureau of Sanitation (LASAN) Sewer Generation Rates Table (Updated 2012)

Appendices

A. City of Los Angeles Department of City Planning letter, Request for Water Supply Assessment, received on March 31, 2022 and updated May 10, 2022, and Scope Confirmation e-mail received on May 31, 2022
B. Water Conservation Commitment Letter
C. Project Location Map(s)
D. Adjudicated Groundwater Basin Judgments
E. Water Supply Assessment Provisions – California Water Code, Sections 10910-10915
F. Metropolitan Water District of Southern California's Appendix A
G. Water Supply Assessment Checklist

Introduction

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 Fourth and Central 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 2020 Urban Water Management Plan (UWMP) showing that there is an adequate 20-year water supply. The Los Angeles Department of Water and Power's (LADWP) 2020 UWMP serves as the City of Los Angeles' (City) master plan for reliable water supply and resources management consistent with the LADWP's goals and policy objectives.

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 LADWP as the public water system that will supply water to the Project site. In response to Planning Department's request for a WSA on March 31, 2022, LADWP has performed the assessment contained herein.

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 LADWP's 2020 UWMP, adopted by the Board of Water and Power Commissioners (Board) on May 25, 2021. LADWP's 2020 UWMP is incorporated by reference and is available through LADWP's website, www.ladwp.com/uwmp.

LADWP's 2020 UWMP details LADWP's plans to meet all of the City's current and future water needs. Faced with increasing water demands and extended dry periods, LADWP is addressing the challenge of providing a reliable water supply for a growing population by expanding local water supply programs and reducing demands on purchased imported water. LADWP continues to make significant investments in local groundwater, recycled water, stormwater capture, and water conservation and use efficiency to diversify its water supply portfolio. 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. 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.

Findings

The Project is estimated to increase the total net water demand within the site by 439 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 the CP LA Cold Storage Land, 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 439 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 projects is LADWP's most recently adopted UWMP. LADWP's water demand forecast, as contained in LADWP's 2020 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 2020 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 2020 UWMP was developed based on the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (2020 RTP/SCS) demographic projection by the Southern California Association of Governments (SCAG). The demographic projection was provided to LADWP from the Metropolitan Water District of Southern California (MWD), who collaborates with SCAG to aggregate demographic data for each of its 26 member agencies. LADWP's 2020 UWMP identified water supplies to meet projected water demands through 2045. Therefore, the City's water supply projections in LADWP's 2020 UWMP are sufficient to meet the water demand for projects that are determined by the CEQA lead agency to be consistent with the 2020 RTP/SCS by SCAG.

The Planning Department has indicated that a General Plan Amendment is required to conform 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 the 2020 RTP/SCS. Based on the information provided by Planning Department, the anticipated water demand for the Project is within LADWP's 2020 UWMP projected water supplies for normal, single-dry, and multiple-dry years through the year 2045 and is also within the LADWP 2020 UWMP 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 2020 UWMP projected increase in LADWP's service area water demands. Additionally, LADWP's 2020 UWMP contains a water shortage contingency plan (WSCP) that was adopted in May 2021. The WSCP complies with the California Water Code and is based on the City's Emergency Water Conservation Plan. The WSCP establishes six standard water supply shortage levels and corresponding shortage response actions, which the City can take in the event of a water supply shortage. Furthermore, the City has utilized ordinances as a tool to reduce water demands since 1988. See Section 3.0 Water Conservation for more information on the City's efforts on water conservation.

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. Also, this WSA is an informational document required to be prepared for use in the Planning Department's environmental review of the Project under CEQA, and it assesses the adequacy of water supplies to serve the Project and cumulative demand. Approval of this WSA is not equivalent to approval of the Project.

The Fourth and Central Project Description

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

Project Name:	Fourth and Central Project
Lead Agency:	Planning Department
Community Plan:	Central City Community Plan

The Project will redevelop an approximately 7.6-acre site of light industrial land use to commercial land use within the Central City Community Plan area of the City for residential and commercial land use. The Project site is spaced over three city blocks. The North site is located at the northeast corner of Central Avenue and 4th Street. The South site is generally bounded by 4th Street to the north, Alameda Street to the east, industrial uses to the south, and Central Avenue to the west. The West site is located west of the intersection of Gladys Avenue and Central Avenue.

The Project site currently contains cold storage facilities, warehouses, and associated offices. The existing buildings on the Project site have a total floor area of 360,734 square feet (sf). As part of the Project, the South site building and surface parking areas will be demolished, while the North site may be reused or completely demolished. The West site surface parking lot will also be demolished. The existing water demand related to the existing use is 14 acre-feet per year (AFY).

The Project will construct approximately 2,318,534 sf of residential and commercial uses within ten buildings over three sites. The buildings will contain the following:

- Building 1 contains restaurant, retail, and residential amenities.
- Building 2 contains 449 residential units, restaurant, retail and residential amenities.
- Buildings 3, 4, and 8 contain retail, restaurant, and office use.
- Building 5 contains 425 residential units, restaurant, retail, and residential amenities.
- Building 6 contains 68 residential units, 68 hotel rooms, retail, restaurant, and residential amenities.
- Building 7 contains 123 residential units, retail, restaurant, and residential amenities.
- Building 9 contains 312 residential units, retail, restaurant, and residential amenities.
- Building 10 contains 144 residential units and residential amenities.

There will be a total of 1521 residential units that has a floor area of 1,731,849 sf, 411,113 sf of office space, 45,266 sf of retail space, 55,822 sf of indoor restaurant space, and 12,477 sf of outdoor restaurant space. The Project will also include 54,928 sf of landscaping and 5,261 sf of pools or water features throughout the Project, 1,019,182 sf of covered parking, and a total of 4,000 ton chiller plant that will cool eight of the ten buildings. The other two buildings will use an air-cooled system.

LADWP staff performed the water demand analysis and determined the net increase in water demand for the Project is 439 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 Planning Department.

The Fourth and Central Project Water Demand Estimate

The projected total net water demand increase for the Project is estimated to be 439 AF annually. This amount took account of savings due to water conservation ordinances which are approximately 80 AFY, and savings due to additional voluntary conservation measures which are approximately 12 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 maybe used to estimate the 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 in order to reduce the Project's total proposed water demand.

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).

EXHIBIT 4

TABLE I
Fourth and Central Project
Calculated Total Additional Water Demand

Existing Use to be Removed[1]	Quantity	Unit			Existing Water Use to be Removed (gpd)	(af/y)
Cold Storage Facilities - Warehouse and associated offices[2]	360,734	sf			12,700	14
Existing to be Removed Total						

Proposed Use[1]	Quantity	Unit	Water Use Factor[3] (gpd/unit)	Base Demand (gpd)	Required Ordinances Water Savings[4] (gpd)	Proposed Water Demand (gpd)	(af/y)
Residential Studio - Building 2, 5, 7, 9, 10	428	du	75	32,100			
Residential 1 Bedroom - Building 2, 5, 6,7, 9, 10	720	du	110	79,200			
Residential 2 Bedroom - Building 2, 5,6, 7, 9, 10	323	du	150	48,450			
Residential 3 bedroom - Building 2	42	du	190	7,980			
Residential Live/Work - Building 7, 9	8	du	185	1,480			
Total Residential Units	1,521	du					
Base Demand Adjustment[5]				18,639			
Residential Units Total				**187,849**	**46,080**	**141,769**	**158.8**
Hotel - Building 6	68	room	120.00	8,160			
Base Demand Adjustment[5]				739			
Hotel Rooms Total				**8,899**	**971**	**7,928**	**8.88**
Gymnasium (Building 1,2,5,6,7,9,10)	11,000	sf	0.20	2,200			
Health Club (Building 1, 2, 5, 6,7,9,10)	8,000	sf	0.65	5,200			
Community room/Conference Rooms (Building 1, 2, 5,6,9,10)	41,360	sf	0.12	4,963			
Pet Grooming (Building 1,2,5,6,7,9,10)	3,500	sf	0.43	1,488			
Rooftop Terrace/Lounge Area with pool (Building 2,5,6,7,9)[6]	54,608	sf	0.05	2,730			
Residential Amenities							
Retail (Building 1, 2, 3, 4, 5, 6, 7, 8, 9)	45,266	sf	0.025	1,132			
Office (Building 3, 4, 8)	411,113	sf	0.12	49,334			
Restaurant (Building 1, 2,3, 4, 5, 6, 7,8 9 - seating area[7])	4,553	seats	30.00	136,598			
Hotel Bar (Building 6) [8]	36	seats	30.00	1,094			
Car Wash (Building 1,5,6,7,8,9,10)[9]	42	cars	40.00	1,680			
Base Demand Adjustment[5]				269			
Residential Amenities and Commercial Total				**206,687**	**6,427**	**200,260**	**224.34**
Landscaping and Pools[10]	60,189	sf		**5,995**	**2,864**	**3,131**	**3.51**
Covered Parking[11]	1,014,982	sf	0.02	**667**	**0**	**667**	**0.75**
Cooling Tower[12]	4,000	ton	19.31	**77,220**	**15,444**	**61,776**	**69.20**
			Proposed Subtotal	**487,317**	**71,786**	**415,531**	**465.49**
					Less Existing to be Removed Total	**-12,700**	**-14**
					Less Additional Conservation[13]	**-10,634**	**-12**
					Net Additional Water Demand	**392,197 gpd**	**439 af/y**

[1] Provided by City of Los Angeles Department of City Planning in the Request for WSA letter and Scope Confirmation e-mail. See Appendix A. Proposed Uses that do not have additional water demands are not shown here.

[2] The existing cold storage facilities, which are warehouse and wholesale commercial buildings, will be demolished at the property. The six-story building on the North site maybe reused, if feasible, or demolished. Historical consumption was retrieved from water billing records from April 2017 to March 2022.

[3] 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.

[4] 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.

[5] 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.

[6] Rooftop Terrace/Lounge Area with pool is a residential amenity that contains an outdoor kitchen.

[7] Restaurant Space. Total Indoor and Outdoor Restaurant Floor Area is 68,299 sf. Indoor Restaurant Area is 55,822 sf and Outdoor Restaurant Area is 12,477 sf.

[8] Hotel Bar Floor Area is 547 sf.

[9] Car Wash Actual Water Use is 100 gallons/day as provided in the WSA Request Letter by the Applicant. AB 2230 (2012) requires 40 percent of the amount of water to be potable. Each Car Wash area is 600 sf; therefore, total floor area of car wash is 4,200 SF.

[10] Landscaping & pool/spa water use is estimated per California Code of Regulations Title 23. Division 2. Chapter 2.7. Model Water Efficient Landscape Ordinance. Residential pool areas is 5,261 sf. Total landscaping is 54,928 sf.

[11] 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. Covered parking includes Bicycle Parking/Repair area, and excludes car wash area of 4200 sf.

[12] The proposed project will use cooling towers for 8 of the 10 buildings. The cooling tower's total load is 4000 ton.

[13] 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

EXHIBIT 4

TABLE II
Fourth and Central Project
Estimated Additional Water Conservation

Conservation Measures[1]	Quantity[2]	Units	Water Saving Factor[3] (gpd/unit)	Water Saved (gpd)	Water Saved (af/y)
Residential Clothes Washer (capacity less than 2.5 cubic feet)	1521	du	0.50	761	0.85
Residential Dishwashers - standard	1521	du	0.18	274	0.31
Hybrid Urinals	26	ea	3.44	89	0.10
Toilet - studio and 1-bd	1,148	du	0.99	1,137	1.27
Toilet - 2 bd	323	du	2.48	799	0.90
Toilet - 3 bd	42	du	3.96	166	0.19
Toilet - Live/Work	8	du	1.11	9	0.01
Toilet - Hotel	68	room	1.49	101	0.11
Toilet - Commercial	86	du	3.92	337	0.38
Showerhead - studio and 1-bd	1,148	du	1.59	1,825	2.04
Showerhead - 2-bd	323	du	3.98	1,284	1.44
Showerhead - 3-bd	42	du	6.36	267	0.30
Showerhead - Live/Work	8	du	1.59	13	0.01
Residential and Commercial Total				**7,062**	**7.91**
Landscaping Total Conservation[4]				**630**	**0.71**
Cooling Tower (from 6 coc to 8 coc)				**2,942**	**3.30**
Total Additional Water Conserved =				**10,634**	**12**

[1] Water conservation measures agreed to by the Applicant. See Appendix B.

[2] Plumbing fixture quantities were provided by the Applicant.

[3] Based on LADWP estimates.

[4] Landscaping water conservation is estimated per California Code of Regulations Title 23. Division 2. Chapter 2.7. Model Water Efficient Landscape Ordinance.

Abbreviations: sf- square feet du - dwelling unit gpd - gallons per day af/y - acre feet per year coc – cycles of concentration

EXHIBIT 4

Los Angeles Department of Water and Power – 2020 UWMP

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 in compliance with state guidelines and requirements. The main goals of UWMPs are to forecast future water demands and water supplies under average and dry hydrologic conditions, identify future water supply projects, and provide a reliability assessment under average, single dry year, and multi-dry years, and assess near term drought risk management.[1]

LADWP's 2020 UWMP, available for reference through www.ladwp.com/uwmp, serves two purposes: (1) it serves as the master plan for the City's reliable water supply and resources management consistent with LADWP's goals and policy objectives, and (2) it fulfills LADWP's obligations under the California's Urban Water Management Planning Act, as codified in California Water Code (CWC) Division 6, Part 2.6, Section 10610, et seq.[2]

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 2017 to FYE 2021 from these sources.

TABLE III
LADWP Water Supply

Fiscal Year Ending	Los Angeles Aqueducts (AF)	Local Groundwater (AF)	MWD (AF)	Recycled Water (AF)	Transfer, Spread, Spills, and Storage (AF)	Total (AF)
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
2021	128,268	51,070	316,627	11,455	-938	508,359

Note: Units are in AF.

1.0 Los Angeles Aqueduct

The City receives surface water and groundwater from the Eastern Sierra Nevada Mountains through the Los Angeles Aqueduct (LAA). LADWP constructed the first LAA in 1913 to convey water from the Eastern Sierra to the City. In 1940, the LAA was extended 40 miles north from

[1] *City of Los Angeles Department of Water and Power 2020 Urban Water Management Plan*, at ES-2.

[2] *Id.* at 1-1.

the Owens River to the Mono Basin. To meet additional water demands from the City, a second barrel of the LAA was constructed and completed in 1970. The second LAA increased the City's capacity to deliver water from the Mono Basin and the Owens Valley from 485 cubic feet per second (cfs) to 775 cfs. The value of the City's historical investment in the LAA system is substantial because the City has benefited from the LAA's delivery of high-quality, cost-effective water supplies from the Eastern Sierra for over a century.

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. 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. Up to 16,000 AFY can be supplied from Mono Basin, which is permitted by the 1994 Mono Lake Basin Water Right Decision 1631. Decision 1631 set a limit on LADWP water exports from the Mono Basin, which were set to a range of 0 to 16,000 AFY based on Mono Lake's water elevation. Aside from the primary surface water rights, the groundwater right in the Owens Valley is managed under the 1991 Long Term Water Agreement (LTWA) and uses vegetation water demand and available soil moisture to determine whether groundwater wells can be pumped. Since 1991, the average annual pumping from Owens Valley wellfields has been less than 75,000 AF compared to 107,000 AF from 1974 to 1990.

Annual water deliveries from the LAA to the City are impacted by hydrologic variability in the Eastern Sierra Nevada and water set aside for environmental projects. At its peak in fiscal year ending (FYE) 1984, the LAA delivered 531,729 AF to the City. Concerns over environmental impacts have required the City to reallocate approximately one-half of the LAA water supply to other uses within the Owens Valley and Mono Basin. Between 1992 and 2020, LADWP reduced deliveries to the City by approximately 177,000 AF to supply water for a variety of environmental projects throughout the Eastern Sierra. Environmental enhancement and mitigation projects in the Mono Basin and Owens Valley that utilize water from the Eastern Sierra include Mono Basin releases, Lower Owens River Project, Owens Lake Dust Mitigation Program, as well as other environmental enhancement and mitigation projects and uses. When considering water allocations for these projects, the expected annual long term LAA delivery over the next 25 years is approximately 192,000 AFY for average years. However, annual deliveries for a series of dry years, are expected to range from approximately 71,400 AF to 143,000 AF.

The sole reliance on LAA supply with impacts due to natural variability and water set aside for environmental projects is not sufficient to meet the City's annual water demands; therefore, LADWP has implemented, and continues to increase, stormwater capture, local groundwater, water conservation, water use efficiency, and water recycling programs to mitigate the reduction of LAA supplies. Additionally, LADWP can purchase supplemental imported water from MWD to meet the City's remaining water demands.

For additional information, refer to Chapter 4 "Los Angeles Aqueduct System" of LADWP's 2020 UWMP.

2.0 Local Groundwater Supplies

Local groundwater provided approximately 8 percent of LA's total water supply, from FYE 2017 to FYE 2021. This amount significantly differs from fifty years ago when local groundwater provided up to 23 percent of total supply during extended dry periods. In recent years,

contamination issues have impacted LADWP's ability to fully utilize its local groundwater entitlements and provide groundwater supplies to support annual water demands. In response to this issue and to address the hydrologic variability impacts to imported water supplies, LADWP has a focus on sustainable management of its local groundwater basins. LADWP continues to invest in stormwater recharge projects to restore local groundwater basin levels as well as advanced treatment systems to produce purified recycled water for groundwater replenishment. Furthermore, LADWP has, and will continue to, conjunctively use this large groundwater basin within the City to store wet year LAA flows to supply water during dry periods.

The City's total adjudicated water rights are approximately 109,809 AFY, which are located within the San Fernando Basin (SFB), Sylmar Basin, Central Basin, and West Coast Basin. There are additional groundwater basins near and within the Los Angeles area, such as the unadjudicated Hollywood, Santa Monica, and northern Central Basins that may provide additional groundwater supplies for the City.

The SFB is the primary source of local groundwater for the City. It is located in the Upper Los Angeles River Area (ULARA) and spans 112,000 acres. The ULARA encompasses the San Fernando and Sylmar Basin. It is managed by a court-appointed Watermaster and administrative committee that oversees the operation of GW system and report the groundwater elevations and water quality. The average SFB groundwater rights is approximately 87,000 AFY. LADWP is implementing its SFB Groundwater Remediation Program to help restore the capacity of SFB as a drinking water source and groundwater storage. LADWP is implementing the following groundwater remediation facilities:

1. North Hollywood West Response Action is expected to be operational in early 2023.
2. Tujunga Response Action is expected to be operational in mid-2023.
3. North Hollywood Central Response Action is expected to be operational in late 2023.

LADWP receives additional SFB water through the Los Angeles-Burbank Interim Interconnection Pipeline. In 2015, the City of Los Angeles and the City of Burbank entered into an agreement to construct and operate the Los Angeles-Burbank Interim Interconnection and began delivery of a minimum of 500 AF of blended water in August 2019. The blended water consists of SFB groundwater treated at the Burbank Operable Unit and Metropolitan Water District of Southern California imported water supply. This connection began service in August 2019 and will operate for five years.

The Central Basin is another source of groundwater supply for the City. The Central Basin Watermaster oversees this area that is located in the southeastern part of the Los Angeles Coastal Plan in Los Angeles County. The City has approximately 17,236 AFY of groundwater rights in this basin. With additional carryover and storage of unused water rights, the City has accrued a total of 22,943 AF of stored water as of FYE 2020. LADWP is implementing the following projects at Manhattan and the 99th St. Wellfields to address several issues such as water quality matters, deteriorating groundwater pumps, and necessary upgrades:

1. Manhattan Wells Improvement Project was completed in March 2022.
2. 99th Street Filtration Plant Project includes a series of wellfield improvements to address the water quality issues, expected to be completed in 2025.

Besides the SFB and CB, the City holds water rights in the following local groundwater basins:

1. The Sylmar and Eagle Rock basins are adjudicated basins, managed by the ULARA, that provides 3,570 AF and 500 AF, respectively. The majority of the Sylmar Basin's groundwater production facilities are inoperable due to high levels of contamination and deteriorated facilities. The Mission Wellfield facility underwent continued improvements since the early 2000's to replace the existing deteriorated facilities and restore Sylmar Basin groundwater production capacity. This facility has been in operation since early 2022. Although the City has the right to produce groundwater from Eagle Rock Basin, there are no current plans to establish groundwater production facilities here.
2. The West Coast Basin is managed by the West Coast Basin Watermaster and is located in the southwestern part of the Los Angeles Coastal Plain in Los Angeles County. LADWP has the right to pump 1,503 AF. In 2014, the West Coast Basin Judgment was amended to increase certain parties', like LADWP's, pumping capacity to 5,000 AFY of unused West Coast Basin rights out of the Central Basin. This basin has groundwater quality problems related to TDS, chloride, and hydrocarbon pollutants; therefore, LADWP has discontinued use of West Coast Basin facilities in 1980 until further studies are completed to restore groundwater pumping.

Groundwater produced by the City from the San Fernando, Sylmar, and Central Basins for the last available five years are shown in Table IV.

Table IV
Historical Local Groundwater Basin Supply

Fiscal Year (July-June)	San Fernando (AF)	Sylmar (AF)	Central (AF)
2016-2017	55,116	0*	3,005
2017-2018	22,259	0*	1*
2018-2019	36,870	1*	5*
2019-2020	35,949	2*	10*
2020-2021	53,625	1,368	2,247

*Small quantities pumped from Sylmar and Central Basin were for water quality testing purposes, not water supply

LADWP also has groundwater rights outside the of City. There are 3,975 AF of groundwater rights in the Antelope Valley Groundwater Basin. This basin only allows the native water rights to be used locally; however, LADWP would have the ability to store water it imports into the basin for future export. LADWP would be able to recover imported and stored water for export to the City at times when it is necessary to manage seasonal peak demand or augment supplies during dry periods, emergencies, or natural disasters.

The Central and West Los Angeles areas of the City overlie the unadjudicated groundwater basins from Hollywood Basin, Santa Monica Basin, and the northerly area of Central Basin located outside of the adjudicated Central Basin boundary. LADWP is considering and exploring opportunities to develop groundwater resources in these manners that is locally sustainable and

in cooperation with its regional partners to increase the City's use of local resources. Since the Sustainable Groundwater Management Act (SGMA) took effect on January 1, 2015, LADWP had been working with regional partners towards implementing a SGMA Groundwater Sustainability Plan (GSP) for the Santa Monica Basin. In September 2017, Department of Water Resources (DWR) approved the formation of the Santa Monica Basin Groundwater Sustainability Agency (SMGSA), which consisted of LADWP and four other local agencies. The SMGSA submitted the final GSP to DWR in January 2022.

For additional information, refer to Chapter 5 "Local Groundwater" of LADWP's 2020 UWMP.

3.0 Water Conservation

Water conservation and water use efficiency have significant effects on the City's water use patterns and their benefit to reducing water demands and pressure on other water supplies have become a permanent part of LADWP's water management philosophy. The City's water usage today is the same as over fifty years ago despite an increase in population of over one million people, reflecting the success and importance of the City's water conservation strategies. In the future, conservation will continue to be an important part of maintaining long term supply reliability and is a key component of LADWP's goals to reduce potable water use per capita by 22.5 percent and 25 percent by 2025 and 2035, respectively. LADWP will also comply with the State's water use requirements of Assembly Bill 1668 (2018) and Senate Bill 606 (2018).

LADWP has developed many progressive water conservation and use efficiency programs in conjunction with state and local conservation ordinances and plumbing codes to achieve water conservation throughout its service area and customer classes. Since inception of LADWP's conservation program, the estimated cumulative annual active savings is over 150,000 AFY. Additional savings are passive savings, achieved from codes, ordinances, and changes in customer behavior due to outreach and educational programs.

The state and local conservation ordinances and plumbing codes help LADWP to achieve water conservation throughout its service area and customer classes. Since 1988, the City has utilized ordinances as a tool to reduce water waste, beginning with the adoption of its first version of a plumbing retrofit ordinance. The latest applicable ordinances are: 2009 City's "High Efficiency Plumbing Fixture", 2016 Citywide Water Efficiency Standards Ordinance, 2015 Model Water Efficient Landscape Ordinance (MWELO), and the 2016 Emergency Water Conservation Plan (Conservation Ordinance). The Conservation Ordinance 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. For a full list of Conservation Ordinance prohibited water uses for various phases, please refer to LADWP's 2020 UWMP.

LADWP also achieves and maintains water use reductions through the application of tiered volumetric water rates. Since 1993, LADWP has used an ascending tier rate structure that is entirely volumetric based pricing. LADWP's tiered volume water rates, which were last amended by the City's Water Rate Ordinance (Ordinance No. 184130) with the effective date of April 15, 2016, incorporate and further reinforce foundational water conservation, water use efficiency, and financial principles. A lower first tier rate is applied to water within a specified allocation, and higher successive tier rate is applied to every billing unit exceeding the first tier allocation.

LADWP offers rebates and incentives to promote the installation of water-efficient fixtures and appliances. In 2008, MWD's region-wide SoCal Water$mart Program for residential and commercial water use efficiency rebates replaced previous LADWP rebate programs. This program administers uniform rebate amounts across the MWD service area to all MWD member agencies like LADWP. LADWP takes full advantage of regional programs for many product rebates offered through MWD for the residential and Commercial, Industrial, and Institutional (CII) sector, and adds supplemental funding to increase the rebate amount provided for LADWP customers for many qualifying products. Also, since 1992, LADWP has continued the Technical Assistance Program to promote innovative solutions to saving water. The program provides customized incentives for retrofitting water-intensive equipment in the CII or multi-family customer sector.

LADWP plans its future water conservation programs, focusing on obtaining additional active and passive water savings in the water end uses that have the most non-conserving devices still remaining for each of the customer sectors. LADWP is currently developing the following programs:

- CalConserve Loan Program
- Cooling Tower/Water Fixture Inventory
- Free Turf Replacement Landscape Design Services for Single-Family Residential Customers
- Home Water Use Reports all Single-Family Residential Customers Real-Time Monitoring Devices for Customers

LADWP will continue to actively monitor the per capita water use, particularly in the context of all existing and new standards to ensure that target reductions are met in the future. Additional information on water conservation programs are found in Chapter 3 "Water Conservation" of LADWP's 2020 UWMP and at www.ladwp.com/uwmp.

4.0 Stormwater Capture

Stormwater runoff from urban areas is an underutilized local water resource. Within the City, the majority of stormwater runoff is directed to storm drains and ultimately channeled into the ocean. This unused stormwater carries many pollutants that are harmful to marine life and public health. In addition, local groundwater aquifers that could be replenished by stormwater are receiving less recharge than in past historical times 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. In response, LADWP completed a Stormwater Capture Master Plan in 2015 to comprehensively evaluate stormwater capture potential within the City. Stormwater capture can be achieved by increasing infiltration into groundwater basins and by onsite capture and reuse of stormwater for landscape irrigation (i.e., direct use). The total baseline amount of stormwater captured is 64,000 AF. Through the implementation of additional centralized and distributed stormwater capture projects and programs, in development and in construction, it will provide for increased groundwater recharge in the amount of 66,000 AFY and increased direct use in the amount of 2,000 AFY. Under LADWP's current implementation strategy, the total estimated stormwater capture

capacity is projected to be 155,000 AFY by 2035. This amount is between the conservative estimate of 132,000 AFY and aggressive scenario of up to 178,000 AFY by 2035. LADWP utilizes various strategies to respond to hydrologic variability to maintain supply reliability. One of the strategies, known as conjunctive use, is storing supplies when available to help minimize the impacts of water shortages during future dry periods. Since the 1930's, LADWP has recognized the greater operational flexibility provided by a storage program. LADWP has operated its groundwater resources conjunctively by reducing groundwater pumping and diverting water from the LAA into the Tujunga and Pacoima Spreading Grounds. Another strategy is to capture a large portion of stormwater flows, especially during wet years, through the centralized stormwater capture projects. The captured stormwater is a major source for replenishing groundwater supplies through spreading basins where it is infiltrated into underlying groundwater aquifers. Groundwater recharge will address the overall long-term decline in groundwater basin elevations, protect the safe yield of the groundwater basin, and ensure the long-term water supply reliability of the San Fernando Basin (SFB). The 2020 UWMP projects that by 2045 there will be a minimum of 15,000 AFY of increased groundwater pumping in the SFB due to increased groundwater recharge through centralized stormwater infiltration. Anticipating that stored groundwater will rebound in response to enhanced groundwater recharge, LADWP will work with the ULARA Watermaster to continue observing actual basin elevations and re-evaluate basin safe yield to allow additional increases in groundwater production over time as SFB elevations rebound.

Flood control facilities are the primary means to divert native runoff into the spreading basin facilities. LADWP coordinates stormwater capture related activities, such as collection and delivery of large stormwater runoff to spreading basins, with Los Angeles County Flood Control District to effectively recharge the SFB. Completed in November 2021, the Tujunga Spreading Grounds Upgrade Project increased stormwater capture capacity by 8,000 AFY to a total of 16,000 AFY.

LADWP's Stormwater Capture Parks Program (Parks Program) has identified nine City-owned parks suitable for stormwater capture projects. The primary objective of the Parks Program is to recharge the San Fernando Valley Groundwater Basin by capturing urban runoff and diverting stormwater from the Tujunga Wash Central Branch storm drain. The anticipated Parks Program capture capacity is 3,088 AFY. The Parks Program provides multiple benefits, such as improvements to the Los Angeles River water quality, reducing localized flooding, raising public awareness, and providing open space enhancements through active and passive recreation space.

The other method to capture stormwater is through distributed stormwater capture facilities. Distributed stormwater/runoff capture refers to capturing localized dry and wet weather runoff. While centralized stormwater capture plays a key role in groundwater recharge in the City, space constraints limit opportunities for new large centralized facilities, and the City has changed the focus towards distributed stormwater capture. Distributed stormwater capture includes stormwater management Best Management practices that utilize vegetation, soils, and natural processes to manage stormwater runoff close to the source. Distributed facilities also aim to conserve water by capturing stormwater for uses that reduce potable water demand.

For additional information, refer to Chapter 6 "Watershed Management" of LADWP's 2020 UWMP.

5.0 Water Recycling

As early as 1960, the City recognized the potential for water recycling and invested in infrastructure that produced water of tertiary quality, a high treatment standard for wastewater. In 1979, LADWP began delivering tertiary quality recycled water to the Department of Recreation and Parks for irrigation of various areas in Griffith Park. Today LADWP serves approximately 179 sites in the City with recycled water for irrigation, industrial, and environmental beneficial uses. There are approximately 200 individual customer service accounts, with several projects containing multiple customer accounts at a single location. Recycled water produced for FYE 2020 was 36,392 AFY, inclusive of municipal and industrial, and environmental reuse.

LADWP is committed to maximizing use of recycled water in the City's water supply portfolio. Expansion of recycled water use to offset potable demands has been recognized as one method that will help LADWP achieve its goal of improving the local sustainability of its water supply. LADWP is working in conjunction with LASAN to develop non-potable reuse projects for irrigation and industrial uses. In addition, the City is pursuing a groundwater replenishment project to replenish the San Fernando Groundwater Basin with highly treated recycled water. LADWP's recycled water use is projected to reach 50,900 AFY by FYE 2025 by adding 8,000 AFY of planned municipal/industrial use and 7,000 AFY of indirect potable reuse (groundwater replenishment), and further increase to 67,600 AFY through FYE 2045. Environmental reuse is expected to remain relatively constant at approximately 26,600 AFY. For more information on the latest 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.

For additional information, refer to Chapter 7 "Recycled Water" of LADWP's 2020 UWMP.

6.0 Metropolitan Water District of Southern California

MWD is the largest water wholesaler for supplemental domestic and municipal water uses in California. As one of the twenty-six member agencies of MWD, the City through LADWP purchases water from MWD to supplement its water supplies from the LAA, local groundwater, and recycled water. Between FYE 2017 to FYE 2021, LADWP purchased an average of 201,211 AFY from MWD or approximately 40 percent of the City's total water supply.

MWD imports water from two principal sources: northern California via the California Aqueduct and the Colorado River via the Colorado River Aqueduct (CRA). MWD also manages and owns in-basin surface storage facilities, stores groundwater within the basin via contracts, engages in groundwater storage outside the basin, and conducts water transfers to provide additional supplies for its member agencies. All member agencies have preferential rights to purchase water from MWD, pursuant to Section 135 of MWD Act. As of FYE 2021, LADWP has a preferential right to purchase 17.93 percent of MWD's total water supply.

MWD is a contractor for water from Northern California through the State Water Project's (SWP) California Aqueduct. MWD holds 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 SWP. However, this

amount varies annually due to many factors. DWR annually approves the amount of contract allocations SWP receives, which is shown in DWR's "Table A."

MWD owns and operates the CRA. Since 1942, the CRA has delivered water from the Colorado River to Southern California. The Colorado River supplies come from watersheds of the Upper Colorado River Basin in the states of Colorado, Utah, and Wyoming. 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. California is apportioned 4.4 million AF, annually, plus one-half of any surplus that may be available for use, collectively, in Arizona, California, and Nevada. Of the California apportionment, MWD holds the fourth priority right to 550,000 AFY under the 1931 priority system governing allotments to California. Beyond the basic apportionment, MWD holds a fifth priority right to 662,000 AF of water. See Appendix F for more details.

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 actions have been focused on the following: continuing water conservation, developing water supply management programs outside of the region, developing storage programs related to the SWP and the Colorado River, developing storage and groundwater management programs within the Southern California region, increasing water recycling, groundwater recovery, stormwater, and seawater desalination and pursuing long-term solutions for the ecosystem, regulatory and water supply issues in the California Bay-Delta.

MWD's water reliability assessments are presented in MWD's 2020 UWMP, which can be found at the following link: http://www.mwdh2o.com/AboutYourWater/Planning/Planning-Documents

7.0 Summary of Water Demand and Supply Projections for 20 years

LADWP's 2020 UWMP projects yearly water demand to reach 710,500 AF by FYE 2045 with existing water conservation prior to FYE 2014 already subtracted from projected demands, and with new water conservation savings achieved included as a supply source. Demographic data from 2020 SCAG Regional Transportation Plan for LADWP's service area, as well as billing data for each major customer class, price of water, median household income, household size, economy, and dry period conservation effect were factors used in forecasting future water demand growth. Further details on LADWP's water demand forecast methodology can be found in Chapter 2 "Water Demand" of LADWP's 2020 UWMP. Table V tabulates the service reliability assessment for average weather year.

EXHIBIT 4

Table V
Service Area Reliability Assessment for Average Weather Year

Demand and Supply Projections (in acre-feet)	Average Year Fiscal Year Ending (FYE) on June 30				
	2025	2030	2035	2040	2045
Total Water Demand[1]	**642,600**	**660,200**	**678,800**	**697,800**	**710,500**
Post-Conservation Demand	**509,500**	**526,700**	**536,100**	**554,500**	**565,800**
Existing / Planned Supplies					
Conservation (Additional Active[2] and Passive[3] after FYE 14)	133,100	133,500	142,700	143,300	144,700
Los Angeles Aqueduct[4]	190,400	188,900	187,300	185,800	184,200
Groundwater					
- Entitlements[5]	109,400	109,400	109,400	108,800	108,800
- Groundwater Replenishment	7,000	11,000	11,000	11,000	11,000
- Stormwater Recharge (Increased Pumping)	4,000	8,000	15,000	15,000	15,000
Recycled Water- Irrigation and Industrial Use	17,300	29,200	29,700	29,800	30,000
Subtotal	461,200	480,000	495,100	493,700	493,700
MWD Water Purchases					
With Existing/Planned Supplies	181,400	180,200	183,700	204,100	216,800
Total Supplies	**642,600**	**660,200**	**678,800**	**697,800**	**710,500**

[1] Total Demand with existing passive conservation prior to FYE 14

[2] Cumulative hardware savings since late 1980s reached 110,822 AFY by FYE 14

[3] Additional non-hardware conservation inclusive of retained passive savings from the dry period ending in 2017

[4] Los Angeles Aqueduct supply is estimated to decrease 0.1652 percent per year due to climate impacts.

[5] LADWP Groundwater Remediation projects in the San Fernando Basin are expected to be in operation by FYE 2023. Sylmar Basin production will increase to 4,170 AFY from FYE 2021 to 2036 to avoid the expiration of stored water credits, then revert to entitlement amounts of 3,570 AFY in 2037.

Service area reliability assessments for single-dry year and multiple-dry year conditions are shown in LADWP 2020 UWMP Exhibits 11F through 11G. Demands are met by the available supplies under all scenarios.

Water System Financing Program

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.

The current water rates and its structures provide for modest rate increases each year over a five-year period for infrastructure improvements, meeting regulatory water quality requirements, and expanding the local water supply, which includes recycled water, stormwater capture, conservation, water efficiency, and groundwater remediation. LADWP's water rates incorporate and further reinforce foundational water conservation, water use efficiency, and financial principles. For example, the current water rate structure contains four tiers for single-family residential customers. The four tiers build on the previous two tier structure, providing a first-tier indoor water use base allocation, a second-tier allocation based on California Friendly Landscaping efficient outdoor use, a third-tier allocation capturing high outdoor water use, and a fourth-tier allocation for excessive use. In keeping with cost of service principles, the incremental pricing for the tiers is based on the cost of water supply.

In addition, LADWP will utilize a combination of the following funding sources:

- MWD – Currently provides funding through their Local Resources Program for the development of water recycling, groundwater recovery and seawater desalination.

- Grants and loans – LADWP continues to proactively seek government funding to offset potential impacts to ratepayers. Local funds, such as Measure W's "Safe, Clean Water Program," provide funding for stormwater capture projects. State funds, such as Propositions 1, 50, and 84, provide funding for recycling, groundwater, conservation and stormwater capture projects. And Federal funds, such as the Water Resource Development Act and the US Bureau of Reclamation's Title XVI program, provide funding for water recycling projects.

Conclusion

The Project is estimated to increase the total water demand within the site by 439 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's 2020 UWMP using a service area-wide approach that does not rely on individual development demand. The LADWP's 2020 UWMP utilized SCAG's 2020 RTP/SCS 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 SCAG's 2020 RTP/SCS, LADWP has determined that the Project's water demand is included in the LADWP's 2020 UWMP, which forecasts adequate water supplies to meet all projected water demands in the City through the year 2045. LADWP concludes that the projected 439 AFY increase in the total water demand for this Project is accounted for in the LADWP's 2020 UWMP 25-year water demand projections. LADWP has determined that 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.

EXHIBIT 4

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

CAROLINE CHOE
VICE-PRESIDENT

HELEN CAMPBELL
JENNA HORNSTOCK
HELEN LEUNG
YVETTE LOPEZ-LEDESMA
KAREN MACK
DANA M. PERLMAN
RENEE DAKE WILSON

EXHIBIT 4

CITY OF LOS ANGELES
CALIFORNIA

ERIC GARCETTI
MAYOR

EXECUTIVE OFFICES
200 N. SPRING STREET, ROOM 525
LOS ANGELES, CA 90012-4801
(213) 978-1271

VINCENT P. BERTONI, AICP
DIRECTOR

SHANA M.M. BONSTIN
DEPUTY DIRECTOR

ARTHI L. VARMA, AICP
DEPUTY DIRECTOR

LISA M. WEBBER, AICP
DEPUTY DIRECTOR

March 31, 2022

Los Angeles Department of Water and Power
Water Resources Division
Sabrina Tsui, Manager of Resources Development
111 North Hope Street, Room 314
Los Angeles, California 90012

Re: Request for Water Supply Assessment — Fourth & Central Project (Case No. Env-2021-4071-EIR)

Dear Mrs. Tsui:

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 the 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: (1) residential developments of more than 500 dwelling units; (2) a shopping center or business establishment that will employ more than 1,000 persons or have more than 500,000 square feet of floor space; (3) a commercial office building that will employ more than 1,000 persons or have more than 250,000 square feet of floor space; (4) hotels, motels, or both, having more than 500 rooms; (5) 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) mixed-use projects that include one or more of the above-identified categories; or (7) a project that would demand an amount of water equal to or greater than the amount of water needed to serve a 500 dwelling unit project.

The Fourth & Central Project (herein referred to as the Project) is a mixed-use project (Criteria 6) that includes the development of more than 500 dwelling units (Criteria 1), a shopping center or business establishment encompassing more than 500,000 square feet of floor space or employing more than 1,000 persons (Criteria 2), and a commercial office building encompassing more than 250,000 square feet of floor space or employing more than 1,000 persons (Criteria 3). The Project includes the development of 1,581 residential units with a total floor area of 1,581,514 square feet within it mix of residential, retail/restaurant, office and hotel uses.

The Los Angeles Department of Water and Power (LADWP) has been identified as the public water system (as defined in CWC Section 10912 and CEQA Guidelines Section 15083.5(e)) that would serve the Project. Accordingly, the City of Los Angeles Department of City Planning requests that, to facilitate this study the LADWP: (1) determine whether the estimated water demand associated with the Project was included as part of LADWP's most recently adopted UWMP; and (2) prepare and approve a water supply assessment using the UWMP or new analyses for the Project pursuant to CWC Section 10910 et seq.

The requirements for a water supply assessment include the identification of existing water supply entitlements, water rights, or water service contracts held by LADWP's public water system, and prior years' water deliveries received by LADWP's public water system. Please refer to CWC Section 10910 (d)(2) for the documentation required to verify any identified rights to a water supply. If the LADWP has not received water in prior years as described in CWC Section 10910 (e) or if groundwater is a source of supply as described in CWC Section 10910 (f), please comply with the requirements of those sections.

The Department of City Planning, which is preparing an Environmental Impact Report (EIR) for the Project in accordance with CEQA, requests that the water supply assessment include a discussion of whether LADWP's public water system's total projected water supplies available during normal, single dry, and multiple dry water years will meet the projected water demand associated with the Project, in addition to LADWP's public water system's existing and planned future uses, including agricultural and manufacturing uses, pursuant to CWC Section 10910 (c)(3).

Project Location

The Project Site is generally located at 400 Central Avenue and is made up of six (6) parcels (Assessor Parcel Numbers: 5147-001-007, 5147-013-016, 5147-012-015, 5147-011-015, 5147-011-016, and 5147-011-017) is located at 364, 400–464 (even), 425, 427, 429, 431, and 433 South Central Avenue; 707, 715, 730 East 4th Street; Los Angeles, CA 90013, in the Central City Community Plan Area of the City of Los Angeles.

The Project Site includes a total land area of approximately 7.6 acres [333,602 gross square feet (sf) of lot area pre-dedication]. The parcels that make up the Project Site are clustered across three City blocks and include the following three areas:

- The 1.35-acre North Site (APN 5147-001-007) is generally located at the northeast corner of Central Avenue and 4th Street.
- The 5.98-acre South Site (APN 5147-013-016) is generally bound by 4th Street to the north, Alameda Street to the east, Central Avenue to the west and industrial uses to the south. The southern boundary of the South Site generally terminates near the intersection of 5th Street and Central Avenue.
- The 0.32-acre West Site (APNs 5147-012-015, 5147-011-015, -016, -017) is generally located west of the intersection of Gladys Avenue and Central Avenue.

Figure 1, *Regional and Project Vicinity Map*, provides an aerial view of the Project Site and its surroundings (attached).

Existing Uses

Currently, the Project Site is occupied by cold storage facilities that include warehouse and wholesale commercial buildings and associated office space, truck loading docks, and surface parking. The existing buildings on the Project Site total approximately 360,734 sf of floor area. **Figure 2**, *Existing On-Site Uses*, illustrates the existing buildings and uses on the Project Site.

As shown in Figure 2, the North Site is currently developed with a six-story cold storage warehouse building and attached single-story warehouse. The combined floor area of the two buildings is approximately 167,596 sf.

The South Site is developed with a single-story high-bay warehouse cold storage building totaling approximately 190,267 sf and a conjoining 2,871 sf, single-story office building. The two buildings have a total floor area of approximately 193,138 sf. The South Site also includes 33 parking spaces that serve the warehouse building.

The West Site provides 39 parking spaces in a fenced, paved lot and is not improved with any buildings. The paved lot allows for additional parking for the existing cold storage facilities across Central Avenue on the North and South Sites.

There is no landscaping on the Project Site. Vegetation is limited to 20 fern pines (Podocarpus sp.) within the adjacent roadway right-of-way, with ten trees being located on the northern boundary of the North Site (along 4th Street) and ten trees along the eastern boundary of the South Site along Alameda Street.

Existing Water Meters

Existing Site Addresses (for billing purposes):

- 715 E. 4th Street
- 400 S. Central Avenue
- 440 S. Central Avenue

Meter/Service Numbers:

- 90126404 & 90126405 (1a) 00000669-1297606
- 90103932 (2b) 04786652-1084559
- 90377974 (3b) 00000176-1249534

Uses Covered by Water Meters:

- Cooling Tower and Domestic use (Restroom Facilities) (1a) 6" Fire Service
- Domestic use for 400 and 418 S. Central Ave. (Restroom Facilities) (2a) 6" Fire Service
- Cooling Tower and Domestic use (Restroom Facilities) (3a) 8" Fire Service for 410, 418 and 440 S. Central Ave.

The water meters cover the entire Project Site. All areas of the Project Site are currently utilized (no vacant areas).

Attachment A, Existing Water Usage Data, to this letter includes water usage data for the existing on-site cold storage facility.

Customer Name/Number:

- LA Cold Storage ACCOUNT NUMBERS (1) 583 418 0000 (1a) 683 418 0000 (2) 083 418 0000 (3) 383 418 0000

Project Characteristics

The Project would demolish all of the existing improvements uses and surface parking on the South and West Sites, and intends to, if feasible, adaptively reuse a portion of a six-story cold storage building on the North Site, while demolishing the remaining warehouse uses. The Project would include a mix of residential, office, restaurant/retail, and hotel uses within 10 distinct buildings over the three Sites

totaling approximately 2,318,534 sf, for a floor area ratio (FAR) of 6.95:1. The Project would include: 1,521 residential units, including affordable housing units, totaling approximately 1,731,849 sf of floor area; approximately 411,113 sf of office uses; approximately 101,088 sf of restaurant/retail uses; and, 68 hotel rooms (74,484 sf of hotel floor area). The Project would include approximately 163,325 sf of Code required private open space. The Project would include approximately 90,113 sf of publicly accessible open space, including paseos passing between Central Avenue and Alameda Street, plazas, and pocket parks within the North and South Sites. The proposed buildings would range in height from 2 to 44 stories, with a maximum height of approximately 497 feet. The Project would provide 2,473 vehicle parking spaces within subterranean parking (up to 4 levels) and podium parking. **Figure 3**, *Conceptual Site Plan*, provides an illustration of the site plan for the Project. **Figure 4**, *Proposed Program Diagrams*, provides a three-dimensional rendering and overall configuration of the Project's ten buildings.

Each of the Project uses are shown by building within the three areas of the Project Site (e.g., North Site, South Site, and West Site) based on the Bureau of Sanitation's Sewage Generation Factors in **Table 1**, *Project Land Uses Per Bureau of Sanitation Wastewater Generation Factors*. Table 1 assumes full flush of the pools/spas to provide a worse-case (conservative analysis) of daily sewer generation. However, full flushing of the pools/spas would not occur on a daily basis, and may only occur a few days per year for each pool/spa. Process flows are typically 500 gallons per or less for each pool/spa.

TABLE 1
DEVELOPMENT PROGRAM SUMMARY

Facility Description	Building Program	Units	Flow	Avg (gpd)[1]
Sewer Generation for Building 1 (6-Stories)				
Residential Amenity	44,660	GPD per KGSF	75	3,350
Retail	7,468	GPD per KGSF	50	373
Restaurant: Full Service Indoor - 8,910 sf (15 sf / seat)	594	GPD per seat	30	17,820
Total Sewer Generation				**21,543**
Sewer Generation for Building 2 (44-Stories)				
Residential (Studio)	74	GPD per DU	75	5,550
Residential (1 Bed Room)	222	GPD per DU	110	24,420
Residential (2 Bed Room)	111	GPD per DU	150	16,650
Residential (3 Bed Room)	42	GPD per DU	190	7,980
Retail	4,102	GPD per KGSF	50	205

TABLE 1
DEVELOPMENT PROGRAM SUMMARY

Facility Description	Building Program	Units	Flow	Avg (gpd)[1]
Restaurant: Full Service Indoor - 1,800 sf + 4,696 sf (15sf / seat)	433	GPD per seat	30	12,992
Spa+Pool	37,403	Gallons		37,403
Gym	3,260	GPD per KGSF	200	652
Total Sewer Generation				**105,852**
Sewer Generation for Building 3 (7-Stories)				
Retail	10,681	GPD per KGSF	50	534
Office with cooling tower	81,854	GPD per KGSF	120	9,822
Restaurant: Full Service Indoor - 4,610 sf (15 sf / seat)	307	GPD per seat	30	9,220
Restaurant: Full Service Outdoor - 2,231 sf (15 sf / seat)	149	GPD per seat	30	4,462
Total Sewer Generation				**24,038**
Sewer Generation for Building 4 (12 Stories)				
Retail	2,246	GPD per KGSF	50	112
office with cooling tower	184,162	GPD per KGSF	120	22,099
Restaurant: Full Service Indoor - 5,475 sf (15 sf / seat)	365	GPD per seat	30	10,950
Restaurant: Full Service Outdoor - 2,888 sf (15 sf / seat)	193	GPD per seat	30	5,776
Total Sewer Generation				**38,937**
Sewer Generation for Building 5 (28-Stories)				
Residential (Studio)	183	GPD per DU	75	13,725
Residential (1 Bed Room)	142	GPD per DU	110	15,620
Residential (2 Bed Room)	100	GPD per DU	150	15,000
Retail	2276	GPD per KGSF	50	114
Restaurant: Full Service Indoor - 3,483 + 5,600 sf (15sf / seat)	606	GPD per seat	30	18,166
Restaurant: Full Service Outdoor - 1,665 + 2,815 sf (15 sf / seat)	299	GPD per seat	30	8,960
Spa+Pool	37,403	Gallons		37,403
Gym	1,000	GPD per KGSF	200	200

TABLE 1
DEVELOPMENT PROGRAM SUMMARY

Facility Description	Building Program	Units	Flow	Avg (gpd)[1]
Total Sewer Generation				**109,188**
Sewer Generation for Building 6 (6-Stories)				
Residential (1 Bed Room)	44	GPD per DU	110	4,840
Residential (2 Bed Room)	24	GPD per DU	150	3,600
Retail	6,407	GPD per KGSF	50	320
Hotel (King)	46	GPD per Room	120	5,520
Hotel (Double Queen)	22	GPD per Room	120	2,640
Restaurant: Full Service Indoor - 3,445 + 5,715 sf (15 sf / seat)	611	GPD per seat	30	18,330
Restaurant: Full Service Outdoor - 1,730 + 1,148 sf (15sf / seat)	192	GPD per seat	30	5,760
Spa+Pool	32,465	Gallons		32,465
Gym	2,740	GPD per KGSF	200	548
Hotel Bar (Outdoor Seating) - 546 sf (15 sf / seat)	37	SF	15	555
Total Sewer Generation				**74,578**
Sewer Generation for Building 7 (10-Stories plus 2-story industrial sheds)				
Residential (Live/Work)	4	GPD per DU	75	300
Residential (Studio)	35	GPD per DU	75	2,625
Residential (1 Bed Room)	62	GPD per DU	110	6,820
Residential (2 Bed Room)	22	GPD per DU	150	3,300
Retail	12,357	GPD per KGSF	50	618
Spa+Pool	37,403	Gallons		37,403
Gym	1,000	GPD per KGSF	200	200
Total Sewer Generation				**51,266**
Sewer Generation for Building 8 (12 Stories)				
Retail	4,645	GPD per KGSF	50	232
office with cooling tower	137,699	GPD per KGSF	120	16,524
Total Sewer Generation				**16,756**
Sewer Generation for Building 9 (27 Stories)				
Residential (Live/Work)	4	GPD per DU	74	296

TABLE 1
DEVELOPMENT PROGRAM SUMMARY

Facility Description	Building Program	Units	Flow	Avg (gpd)[1]
Residential (Studio)	88	GPD per DU	75	6,600
Residential (1 Bed Room)	186	GPD per DU	110	20,460
Residential (2 Bed Room)	34	GPD per DU	150	5,100
Retail	5,076	GPD per KGSF	50	254
Spa+Pool	37,403	Gallons		37,403
Gym	1,000	GPD per KGSF	200	200
Total Sewer Generation				**70,313**
Sewer Generation for Building 10 (18 Stories)				
Residential (Studio)	48	GPD per DU	75	3,600
Residential (1 Bed Room)	64	GPD per DU	110	7,040
Residential (2 Bed Room)	32	GPD per DU	150	4,800
Total Sewer Generation				**15,440**
PROJECT TOTAL SEWER GENERATION				**527,911**

NOTES:

[1] Table assumes full flush of the pools/spas to provide a worse-case (conservative analysis) of sewer generation. However, this would not occur on a daily basis, and may only occur a few days per year for each pool/spa. Process flows are typically 500 gallons per or less.

GPD = gallons per day

KGSF = 1,000 gross square feet

DU – dwelling unit

SOURCE: ESA, 2022.

Existing Planning and Zoning

The Project Site, which is within the planning boundary of the Central City Community Plan, has a General Plan land use designation of Light Industrial and is zoned M2-2D-O on the North Site and M2-2D on the South and West Sites. This zoning permits a range of industrial uses prevalent in the area such as warehouses and cold storage facilities, and also permits commercial and office uses. The “2D” indicates Height District 2D, which does not limit the height of buildings on these properties, but limits

the FAR to 3:1. The "O" designation indicates that the Project Site is located within an oil drilling district where the drilling of oil wells or the production from oil wells, gas, or other hydrocarbon substances is permitted.

Cooling Towers

Based on preliminary cooling load calculations and mechanical system arrangements, it is estimated that the total make-up water requirement for the cooling towers proposed on the Fourth and Central site would be approximately 22,472,590 gallons annually (with a monthly average of 1,872,716 gallons or 62,569 gallons per day). This make-up water rate is based on a 4,000 Ton chiller plant system being proposed to serve 8 of the buildings, with the two other buildings on the site being served via air-cooled systems. These values are rough estimates at this early design stage that could be impacted by several variables including building thermal performance, system selection, and occupancy profiles.

Landscaping

The Project would include landscaping throughout the ground level and rooftop amenity decks. These planting areas would consist of a mix of shade and ornamental trees, shrubs, and groundcovers. **Figure 5**, *Ground Level Plan,* shows the landscape plan for the ground level of Buildings 1-10. Plant materials would be combination of native plants and plants adapted to the Southern California climate that have low to medium water demand. New and existing soils would be amended to ensure healthy, vigorous plants and a layer of decorative bark mulch would aid in moisture retention and weed control. The final planting design would include an irrigation system that complies with the State of California Model Water Efficient Landscape Ordinance (MWELO). A smart irrigation controller with weather sensing technology along with a high efficiency drip irrigation system would be utilized to apply water efficiently and effectively to new planting areas.

Figure 6, *Overall Tree Planting Plan*, illustrates the tree planting plan for the Project. The residential uses would generate a requirement of 382 trees to be provided within the Project Site. In addition, the existing 20 street trees to be removed during Project construction would be required to be replaced at a 2:1 ratio for a total of 40 replacement trees. Overall, the total tree planting for the Project would require 408 new trees which the Project would provide.

Table 2A, *Hydrozone Area Information (non-residential)*, shows the plant factors and the square footages for each proposed Hydrozone Area at all mixed-used buildings and streetscape. The Low Shrub (19,616 square feet), Moderate Shrub (10,564 square feet), and High Shrub Hydrozone Areas (2,879 square feet) would use drip irrigation. The Low Tree (3,294 square feet) and Moderate Tree Hydrozone areas (1,161 square feet) would use bubbler sprays. The Level 6 swimming pool & Spas (1,110 square feet) are included in the High Hydrozone areas as well. The

landscaped areas would meet California Assembly Bill (AB) 1881 and all applicable Model Water Efficient Landscape Ordinance requirements.

TABLE 2A
HYDROZONE AREA INFORMATION (NON-RESIDENTIAL)

Hydrozone	PF	Hydrozone Area square feet (sf)
Low shrub	0.2	19,616 sf
Low Tree	0.2	3,294 sf
Moderate shrub	0.5	10,564 sf
Moderate tree	0.5	1,161 sf
High shrub	0.7	2,879 sf
Pool & Spas	0.7	1,110 sf
Total		**38,624 sf**

SOURCE: Studio One Eleven, 2022.

Table 2B, *Hydrozone Area Information (residential)*, shows the plant factors and the square footages for each proposed Hydrozone Area in residential building 10. The Low Shrub (5,763 square feet), Moderate Shrub (9,272 square feet) would use drip irrigation. The Low Tree (1,764 square feet) and Moderate Tree Hydrozone areas (1,458 square feet) would use bubbler sprays. The landscaped areas would meet California Assembly Bill (AB) 1881 and all applicable Model Water Efficient Landscape Ordinance requirements.

TABLE 2B
HYDROZONE AREA INFORMATION (RESIDENTIAL)

Hydrozone	PF	Hydrozone Area square feet (sf)
Low shrub	0.2	5,763 sf
Low Tree	0.2	1,764 sf
Moderate shrub	0.5	9,272 sf
Moderate tree	0.5	1,458 sf
Total		**18,257 sf**

SOURCE: Studio One Eleven, 2022.

With respect to landscape irrigation, **Table 3A**, *Maximum Applied Water Allowance (MAWA) Non-Residential*, shows the projected water consumption associated with proposed landscaping at all mixed-used buildings and streetscape, which is estimated to be 539,882 gallons per year (1.66 acre-feet per year), as calculated per the Model Water Efficient Landscape Ordinance (California Code of Regulations

(CCR) Title 23, Division 2, Chapter 2.7, Section 492.1). **Table 3B**, *Maximum Applied Water Allowance (MAWA) Residential*, shows the projected water consumption associated with proposed landscaping in the residential tower 10, which is estimated to be 311,904 gallons per year (.96 acre-feet per year), as calculated per the Model Water Efficient Landscape Ordinance (California Code of Regulations (CCR) Title 23, Division 2, Chapter 2.7, Section 492.1). **Table 4A**, *Planting Matrix Estimated Total Water Use (MAWA) [Non-Residential]*, shows the proposed planting matrix for the Project**. Table 4B**, *Planting Matrix Estimated Total Water Use (MAWA)[Residential}*, shows the proposed planting matrix for the Project**.**

TABLE 3A
MAXIMUM APPLIED WATER ALLOWANCE (MAWA) [NON-RESIDENTIAL]

Reference Evapotranspiration (ETo)[a]	Conversion Factor	ET Adjustment Factor (AF)	Landscape Area (LA)	Special Landscape Area (SLA)	Gallons Used	Acre-Feet per year (AFY)
Landscape Area						
50.1	0.62	0.45	38,624	-	539,882	1.66

NOTES

[a] Reference Evapotranspiration (ETo) value from CIMIS ETo Zone Map. Accessed from http://www.cimis.water.ca.gov/App_Themes/impages/etozonemap.jpg

SOURCE: Studio One Eleven, 2022.

TABLE 3B
MAXIMUM APPLIED WATER ALLOWANCE (MAWA) [RESIDENTIAL]

Reference Evapotranspiration (ETo)[a]	Conversion Factor	ET Adjustment Factor (AF)	Landscape Area (LA)	Special Landscape Area (SLA)	Gallons Used	Acre-Feet per year (AFY)
Landscape Area						
50.1	0.62	0.55	18,257	-	311,904	0.96

NOTES

[a] Reference Evapotranspiration (ETo) value from CIMIS ETo Zone Map. Accessed from http://www.cimis.water.ca.gov/App_Themes/impages/etozonemap.jpg

SOURCE: Studio One Eleven, 2022.

TABLE 4A
PLANTING MATRIX - ESTIMATED TOTAL WATER USE (MAWA) [NON-RESIDENTIAL]

Plant Types	Plant Water Type / WUCOL	Plant Factor (PF)	Irrigation Method	Irrigation Efficiency	Hydrozone Area (HA)	PF x HA
Trees, Shrubs and Groundcover	LOW	0.2	Drip	0.81	22,910	4,582
Trees, Shrubs and Groundcover	MEDIUM	0.5	Drip	0.81	11,725	5,862
Annuals, Shrubs	HIGH	0.7	Drip	0.81	2,879	2,015
Pool & Spas at Bldg 6	HIGH	0.7	Spray	0.75	1,110	777
					38,624	***13,236***
					Estimated Total Water Use (ETWU) = 512,685 gallons per year	

NOTES

[a] Reference Evapotranspiration (ETo) value from CIMIS ETo Zone Map. Accessed from http://www.cimis.water.ca.gov/App_Themes/impages/etozonemap.jpg

SOURCE: Studio One Eleven, 2022.

TABLE 4B
PLANTING MATRIX - ESTIMATED TOTAL WATER USE (MAWA) [RESIDENTIAL]

Plant Types	Plant Water Type / WUCOL	Plant Factor (PF)	Irrigation Method	Irrigation Efficiency	Hydrozone Area (HA)	PF x HA
Trees, Shrubs and Groundcover	LOW	0.2	Drip	0.81	7,527	1,505
Trees, Shrubs and Groundcover	MEDIUM	0.5	Drip	0.81	10,730	5,365
					18,257	***6,870***
					Estimated Total Water Use (ETWU) = 265,094 gallons per year	

NOTES

[a] Reference Evapotranspiration (ETo) value from CIMIS ETo Zone Map. Accessed from http://www.cimis.water.ca.gov/App_Themes/impages/etozonemap.jpg

SOURCE: Studio One Eleven, 2022.

Sustainability Features

At the minimum, the Project's buildings will be designed to meet the standards for United States Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) Certification through proven and effective design strategies. The Project may seek certification as an Environmental Leadership Development Project (ELDP) under the Jobs and Economic Improvement Through Environmental Leadership Act (PRC, § 21178 et seq.). The Project would incorporate water conservation and rainwater management strategies such as low flow/efficient water fixtures, rainwater capture systems, drought-tolerant/California native plant species selection, landscape contouring to minimize precipitation runoff, irrigation system efficiency, smart irrigation systems (e.g., weather-based controls), and water-saving pool equipment. The Project will use tree landscaping via passive solar shading and use cool roof/pavement coatings to reduce the urban heat island effect.

Parking

Vehicle parking to serve each of the buildings would be provided in several locations throughout the Project Site. Parking for the North Site would be provided within Building 2, in a 4-level subterranean structure and six levels above grade. The South Site includes a 3-level subterranean structure that runs underneath the entire South Site. Building 9 also includes 4 levels of above grade structured parking. Parking for Building 10 on the West Site is located within a 1-level subterranean structure and surface parking.

The Project Site is located within the Los Angeles State Enterprise Zone, which permits general commercial uses to provide two (2) parking spaces per 1,000 sf of gross commercial floor area. (LAMC Section 12.21-A.4(x).) The Project Site is also part of the Central City Parking District, which governs the Project's residential and hotel parking requirements. (LAMC, § 12.21-A.4(p).) The parking requirement for residential projects in the Central City Parking District is one space for each dwelling unit with three or fewer habitable rooms and 1.25 spaces for units with more than three habitable rooms. (LAMC Section 12.21-A.4(p).) Parking requirements for hotels within the Central City Parking District are as follows: one space for each two individual guest rooms for the first 20 rooms, one additional parking space for each four guest rooms in excess of 20 but not exceeding 40 rooms, and one additional parking space for each six guest rooms in excess of 40 rooms. (LAMC Section 12.21-A.4(p).)

The Project's vehicular parking requirement under the LAMC is 2,658 spaces. However, pursuant to LAMC section 12.21-A.4, the Project will replace required vehicular parking spaces with bicycle parking spaces, which reduces the total vehicular parking requirement to 2,474 spaces. The Project would provide a total of approximately 2,475 spaces, thus, meeting LAMC parking requirements.

There would be two (2) restrooms with showers (236 SF) on Level P3 in the South Site for residential bicycle parking.

Anticipated Approvals

The list below includes the anticipated requests for approval of the Project.

- General Plan Amendment pursuant to LAMC Section 11.5.6 A to re-designate the underlying land use from Light Industrial to Regional Center Commercial.
- Vesting Zone Change and Height District Change pursuant to LAMC Sections 12.32 F, 12.32 H, and 12.32 Q, to change the zone from M2-2D/M2-2D-O to C2-2, which involves removing the D Development Limitation.
- Affordable Housing Development Incentives under Measure JJJ.
- Main Conditional Use Permit pursuant to LAMC Section 12.24 W.1 to permit the sale and dispensing of alcoholic beverages for on-site and/or off-site consumption.
- Site Plan Review pursuant to LAMC Section 16.05 for approval of development of a project which creates 50,000 gross sf or more of nonresidential floor area and creates 50 or more dwelling units.
- Vesting Tentative Tract Map pursuant to LAMC Section 17.15 to merge 35 existing lots and re-subdivide into four (4) ground lots and twenty-six air space lots for commercial and residential purposes.
- Development Agreement approval pursuant to Government Code Sections 65864 et seq.

Construction Schedule

Project construction is anticipated to commence as early as 2025 and is estimated to be completed within approximately 5 years. Construction activities within the North, South and West Sites would be phased to meet market demand and/or to maximize construction efficiency. As part of the Project construction activities, all on-site buildings and associated infrastructure (i.e., surface parking, sidewalks, landscaping, etc.) would be removed on the South and West Site. On the North Site, a portion of the existing six-story cold storage building at 715 4th Street is intended to be adaptively reused, if feasible, to provide new restaurant/retail uses and residential amenities. The remainder of the six-story warehouse and the existing 1-story warehouse building component on the North Site would be demolished during Project construction activities. If it is not feasible to adaptively reuse a portion of the existing

six-story cold storage building at 715 E. 4th Street, the building would be demolished in its entirety.

Overall, construction would include up to approximately 651,000 cubic yards (CY) of grading (cut), including 105,000 CY within the North Site, 534,000 CY in the South Site and 12,000 CY in the West Site, all of which would be exported from the Project Site, with excavations depths to approximately 57 feet below the ground surface (bgs) for the lowest foundations and approximately 64 bgs in isolated areas for elevator pits.

Thank you for your assistance with this request. Your expert evaluation will help to ensure that our analysis of the Project's impacts on water demand is accurate and complete. CWC Section 10910 (g)(1) requires submission of the assessment within 90 days of this request. We would appreciate the receipt of the water assessment within that timeframe. If you have any questions or need additional information, please contact Alan Como at (213) 847-3633.

Sincerely,

Alan Como, AICP
City Planner
City of Los Angeles Department of City Planning

Attachments:

Water Supply Assessment Supplemental Information Form

Figure 1, Regional and Project Vicinity Map
Figure 2, Existing On-site Uses
Figure 3, Conceptual Site Plan
Figure 4, Proposed Program Diagram
Figure 5, Conceptual Landscape Plan
Figure 6, Overall Tree Planting Program

Existing Water Usage Data

DEPARTMENT OF
CITY PLANNING

COMMISSION OFFICE
(213) 978-1300

CITY PLANNING COMMISSION

SAMANTHA MILLMAN
PRESIDENT

CAROLINE CHOE
VICE-PRESIDENT

HELEN CAMPBELL
JENNA HORNSTOCK
HELEN LEUNG
YVETTE LOPEZ-LEDESMA
KAREN MACK
DANA M. PERLMAN
RENEE DAKE WILSON

EXHIBIT 4

CITY OF LOS ANGELES
CALIFORNIA

ERIC GARCETTI
MAYOR

EXECUTIVE OFFICES
200 N. SPRING STREET, ROOM 525
LOS ANGELES, CA 90012-4801
(213) 978-1271

VINCENT P. BERTONI, AICP
DIRECTOR

SHANA M.M. BONSTIN
DEPUTY DIRECTOR

ARTHI L. VARMA, AICP
DEPUTY DIRECTOR

LISA M. WEBBER, AICP
DEPUTY DIRECTOR

May 10, 2022

Los Angeles Department of Water and Power
Water Resources Division
Sabrina Tsui, Manager of Resources Development
111 North Hope Street, Room 314
Los Angeles, California 90012

Re: Request for Water Supply Assessment — Fourth & Central Project (Case No. Env-2021-4071-EIR)

Dear Mrs. Tsui:

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 the 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: (1) residential developments of more than 500 dwelling units; (2) a shopping center or business establishment that will employ more than 1,000 persons or have more than 500,000 square feet of floor space; (3) a commercial office building that will employ more than 1,000 persons or have more than 250,000 square feet of floor space; (4) hotels, motels, or both, having more than 500 rooms; (5) 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) mixed-use projects that include one or more of the above-identified categories; or (7) a project that would demand an amount of water equal to or greater than the amount of water needed to serve a 500 dwelling unit project.

The Fourth & Central Project (herein referred to as the Project) is a mixed-use project (Criteria 6) that includes the development of more than 500 dwelling units (Criteria 1), a shopping center or business establishment encompassing more than 500,000 square feet of floor space or employing more than 1,000 persons (Criteria 2), and a commercial office building encompassing more than 250,000 square feet of floor space or employing more than 1,000 persons (Criteria 3). The Project includes the development of 1,521 residential units with a total floor area of 2,318,534 square feet within it mix of residential, retail/restaurant, office and hotel uses.

The Los Angeles Department of Water and Power (LADWP) has been identified as the public water system (as defined in CWC Section 10912 and CEQA Guidelines Section 15083.5(e)) that would serve the Project. Accordingly, the City of Los Angeles Department of City Planning requests that, to facilitate this study the LADWP: (1) determine whether the estimated water demand associated with the Project was included as part of LADWP's most recently adopted UWMP; and (2) prepare and approve a water supply assessment using the UWMP or new analyses for the Project pursuant to CWC Section 10910 et seq.

The requirements for a water supply assessment include the identification of existing water supply entitlements, water rights, or water service contracts held by LADWP's public water system, and prior years' water deliveries received by LADWP's public water system. Please refer to CWC Section 10910 (d)(2) for the documentation required to verify any identified rights to a water supply. If the LADWP has not received water in prior years as described in CWC Section 10910 (e) or if groundwater is a source of supply as described in CWC Section 10910 (f), please comply with the requirements of those sections.

The Department of City Planning, which is preparing an Environmental Impact Report (EIR) for the Project in accordance with CEQA, requests that the water supply assessment include a discussion of whether LADWP's public water system's total projected water supplies available during normal, single dry, and multiple dry water years will meet the projected water demand associated with the Project, in addition to LADWP's public water system's existing and planned future uses, including agricultural and manufacturing uses, pursuant to CWC Section 10910 (c)(3).

Project Location

The Project Site is generally located at 400 Central Avenue and is made up of six (6) parcels (Assessor Parcel Numbers: 5147-001-007, 5147-013-016, 5147-012-015, 5147-011-015, 5147-011-016, and 5147-011-017) is located at 364, 400–464 (even), 425, 427, 429, 431, and 433 South Central Avenue; 707, 715, 730 East 4th Street; Los Angeles, CA 90013, in the Central City Community Plan Area of the City of Los Angeles.

The Project Site includes a total land area of approximately 7.6 acres [333,602 gross square feet (sf) of lot area pre-dedication]. The parcels that make up the Project Site are clustered across three City blocks and include the following three areas:

- The 1.35-acre North Site (APN 5147-001-007) is generally located at the northeast corner of Central Avenue and 4th Street.
- The 5.98-acre South Site (APN 5147-013-016) is generally bound by 4th Street to the north, Alameda Street to the east, Central Avenue to the west and industrial uses to the south. The southern boundary of the South Site generally terminates near the intersection of 5th Street and Central Avenue.
- The 0.32-acre West Site (APNs 5147-012-015, 5147-011-015, -016, -017) is generally located west of the intersection of Gladys Avenue and Central Avenue.

Figure 1, *Regional and Project Vicinity Map*, provides an aerial view of the Project Site and its surroundings (attached).

Existing Uses

Currently, the Project Site is occupied by cold storage facilities that include warehouse and wholesale commercial buildings and associated office space, truck loading docks, and surface parking. The existing buildings on the Project Site total approximately 360,734 sf of floor area. **Figure 2**, *Existing On-Site Uses*, illustrates the existing buildings and uses on the Project Site.

As shown in Figure 2, the North Site is currently developed with a six-story cold storage warehouse building and attached single-story warehouse. The combined floor area of the two buildings is approximately 167,596 sf.

The South Site is developed with a single-story high-bay warehouse cold storage building totaling approximately 190,267 sf and a conjoining 2,871 sf, single-story office building. The two buildings have a total floor area of approximately 193,138 sf. The South Site also includes 33 parking spaces that serve the warehouse building.

The West Site provides 39 parking spaces in a fenced, paved lot and is not improved with any buildings. The paved lot allows for additional parking for the existing cold storage facilities across Central Avenue on the North and South Sites.

There is no landscaping on the Project Site. Vegetation is limited to 20 fern pines (Podocarpus sp.) within the adjacent roadway right-of-way, with ten trees being located on the northern boundary of the North Site (along 4th Street) and ten trees along the eastern boundary of the South Site along Alameda Street.

Existing Water Meters

Existing Site Addresses (for billing purposes):

- 715 E. 4th Street
- 400 S. Central Avenue
- 440 S. Central Avenue

Meter/Service Numbers:

- 90126404 & 90126405 (1a) 00000669-1297606
- 90103932 (2b) 04786652-1084559
- 90377974 (3b) 00000176-1249534

Uses Covered by Water Meters:

- Cooling Tower and Domestic use (Restroom Facilities) (1a) 6" Fire Service
- Domestic use for 400 and 418 S. Central Ave. (Restroom Facilities) (2a) 6" Fire Service
- Cooling Tower and Domestic use (Restroom Facilities) (3a) 8" Fire Service for 410, 418 and 440 S. Central Ave.

The water meters cover the entire Project Site. All areas of the Project Site are currently utilized (no vacant areas).

Attachment A, Existing Water Usage Data, to this letter includes water usage data for the existing on-site cold storage facility.

Customer Name/Number:

- LA Cold Storage ACCOUNT NUMBERS (1) 583 418 0000 (1a) 683 418 0000 (2) 083 418 0000 (3) 383 418 0000

Project Characteristics

The Project would demolish all of the existing improvements uses and surface parking on the South and West Sites, and intends to, if feasible, adaptively reuse a portion of a six-story cold storage building on the North Site, while demolishing the remaining warehouse uses. The Project would include a mix of residential, office, restaurant/retail, and hotel uses within 10 distinct buildings over the three Sites

totaling approximately 2,318,534 sf, for a floor area ratio (FAR) of 6.95:1. The Project would include: 1,521 residential units, including affordable housing units, totaling approximately 1,731,849 sf of floor area; approximately 411,113 sf of office uses; approximately 101,088 sf of restaurant/retail uses[1]; and, 68 hotel rooms (74,484 sf of hotel floor area). The Project would include approximately 163,325 sf of Code required open space. In addition, the Project would include approximately 90,113 sf of publicly accessible open space, including paseos passing between Central Avenue and Alameda Street, plazas, and pocket parks within the North and South Sites. The proposed buildings would range in height from 2 to 44 stories, with a maximum height of approximately 497 feet. The Project would provide 2,475 vehicle parking spaces within subterranean parking (up to 4 levels) and podium parking. **Figure 3**, *Conceptual Site Plan*, provides an illustration of the site plan for the Project. **Figure 4**, *Proposed Program Diagrams*, provides a three-dimensional rendering and overall configuration of the Project's ten buildings.

Each of the Project uses are shown by building within the three areas of the Project Site (e.g., North Site, South Site, and West Site) based on the Bureau of Sanitation's Sewage Generation Factors in **Table 1**, *Project Land Uses Per Bureau of Sanitation Wastewater Generation Factors*. Table 1 assumes full flush of the pools/spas to provide a worse-case (conservative analysis) of daily sewer generation. However, full flushing of the pools/spas would not occur on a daily basis, and may only occur a few days per year for each pool/spa. Process flows are typically 500 gallons per or less for each pool/spa.

TABLE 1
DEVELOPMENT PROGRAM SUMMARY

Facility Description	Building Program	Units	Flow	Avg (gpd)[1]
Sewer Generation for Building 1 (6-Stories)				
Retail	8,189	GPD per KGSF	50	410
Restaurant: Full Service Indoor - 8,189 sf (15 sf / seat)	546	GPD per seat	30	16,380
Amenities				

[1] The 101,088 square feet restaurant/retail floor area includes floor area for purposes of calculating floor area per Los Angeles Municipal Code (LAMC) requirements. An additional potential 13,024 square feet of outdoor dining/patio space may be incorporated into the Project, which does not count towards the LAMC calculation of floor area. To provide a conservative analysis of environmental impacts associated with the Project's retail/restaurant uses, the wastewater generation environmental analyses evaluates a total of 114,112 square feet of restaurant/retail uses. It is assumed there would be 45,266 square feet of retail uses and 68,846 square feet of restaurant uses.

TABLE 1
DEVELOPMENT PROGRAM SUMMARY

Facility Description	Building Program	Units	Flow	Avg (gpd)[1]
Car Wash Area	6 Cars	Actual (100 GPD/Car)	100	600
Community Room / Conference Rooms	36,360	GPD per KGSF	120	4,363
Gym	5,000	GPD per KGSF	200	1,000
Health Club / Spa	2,000	GPD per KGSF	650	1,300
Pet Grooming [2]	500	GPD per KGSF	120	60
Bicycle Parking / Repair [3]	200	GPD per KGSF	20	4
Rooftop Terrance / Lounge Area	14,184	GPD per KGSF	50	709
Total Sewer Generation				**24,826**
Sewer Generation for Building 2 (44-Stories)				
Residential (Studio)	74	GPD per DU	75	5,550
Residential (1 Bed Room)	222	GPD per DU	110	24,420
Residential (2 Bed Room)	111	GPD per DU	150	16,650
Residential (3 Bed Room)	42	GPD per DU	190	7,980
Retail	6,347	GPD per KGSF	50	317
Restaurant: Full Service Indoor - 6,347 sf (15sf / seat)	423	GPD per seat	30	12,690
Amenities				
Spa+Pool	37,403	Gallons		37,403
Gym	1,000	GPD per KGSF	200	200
Lobby/Lounge	1,078	GPD per KGSF	50	54
Community Room / Conference Rooms	1,000	GPD per KGSF	120	120

TABLE 1
DEVELOPMENT PROGRAM SUMMARY

Facility Description	Building Program	Units	Flow	Avg (gpd)[1]
Health Club / Spa	1,000	GPD per KGSF	650	650
Pet Grooming [2]	500	GPD per KGSF	120	60
Rooftop Terrance / Lounge Area	12,513	GPD per KGSF	50	626
Total Sewer Generation				**106,720**
Sewer Generation for Building 3 (7-Stories)				
Retail	8,761	GPD per KGSF	50	438
Office with cooling tower	81,854	GPD per KGSF	170	13,915
Restaurant: Full Service Indoor - 6,530 sf (15 sf / seat)	435	GPD per seat	30	13,050
Restaurant: Full Service Outdoor - 2,231 sf (15 sf / seat)	149	GPD per seat	30	4,470
Amenities				
Lobby / Lounge	1,078	GPD per KGSF	50	54
Rooftop Terrance / Lounge Area	4,645	GPD per KGSF	50	232
Total Sewer Generation				**32,159**
Sewer Generation for Building 4 (12 Stories)				
Retail	2,246	GPD per KGSF	50	112
office with cooling tower	184,162	GPD per KGSF	170	31,308
Restaurant: Full Service Indoor - 5,475 sf (15 sf / seat)	365	GPD per seat	30	10,950
Restaurant: Full Service Outdoor - 2,888 sf (15 sf / seat)	193	GPD per seat	30	5,790

TABLE 1
DEVELOPMENT PROGRAM SUMMARY

Facility Description	Building Program	Units	Flow	Avg (gpd)[1]
Amenities				
Lobby / Lounge	1,078	GPD per KGSF	50	54
Rooftop Terrance / Lounge Area	3,700	GPD per KGSF	50	185
Total Sewer Generation				**48,399**
Sewer Generation for Building 5 (28-Stories)				
Residential (Studio)	183	GPD per DU	75	13,725
Residential (1 Bed Room)	142	GPD per DU	110	15,620
Residential (2 Bed Room)	100	GPD per DU	150	15,000
Retail	2,276	GPD per KGSF	50	114
Restaurant: Full Service Indoor - 9,083 sf (15sf / seat)	606	GPD per seat	30	18,180
Restaurant: Full Service Outdoor - 4,480 sf (15 sf / seat)	299	GPD per seat	30	8,970
Amenities				
Spa+Pool	37,403	Gallons		37,403
Gym	1,000	GPD per KGSF	200	200
Car Wash Area	6 Cars	Actual (100 GPD/Car)	100	600
Lobby / Lounge	1,700	GPD per KGSF	50	85
Community Room / Conference Rooms	1,000	GPD per KGSF	120	120
Health Club / Spa	1,000	GPD per KGSF	650	650
Pet Grooming [2]	500	GPD per KGSF	120	60
Bicycle Parking / Repair [3]	200	GPD per KGSF	20	4

TABLE 1
DEVELOPMENT PROGRAM SUMMARY

Facility Description	Building Program	Units	Flow	Avg (gpd)[1]
Rooftop Terrance / Lounge Area	9,214	GPD per KGSF	50	461
Total Sewer Generation				**111,192**
Sewer Generation for Building 6 (6-Stories)				
Residential (1 Bed Room)	44	GPD per DU	110	4,840
Residential (2 Bed Room)	24	GPD per DU	150	3,600
Retail	6,407	GPD per KGSF	50	320
Hotel (King)	46	GPD per Room	120	5,520
Hotel (Double Queen)	22	GPD per Room	120	2,640
Restaurant: Full Service Indoor - 9,160 sf (15 sf / seat)	611	GPD per seat	30	18,330
Restaurant: Full Service Outdoor - 2,878 sf (15sf / seat)	192	GPD per seat	30	5,760
Hotel Bar (Outdoor Seating) - 546 sf (15 sf / seat)	37	SF	15	555
Amenities				
Spa+Pool	32,465	Gallons		32,465
Gym	1,000	GPD per KGSF	200	200
Car Wash Area	6 Cars	Actual (100 GPD/Car)	100	600
Lobby / Lounge	3,130	GPD per KGSF	50	157
Community Room / Conference Rooms	1,000	GPD per KGSF	120	120
Health Club / Spa	1,000	GPD per KGSF	650	650
Pet Grooming [2]	500	GPD per KGSF	120	60

TABLE 1
DEVELOPMENT PROGRAM SUMMARY

Facility Description	Building Program	Units	Flow	Avg (gpd)[1]
Bicycle Parking / Repair [3]	200	GPD per KGSF	20	4
Outdoor Space / Lounge Area	26,303	GPD per KGSF	50	1,315
Total Sewer Generation				**77,136**
Sewer Generation for Building 7 (10-Stories plus 2-story industrial sheds)				
Residential (Live/Work)	4	GPD per DU	75	300
Residential (Studio)	35	GPD per DU	75	2,625
Residential (1 Bed Room)	62	GPD per DU	110	6,820
Residential (2 Bed Room)	22	GPD per DU	150	3,300
Retail	6,179	GPD per KGSF	50	309
Restaurant: Full Service Indoor – 6,178 (15 sf / seat)	412	GPD per seat	30	12,360
Amenities				
Spa+Pool	37,403	Gallons		37,403
Gym	1,000	GPD per KGSF	200	200
Car Wash Area	6 Cars	Actual (100 GPD/Car)	100	600
Lobby / Lounge	1,816	GPD per KGSF	50	91
Health Club / Spa	1,000	GPD per KGSF	650	650
Pet Grooming [2]	500	GPD per KGSF	100	50
Bicycle Parking / Repair [3]	200	GPD per KGSF	20	4
Rooftop Terrace / Lounge Area	2,707	GPD per KGSF	50	135
Total Sewer Generation				**64,847**
Sewer Generation for Building 8 (12 Stories)				

TABLE 1
DEVELOPMENT PROGRAM SUMMARY

Facility Description	Building Program	Units	Flow	Avg (gpd)[1]
Retail	2,323	GPD per KGSF	50	116
Restaurant: Full Service Indoor – 2,322 (15 sf / seat)	155	GPD per seat	30	4,650
Office with cooling tower	137,699	GPD per KGSF	170	23,409
Amenities				
Car Wash Area	6 Cars	Actual (100 GPD/Car)	100	600
Lobby / Lounge	1,720	GPD per KGSF	50	86
Rooftop Terrace / Lounge Area	3,667	GPD per KGSF	50	183
Total Sewer Generation				**29,044**
Sewer Generation for Building 9 (27 Stories)				
Residential (Live/Work)	4	GPD per DU	75	300
Residential (Studio)	88	GPD per DU	75	6,600
Residential (1 Bed Room)	186	GPD per DU	110	20,460
Residential (2 Bed Room)	34	GPD per DU	150	5,100
Retail	2,538	GPD per KGSF	50	127
Restaurant: Full Service Indoor – 2,538 (15 sf / seat)	169	GPD per seat	30	5,070
Amenities				
Spa+Pool	37,403	Gallons		37,403
Gym	1,000	GPD per KGSF	200	200
Car Wash Area	6 Cars	Actual (100 GPD/Car)	100	600
Lobby / Lounge	3,887	GPD per KGSF	50	194
Community Room / Conference Rooms	1,000	GPD per KGSF	120	120

TABLE 1
DEVELOPMENT PROGRAM SUMMARY

Facility Description	Building Program	Units	Flow	Avg (gpd)[1]
Health Club / Spa	1,000	GPD per KGSF	650	650
Pet Grooming [2]	500	GPD per KGSF	120	60
Bicycle Parking / Repair [3]	200	GPD per KGSF	20	4
Rooftop Terrace / Lounge Area	16,942	GPD per KGSF	50	847
Total Sewer Generation				**77,735**
Sewer Generation for Building 10 (18 Stories)				
Residential (Studio)	48	GPD per DU	75	3,600
Residential (1 Bed Room)	64	GPD per DU	110	7,040
Residential (2 Bed Room)	32	GPD per DU	150	4,800
Amenities				
Car Wash Area	6 Cars	Actual (100 GPD/Car)	100	600
Lobby / Lounge	745	GPD per KGSF	50	37
Community Room / Conference Rooms	1,000	GPD per KGSF	120	120
Gym	1,000	GPD per KGSF	200	200
Health Club / Spa	1,000	GPD per KGSF	650	650
Pet Grooming [2]	500	GPD per KGSF	120	60
Bicycle Parking / Repair [3]	200	GPD per KGSF	20	4
Rooftop Terrace / Lounge Area	4,606	GPD per KGSF	50	230
Total Sewer Generation				**17,341**
PROJECT TOTAL SEWER GENERATION				**589,399**

TABLE 1
DEVELOPMENT PROGRAM SUMMARY

Facility Description	Building Program	Units	Flow	Avg (gpd)[1]

NOTES:

[1] Table assumes full flush of the pools/spas to provide a worse-case (conservative analysis) of sewer generation. However, this would not occur on a daily basis, and may only occur a few days per year for each pool/spa. Process flows are typically 500 gallons per or less.

[2] The Pet Grooming facility is using the Barber Shop sewerage discharge factor of 120 GPD/KGSF as the closest substitute option.

[3] The Bicycle Parking / Repair Facility is using the Auto Parking sewerage discharge factor of 20 GPD/KGSF as the closest substitute option.

GPD = gallons per day

KGSF = 1,000 gross square feet

DU – dwelling unit

SOURCE: ESA, 2022.

Existing Planning and Zoning

The Project Site, which is within the planning boundary of the Central City Community Plan, has a General Plan land use designation of Light Industrial and is zoned M2-2D-O on the North Site and M2-2D on the South and West Sites. This zoning permits a range of industrial uses prevalent in the area such as warehouses and cold storage facilities, and also permits commercial and office uses. The “2D” indicates Height District 2D, which does not limit the height of buildings on these properties, but limits the FAR to 3:1. The “O” designation indicates that the Project Site is located within an oil drilling district where the drilling of oil wells or the production from oil wells, gas, or other hydrocarbon substances is permitted.

Cooling Towers

Based on preliminary cooling load calculations and mechanical system arrangements, it is estimated that the total make-up water requirement for the cooling towers proposed on the Fourth and Central site would be approximately 22,472,590 gallons annually (with a monthly average of 1,872,716 gallons or 62,569 gallons per day). This make-up water rate is based on a 4,000 Ton chiller plant system being proposed to serve 8 of the buildings, with the two other buildings on the site being served via air-cooled systems. These values are rough estimates at this early design stage that could be impacted by several variables including building thermal performance, system selection, and occupancy profiles.

Landscaping

The Project would include landscaping throughout the ground level and rooftop amenity decks. These planting areas would consist of a mix of shade and ornamental trees, shrubs, and groundcovers. **Figure 5**, *Ground Level Plan,* shows the landscape plan for the ground level of Buildings 1-10. Plant materials would be combination of native plants and plants adapted to the Southern California climate that have low to medium water demand. New and existing soils would be amended to ensure healthy, vigorous plants and a layer of decorative bark mulch would aid in moisture retention and weed control. The final planting design would include an irrigation system that complies with the State of California Model Water Efficient Landscape Ordinance (MWELO). A smart irrigation controller with weather sensing technology along with a high efficiency drip irrigation system would be utilized to apply water efficiently and effectively to new planting areas.

Figure 6, *Overall Tree Planting Plan*, illustrates the tree planting plan for the Project. The residential uses would generate a requirement of 382 trees to be provided within the Project Site. In addition, the existing 20 street trees to be removed during Project construction would be required to be replaced at a 2:1 ratio for a total of 40 replacement trees. Overall, the total tree planting for the Project would require 422 new trees which the Project would provide.

Table 2A, *Hydrozone Area Information (non-residential)*, shows the plant factors and the square footages for each proposed Hydrozone Area at all mixed-used buildings and streetscape. The Low Shrub (16,974 square feet), Moderate Shrub (6,238 square feet), and High Shrub Hydrozone Areas (1,505 square feet) would use drip irrigation. The Low Tree (3,024 square feet) and Moderate Tree Hydrozone areas (882 square feet) would use bubbler sprays. The landscaped areas would meet California Assembly Bill (AB) 1881 and all applicable Model Water Efficient Landscape Ordinance requirements.

TABLE 2A
HYDROZONE AREA INFORMATION (NON-RESIDENTIAL)

Hydrozone	PF	Hydrozone Area square feet (sf)
Low shrub	0.2	16,974 sf
Low Tree	0.2	3,024 sf
Moderate shrub	0.5	6,238 sf
Moderate tree	0.5	882 sf
High shrub	0.7	1,505 sf
Total		**28,623 sf**

SOURCE: Studio One Eleven, 2022.

Table 2B, *Hydrozone Area Information (residential)*, shows the plant factors and the square footages for each proposed Hydrozone Area at all residential buildings and streetscape. The Low Shrub (15,295 square feet), Moderate Shrub (5,800 square feet), and High Shrub Hydrozone Areas (1,360 square feet) would use drip irrigation. The Low Tree (2,050 square feet) and Moderate Tree Hydrozone areas (1,800 square feet) would use bubbler sprays. The swimming pool spas & Water Features (5,261 square feet) are included in the High Hydrozone areas as well. The landscaped areas would meet California Assembly Bill (AB) 1881 and all applicable Model Water Efficient Landscape Ordinance requirements.

TABLE 2B
HYDROZONE AREA INFORMATION (RESIDENTIAL)

Hydrozone	PF	Hydrozone Area square feet (sf)
Low shrub	0.2	15,295 sf
Low Tree	0.2	2,050 sf
Moderate shrub	0.5	5,800 sf
Moderate tree	0.5	1,800 sf
High Shrub	0.7	1,360 sf
Pool & Spas	1.0	5,261 sf
Total		**31,566 sf**

SOURCE: Studio One Eleven, 2022.

With respect to landscape irrigation, **Table 3A**, *Maximum Applied Water Allowance (MAWA) Non-Residential*, shows the projected water consumption associated with proposed landscaping at all mixed-used buildings and streetscape, which is estimated to be 400,089 gallons per year (1.23 acre-feet per year), as calculated per the Model Water Efficient Landscape Ordinance (California Code of Regulations (CCR) Title 23, Division 2, Chapter 2.7, Section 492.1). **Table 3B**, *Maximum Applied Water Allowance (MAWA) Residential*, shows the projected water consumption associated with proposed landscaping at all residential buildings and streetscape, which is estimated to be 539,276 gallons per year (1.65 acre-feet per year), as calculated per the Model Water Efficient Landscape Ordinance (California Code of Regulations (CCR) Title 23, Division 2, Chapter 2.7, Section 492.1). **Table 4A**, *Planting Matrix Estimated Total Water Use (MAWA) [Non-Residential]*, shows the proposed planting matrix for the Project. **Table 4B**, *Planting Matrix Estimated Total Water Use (MAWA)[Residential}*, shows the proposed planting matrix for the Project.

TABLE 3A
MAXIMUM APPLIED WATER ALLOWANCE (MAWA) [NON-RESIDENTIAL]

Reference Evapotranspiration (ETo)[a]	Conversion Factor	ET Adjustment Factor (AF)	Landscape Area (LA)	Special Landscape Area (SLA)	Gallons Used	Acre-Feet per year (AFY)
Landscape Area						
50.1	0.62	0.45	28,623	-	400,089	1.23

NOTES

[a] Reference Evapotranspiration (ETo) value from CIMIS ETo Zone Map. Accessed from http://www.cimis.water.ca.gov/App_Themes/impages/etozonemap.jpg

SOURCE: Studio One Eleven, 2022.

TABLE 3B
MAXIMUM APPLIED WATER ALLOWANCE (MAWA) [RESIDENTIAL]

Reference Evapotranspiration (ETo)[a]	Conversion Factor	ET Adjustment Factor (AF)	Landscape Area (LA)	Special Landscape Area (SLA)	Gallons Used	Acre-Feet per year (AFY)
Landscape Area						
50.1	0.62	0.55	31,566	-	539,276	1.65

NOTES

[a] Reference Evapotranspiration (ETo) value from CIMIS ETo Zone Map. Accessed from http://www.cimis.water.ca.gov/App_Themes/impages/etozonemap.jpg

SOURCE: Studio One Eleven, 2022.

TABLE 4A
PLANTING MATRIX - ESTIMATED TOTAL WATER USE (MAWA) [NON-RESIDENTIAL]

Plant Types	Plant Water Type / WUCOL	Plant Factor (PF)	Irrigation Method	Irrigation Efficiency	Hydrozone Area (HA)	PF x HA
Trees, Shrubs and Groundcover	LOW	0.2	Drip	0.81	19,998	4,000
Trees, Shrubs and Groundcover	MEDIUM	0.5	Drip	0.81	7,120	3,560
Annuals, Shrubs	HIGH	0.7	Drip	0.81	1,505	1,054
					28,623	***8,614***
					Estimated Total Water Use (ETWU) = 332,618 gallons per year	

NOTES

[a] Reference Evapotranspiration (ETo) value from CIMIS ETo Zone Map. Accessed from http://www.cimis.water.ca.gov/App_Themes/impages/etozonemap.jpg

SOURCE: Studio One Eleven, 2022.

TABLE 4B
PLANTING MATRIX - ESTIMATED TOTAL WATER USE (MAWA) [RESIDENTIAL]

Plant Types	Plant Water Type / WUCOL	Plant Factor (PF)	Irrigation Method	Irrigation Efficiency	Hydrozone Area (HA)	PF x HA
Trees, Shrubs and Groundcover	LOW	0.2	Drip	0.81	17,345	3,469
Trees, Shrubs and Groundcover	MEDIUM	0.5	Drip	0.81	7,600	3,800
Annuals, Shrubs	HIGH	0.7	Drip	0.81	1,360	952
Pool/Spas/Water Features	HIGH	1.0	Spray	0.75	5,261	5261
					31,566	***13,482***
					Estimated Total Water Use (ETWU) = 534,732 gallons per year	

NOTES

[a] Reference Evapotranspiration (ETo) value from CIMIS ETo Zone Map. Accessed from http://www.cimis.water.ca.gov/App_Themes/impages/etozonemap.jpg

SOURCE: Studio One Eleven, 2022.

Sustainability Features

At the minimum, the Project's buildings will be designed to meet the standards for United States Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) Certification through proven and effective design strategies. The Project may seek certification as an Environmental Leadership Development Project (ELDP) under the Jobs and Economic Improvement Through Environmental Leadership Act (PRC, § 21178 et seq.). The Project would incorporate water conservation and rainwater management strategies such as low flow/efficient water fixtures, rainwater capture systems, drought-tolerant/California native plant species selection, landscape contouring to minimize precipitation runoff, irrigation system efficiency, smart irrigation systems (e.g., weather-based controls), and water-saving pool equipment. The Project will use tree landscaping via passive solar shading and use cool roof/pavement coatings to reduce the urban heat island effect.

Parking

Vehicle parking to serve each of the buildings would be provided in several locations throughout the Project Site. Parking for the North Site would be provided within Building 2, in a 4-level subterranean structure and six levels above grade. The South Site includes a 3-level subterranean structure that runs underneath the entire South Site. Building 9 also includes 4 levels of above grade structured parking. Parking for Building 10 on the West Site is located within a 1-level subterranean structure and surface parking.

The Project Site is located within the Los Angeles State Enterprise Zone, which permits general commercial uses to provide two (2) parking spaces per 1,000 sf of gross commercial floor area. (LAMC Section 12.21-A.4(x).) The Project Site is also part of the Central City Parking District, which governs the Project's residential and hotel parking requirements. (LAMC, § 12.21-A.4(p).) The parking requirement for residential projects in the Central City Parking District is one space for each dwelling unit with three or fewer habitable rooms and 1.25 spaces for units with more than three habitable rooms. (LAMC Section 12.21-A.4(p).) Parking requirements for hotels within the Central City Parking District are as follows: one space for each two individual guest rooms for the first 20 rooms, one additional parking space for each four guest rooms in excess of 20 but not exceeding 40 rooms, and one additional parking space for each six guest rooms in excess of 40 rooms. (LAMC Section 12.21-A.4(p).)

The Project's vehicular parking requirement under the LAMC is 2,658 spaces. However, pursuant to LAMC section 12.21-A.4, the Project will replace required vehicular parking spaces with bicycle parking spaces, which reduces the total vehicular parking requirement to 2,474 spaces. The Project would provide a total of approximately 2,475 spaces, thus, meeting LAMC parking requirements.

There would be two (2) restrooms with showers (236 SF) on Level P3 in the South Site for residential bicycle parking.

Anticipated Approvals

The list below includes the anticipated requests for approval of the Project.

- General Plan Amendment pursuant to LAMC Section 11.5.6 A to re-designate the underlying land use from Light Industrial to Regional Center Commercial.
- Vesting Zone Change and Height District Change pursuant to LAMC Sections 12.32-F, 12.32 H, and 12.32 Q, to change the zone from M2-2D/M2-2D-O to C2-2, which involves removing the D Development Limitation.
- Affordable Housing Development Incentives under Measure JJJ to allow the following incentives:

  a. FAR increase to 6.95:1; and

  b. Averaging of FAR, parking, and open space across the Project Site.

- Main Conditional Use Permit pursuant to LAMC Section 12.24 W.1 to permit the sale and dispensing of alcoholic beverages for on-site and/or off-site consumption.
- Site Plan Review pursuant to LAMC Section 16.05 for approval of development of a project which creates 50,000 gross sf or more of nonresidential floor area and creates 50 or more dwelling units.
- Vesting Tentative Tract Map pursuant to LAMC Section 17.15 to merge 35 existing lots and re-subdivide into four (4) ground lots and twenty-six air space lots for commercial and residential purposes.
- Development Agreement approval pursuant to Government Code Sections 65864 et seq.

Construction Schedule

Project construction is anticipated to commence as early as 2025 and is estimated to be completed within approximately 5 years. Construction activities within the North, South and West Sites would be phased to meet market demand and/or to maximize construction efficiency. As part of the Project construction activities, all on-site buildings and associated infrastructure (i.e., surface parking, sidewalks, landscaping, etc.) would be removed on the South and West Site. On the North Site, a portion of the existing six-story cold storage building at 715 4th Street is intended to be adaptively reused, if feasible, to provide new restaurant/retail uses and residential

amenities. The remainder of the six-story warehouse and the existing 1-story warehouse building component on the North Site would be demolished during Project construction activities. If it is not feasible to adaptively reuse a portion of the existing six-story cold storage building at 715 E. 4th Street, the building would be demolished in its entirety.

Overall, construction would include up to approximately 651,000 cubic yards (CY) of grading (cut), including 105,000 CY within the North Site, 534,000 CY in the South Site and 12,000 CY in the West Site, all of which would be exported from the Project Site, with excavations depths to approximately 57 feet below the ground surface (bgs) for the lowest foundations and approximately 64 bgs in isolated areas for elevator pits.

Thank you for your assistance with this request. Your expert evaluation will help to ensure that our analysis of the Project's impacts on water demand is accurate and complete. CWC Section 10910 (g)(1) requires submission of the assessment within 90 days of this request. We would appreciate the receipt of the water assessment within that timeframe. If you have any questions or need additional information, please contact Alan Como at (213) 847-3633.

Sincerely,

Alan Como
City Planner
City of Los Angeles Department of City Planning

Attachments:

Figure 1, Regional and Project Vicinity Map
Figure 2, Existing On-site Uses
Figure 3, Conceptual Site Plan
Figure 4, Proposed Program Diagram
Figure 5, Conceptual Landscape Plan
Figure 6, Overall Tree Planting Program

Attachment A – Existing Water Usage Data

EXHIBIT 4

WATER SUPPLY ASSESSMENT

SUPPLEMENTAL PROJECT INFORMATION

INSTRUCTIONS

Please submit the information and exhibits listed below to Los Angeles City Planning (LACP) and work with your assigned Project Planner to prepare the Water Supply Assessment (WSA) request that will be sent to the Los Angeles Department of Water and Power (LADWP). Additional information may be requested after LADWP has received the WSA request and supporting project documents.

GENERAL

PROJECT TITLE:	Fourth and Central Project
CEQA LEAD AGENCY	City of Los Angeles
PLANNER NAME / TITLE:	Alan Como, AICP, City Planner
DEPARTMENT:	Department of City Planning
PHONE NUMBER:	213-847-3633
EMAIL:	Alan.como@lacity.org
APPLICANT / DEVELOPER NAME:	CP LA Coold Storage Land, LLC
ENVIRONMENTAL CONSULTANT	
NAME / TITLE:	Mike Harden
COMPANY:	ESA
PHONE NUMBER:	949-870-1510
EMAIL:	mharden@esassoc.com
PROPERTY ADDRESS:	400 S. Central Avenue (364–464, 425-433 S. Central Avenue; 715 and 730 E. 4th Street); Los Angeles, CA 90013
PROJECT SITE AREA:	333,602 gross SQUARE FEET 7.6 ACRES
TOTAL PROJECT FLOOR AREA:	2,318,534 SQUARE FEET

PLEASE PROVIDE A BRIEF PROJECT DESCRIPTION (INCLUDE # OF PROPOSED BUILDINGS AND # OF STORIES FOR EACH BUILDING):

The Project would demolish the existing surface parking and cold storage facility uses on the West and South Sites, and intends to adaptively reuse, if feasible, a portion of a six-story cold storage building on the North Site, while

demolishing the remaining warehouse uses. The Project would include a mix of residential, office, restaurant/retail, and hotel uses within 10 distinct buildings over the three Sites totaling approximately 2,318,534 sf, for a floor area ratio (FAR) of 6.95:1. The Project would include: 1,521 residential units, including affordable housing units, totaling approximately 1,731,849 sf; approximately 411,113 sf of office uses; approximately 101,088 sf of restaurant/retail uses[1]; and, 68 hotel rooms (74,484 sf of hotel floor area). The Project would include approximately 163,325 sf of Code required private open space. The Project would include approximately 90,113 sf of publicly accessible open space, including paseos passing between Central Avenue and Alameda Street, plazas, and pocket parks within the North and South Sites. The proposed buildings would range in height from 2 to 44 stories, with a maximum height of approximately 497 feet. The Project would provide 2,475 vehicle parking spaces within subterranean parking (up to 4 levels) and podium parking.

PROJECT USE AND FLOOR AREA SUMMARY

	Square Feet Residential Floor Area	Square Feet Restaurant/ Retail Floor Area	Square Feet Office Floor Area	Square Feet Hotel Floor Area	Vehicle Parking Spaces	Long-Term Bicycle Parking Spaces	Short-Term Bicycle Parking Spaces
North Site							
Building 1	44,660	16,378	—	—	33	9	9
Building 2	649,911 (449 units)	12,694	—	—	514	27	195
Subtotal North Site	*694,571*	*29,072*	—	—	*547*	*36*	*204*
South Site							
Building 3	—	15,291	81,854	—	195	17	25
Building 4	—	7,721	184,162	—	385	23	41
Building 5	407,217(425 units)	11,359	—	—	473	25	188
Building 6	88,228(68 units)	15,567	—	74,484 (68 rooms)	126	21	69
Building 7	126,555 (123 units)	12,357	—	—	154	17	94
Building 8	—	4,645	145,097	—	301	18	33
Building 9	293,574(312 units)	5,076	—	—	321	19	156
Subtotal South Site	*915,574*	*72,016*	*411,113*	*74,484*	*1,955*	*140*	*606*
West Site							
Building 10	121,704 (144 units)	—	—	—	152	11	97
Total Floor Areas, Units	**1,731,849 (1,521 units)**	**101,088[a]**	**411,113**	**74,484 (68 rooms)**	**2,475**	**146**	**596**
Total Floor Area Ratio:		**Land Area (pre-dedication): 333,602 sf**		**Total Floor Area: 2,318,534 sf**	**Total Floor Area Ratio (FAR): 6.95**		

[1] The 101,088 square feet restaurant/retail floor area includes floor area for purposes of calculating floor area per Los Angeles Municipal Code (LAMC) requirements. An additional potential 13,024 square feet of outdoor dining/patio space may be incorporated into the Project, which does not count towards the LAMC calculation of floor area. To provide a conservative analysis of environmental impacts associated with the Projects retail/restaurant uses, the environmental analyses included in the Draft EIR will evaluate a total of 114,112 square feet of restaurant/retail uses. It is assumed there would be 45,266 square feet of retail uses and 68,846 square feet of restaurant uses.

[a] The 101,088 square feet restaurant/retail floor area includes floor area for purposes of calculating floor area per LAMC requirements. An additional potential 13,024 square feet of outdoor dining/patio space may be incorporated into the Project, which does not count towards the LAMC calculation of floor area. To provide a conservative analysis of environmental impacts associated with the Projects retail/restaurant uses, the environmental analyses included in Chapter 4, *Environmental Impact Analysis*, of this Draft EIR, evaluates a total of 114,112 square feet of restaurant/retail uses. It is assumed there would be 45,266 square feet of retail uses and 68,846 square feet of restaurant uses.

SOURCE: Studio One Eleven, February 2022.

BUILDING STORIES, HEIGHTS AND USES

Project Building #	Stories[a]	Building Height to the top of the Parapet	Uses
Building 1	6	74 feet	Restaurant/Retail, Residential Amenities
Building 2	44	497 feet	Residential, Restaurant/Retail
Building 3	7	93 feet	Restaurant/Retail, Offices
Building 4	12	168 feet	Restaurant/Retail, Offices
Building 5	28	292 feet	Residential, Restaurant/Retail
Building 6	6	96 feet	Residential, Restaurant/Retail, Hotel
Building 7	10[b]	124 feet	Residential, Retail
Building 8	12	156 feet	Offices, Retail
Building 9	27	284 feet	Residential, Retail
Building 10	18	181 feet	Residential

[a] Stories include rooftop floors that include indoor structures (i.e., amenity rooms).

[b] There is a detached trio of 2-story industrial sheds adjacent to Alameda Street, which are accounted for as part of Building 7.

SOURCE: Studio One Eleven, February 2022.

Click or tap here to enter text.

IS THE PROJECT PROPOSING MORE THAN 25 STORIES OF RESIDENTIAL USES? ☒ YES ☐ NO

LAND USE CONSISTENCY

DOES THE PROJECT REQUIRE A GENERAL PLAN AMENDMENT (GPA)? ☒ YES ☐ NO

IF YES:

- WHAT IS THE STATUS OF THE GPA? ☐ APPROVED ☒ PENDING
- IS THE PROJECT CURRENTLY CONSISTENT WITH THE SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS' 2020-2045 REGIONAL TRANSPORTATION PLAN/SUSTAINABLE COMMUNITEIS STRATEGY (SCAG 2020-2045 RTP/SCS) DEMOGRAPHIC PROJECTIONS? ☒ YES ☐ NO

IF NO:

- IS THE PROJECT CONSISTENT WITH THE SCAG 2020-2045 RTP/SCS DEMOGRAPHIC GROWTH PROJECTIONS? ☐ YES ☐ NO

COMMUNITY PLAN AREA:	Central City Community Plan

WILL THE PROPOSED PROJECT PURSUE LEED CERTIFICATION? ☐ YES ☐ NO

IF YES, WHAT LEVEL? ☐ PLATINUM ☒ GOLD ☐ SILVER ☐ CERTIFIED ☐ LEED EQUIVALENT

PLEASE ATTACH:

☒ VICINITY MAP

☒ LATEST PLAN SET, INCLUDING SITE, FLOOR, ELEVATION, AND LANDSCAPE PLANS AND RENDERINGS, IF AVAILABLE.

PLEASE EMAIL THE FULL PLAN SET TO YOUR ASSIGNED LACP PROJECT PLANNER OR PROVIDE A LINK BELOW:

Click or tap here to enter text.

EXISTING USE & SITE CONDITIONS

EXISTING USES

- DESCRIBE THE EXISTING USE(S) ON THE PROJECT SITE IN DETAIL, INCLUDING BUT NOT LIMITED TO THE TOTAL SQUARE FOOTAGE OF RETAIL AND LANDSCAPING, WHETHER THERE IS A COOLING TOWER ON-SITE, ETC.). INDICATE THE PORTIONS OF USES ON THE PROJECT SITE TO REMAIN, BE REMODELED, AND/OR BE REMOVED.
  Click or tap here to enter text.

- HAVE THE EXISTING FACILITIES/BUILDINGS BEEN FULLY OCCUPIED FOR THE PAST 5 YEARS?
  ☒ YES ☐ NO

- IF THE EXISTING FACILITIES/BUILDINGS HAVE NOT BEEN FULLY OCCUPIED, PLEASE DESCRIBE THE PERIOD THEY WERE PARTIALLY OCCUPIED OR VACANT (E.G., FROM 2020-2021 DUE TO THE COVID SHUTDOWN).
  Click or tap here to enter text.

- DESCRIBE IF ANY PORTIONS OF THE EXISTING USE(S) DO NOT HAVE ANY WATER USES (E.G., EXISTING LANDSCAPING THAT DOES NOT REQUIRE WATERING).
  Click or tap here to enter text.

IF FEASIBLE, LADWP MAY RELY ON EXISTING BILLING RECORDS TO ESTIMATE THE EXISTING WATER DEMAND FOR THE LAST FIVE YEARS. OTHERWISE, THEY WILL RELY ON THE BUREAU OF SANITATION'S SEWAGE GENERATION FACTORS TO ESTIMATE THE EXISTING WATER DEMAND.

PROVIDE THE FOLLOWING INFORMATION AS MUCH AS AVAILABLE, WHICH WILL BE USED TO VERIFY THE EXISTING BILLING RECORD:

- METER/SERVICE NUMBERS: Click or tap here to enter text.

Existing Site Addresses (for billing purposes):

- 715 E. 4th Street
- 400 S. Central Avenue
- 440 S. Central Avenue

Meter/Service Numbers:

- 90126404 & 90126405 (1a) 00000669-1297606
- 90103932 (2b) 04786652-1084559
- 90377974 (3b) 00000176-1249534

Uses Covered by Water Meters:

- Cooling Tower and Domestic use (Restroom Facilities) (1a) 6" Fire Service
- Domestic use for 400 and 418 S. Central Ave. (Restroom Facilities) (2a) 6" Fire Service
- Cooling Tower and Domestic use (Restroom Facilities) (3a) 8" Fire Service for 410, 418 and 440 S. Central Ave.
- CUSTOMER NAME/NUMBER: LA Cold Storage ACCOUNT NUMBERS (1) 583 418 0000 (1a) 683 418 0000 (2) 083 418 0000 (3) 383 418 0000
- WHAT EXISTING USES DOES THIS METER COVER? The water meters cover the entire Project Site. All areas of the Project Site are currently utilized (no vacant areas). Attachment A, Existing Water Usage Data, to this letter includes water usage data for the existing on-site cold storage facility.

PROPOSED PROJECT

PROVIDE THE PROPOSED NUMBER OF RESIDENTIAL UNITS AND TYPE (E.G., # OF STUDIO APARTMENTS, 1-BEDROOM CONDOS, 2-BEDROOM TOWNHOUSES, ETC.).

Building #	Studio	1-BR	2-BR	3-BR	L/W
2	74	222	111	42	-
5	183	142	100	-	-
6		44	24	-	
7	35	62	22	-	4
9	88	186	34	-	4
10	48	64	32	-	-
Totals	**428**	**720**	**323**	**42**	**8**

1,521 units total

PROVIDE A DETAILED BREAKDOWN OF OCCUPANCY TYPE AND FLOOR AREAS FOR RESIDENTIAL AMENITIES. PLEASE REFER TO THE BUREAU OF SANITATION'S SEWAGE GENERATION FACTORS TABLE FOR THE LISTED OCCUPANCY TYPES. INCLUDE ANY SPACES THAT HAVE PLUMBING FIXTURES, SUCH AS A TERRACE WITH KITCHEN/SINK.

REFER TO ATTACHED AMENITIES WITH PLUMBING FIXTURES TABLE

EXHIBIT 4

PROVIDE A DETAILED BREAKDOWN OF OCCUPANCY TYPES AND FLOOR AREAS FOR COMMERCIAL, INDUSTRIAL AND/OR EDUCATIONAL USES, ETC. (RETAIL, RESTAURANT (# OF SEATS), OFFICE, THEATRE/ASSEMBLY AREAS, COMMERCIAL KITCHEN, ETC.)

BUILDING #	RETAIL	INDOOR RESTAURANT	OUTDOOR RESTAURANT	OFFICE
BUILDING 1	8,189 SF	8,189 SF	0 SF	0 SF
BUILDING 2	6,347 SF	6,347 SF	0 SF	0 SF
BUILDING 3	8,761 SF	6,530 SF	2,231 SF	81,854 SF
BUILDING 4	2,246 SF	5,475 SF	2,888 SF	184,162 SF
BUILDING 5	2,276 SF	9,083 SF	4,480 SF	0 SF
BUILDING 6	6,407 SF	9,160 SF	2,878 SF	0 SF
BUILDING 7	6,179 SF	6,178 SF	0 SF	0 SF
BUILDING 8	2,323 SF	2,323 SF	0 SF	144,597 SF
BUILDING 9	2,538 SF	2,538 SF	0 SF	0 SF
BUILDING 10	0 SF	0 SF	O SF	0 SF
TOTAL	45,266 SF	55,823 SF	12,477 SF	410,613 SF

PROVIDE A DETAILED BREAKDOWN OF OCCUPANCY TYPES AND FLOOR AREA FOR COMMERCIAL/HOTEL AMENITIES. (FITNESS ROOM, ASSEMBLY ROOMS)

REFER TO ATTACHED AMENITIES WITH PLUMBING FIXTURES TABLE

PROVIDE THE SURFACE AREA (LENGTH X WIDTH, DIAMETER, OR SQUARE FEET IF IRREGULARLY SHAPED) OF ANY PROPOSED SWIMMING POOL/HOT TUB THAT IS NOT PART OF A FITNESS CLUB.

BUILDING #	DIMENSION	SF
BUILDING 1	N/A	0 SF
BUILDING 2	20’-0” x 50’-0”	1,000 SF
BUILDING 3	N/A	0 SF
BUILDING 4	N/A	0 SF
BUILDING 5	20’-0” x 50’-0”	1,000 SF
BUILDING 6	15’-6” x 56’-0”	868 SF
BUILDING 7	20’-0” x 50’-0”	1,000 SF
BUILDING 8	N/A	0 SF
BUILDING 9	20’-0” x 50’-0”	1,000 SF
BUILDING 10	N/A	0 SF

ALSO, BUILDING 6 : INCLUDES 3 HOT TUBS (9’-0” x 9’-0” EA.) – TOTAL 243 SF

PROVIDE THE AREA OF PROPOSED PARKING FOR COVERED PARKING AND SURFACE PARKING SEPARATELY.

LEVEL #	COVERED PARKING AREA	SURFACE PARKING AREA

LEVEL P4	36,925 SF	0 SF
LEVEL P3	263,548 SF	0 SF
LEVEL P2	267,664 SF	0 SF
LEVEL P1	235,404 SF	0 SF
LEVEL 1	23,119 SF	0 SF
LEVEL 2	48,022 SF	0 SF
LEVEL 3	48,022 SF	0 SF
LEVEL 4	48,022 SF	0 SF
LEVEL 5	24,228 SF	0 SF
LEVEL 6	24,228 SF	0 SF
TOTAL	1,019,182 SF	0 SF

LANDSCAPING

- PROVIDE THE HYDROZONE AREA (SF), AND THE PLANT FACTORS (PF) AND IRRIGATION EFFICIENCY (IE) FOR EACH HYDROZONE (REFER TO CALIFORNIA CODE OF REGULATIONS TITLE 23. DIVISION 2. CHAPTER 2.7. MODEL WATER EFFICIENT LANDSCAPE ORDINANCE.)

  SEE TABLE S3A AND 3B IN THE REQUEST LETTER

- PROVIDE THE APPROXIMATE SQUARE FOOTAGE BREAKDOWN OF LANDSCAPED AREA FOR RESIDENTIAL USES AND NON-RESIDENTIAL USES SEPARATELY.

  SEE TABLE 3A AND 3B IN THE REQUEST LETTER

COOLING

- FOR PROJECTS CONTAINING COOLING TOWERS, PROVIDE THE CHILLER CAPACITY (IN TONS), AND THE HOURS OF OPERATION (X HOURS/DAY, X DAYS/WEEK, X WEEKS/YEAR, ETC.).
  Based on preliminary cooling load calculations and mechanical system arrangements, it is estimated that the total make-up water requirement for the cooling towers proposed on the Fourth and Central site would be approximately 22,472,590 gallons annually (with a monthly average of 1,872,716 gallons or 62,569 gallons per day). This make-up water rate is based on a total 4,000 Ton chiller plant system spread across to serve 8 of the buildings, with the two other buildings on the site being served via air-cooled systems. There is a mix of occupancies on this site between commercial and residential, which have differing use profiles, however it is anticipated that the plants will be operational at some capacity 24/7/365 depending on the area that they serve (preliminary detailed load profiles can be provided as required). These values are rough estimates at this early design stage that could be impacted by several variables including building thermal performance, system selection, and occupancy profiles.

- IF THE PROJECT DOES NOT PROPOSE A COOLING TOWER(S), EXPLAIN HOW THE BUILDING(S) WILL BE COOLED.
  The preliminary concept design includes for 8 of the 10 buildings to be currently proposed with cooling towers, however 2 of the buildings are served via air-cooled variable refrigerant flow systems due to their size. This will be re-visited as the design progresses against capital costs, energy efficiency, phased construction, and end leasability.

- IF THE PROPOSED PROJECT INCLUDES A BUILDING OR BUILDINGS WITH OVER 25 RESIDENTIAL FLOORS, HOW MUCH OF THE COOLING TOWER MAKE-UP WATER WILL BE SUPPLIED BY NON-POTABLE WATER?
  The current intent is to plan for a cooling tower design that operates at greater than 6 cycles of concentration (target of 8-9 cyles). Per GRN standards, this would allow for an exemption from non-potable use.

EXHIBIT 4

- WILL GREYWATER OR OTHER NON-POTABLE WATER BE USED FOR IRRIGATION OR THE COOLING TOWER?
  ☒ YES ☐ NO

  IF YES, PLEASE DESCRIBE THE SYSTEM AND AN ESTIMATE OF HOW MUCH NON-POTABLE WATER WILL BE USED.
  Cooling towers will typically target a minimum of 8-9 cycles of concentration which would limit the requirement for non-potable water make-up. Rainwater harvesting is being proposed to be used for irrigation only, however detailed analysis is required at later stages of design depending on stormwater retention requirements.

PLEASE FILL IN THE TABLE BELOW WITH THE QUANTITY OF PLUMBING FIXTURES/APPLIANCES FOR THE PROPOSED PROJECT. DO NOT CHANGE THE CELLS THAT ALREADY SHOW "N/A". YOU NEED ONLY ENTER THE INFORMATION THAT APPLIES TO THE PROJECT.

	RESIDENTIAL DWELLING UNIT	RESIDENTIAL COMMON AREA	RESTAURANT / BAR	RETAIL / COMMERCIAL	OFFICE	HOTEL ROOMS	HOTEL COMMON FACILITY
WATER CLOSETS	N/A	0	34	22	18	N/A	6
URINALS	N/A	0	15	4	6	N/A	1
LAVORATORY FAUCETS	N/A	0	21	12	13	N/A	3
KITCHEN FAUCETS	N/A	0	0	4	0	N/A	0
COMMERCIAL KITCHEN PRE-RINSE SPRAY FAUCETS	N/A	0	17	0	0	N/A	0
SHOWERHEADS	N/A	0	0	0	0	N/A	0
CLOTHES WASHER (RESIDENTIAL)	1,521	0	0	0	0	0	0
CLOTHES WASHER (COMMERCIAL)	0	0	0	0	0	3	0
DISHWASHER (RESIDENTIAL)	1,521	0	0	0	0	0	0
DISHWASHER (COMMERCIAL)	0	0	17	0	0	0	0

These numbers are derived from the CPC based on the total area of each use.

These numbers are a best guess based on a possible demising plan for the ground floor restaurant/retail areas.

EXHIBIT 4



Path: U:\GIS\GIS\Projects\19xxxxD190422.00_400 S. Central\03_MXDs_Projects\Archive\Fig3-1_ProjectSite.mxd, sgeissler 6/1/2021

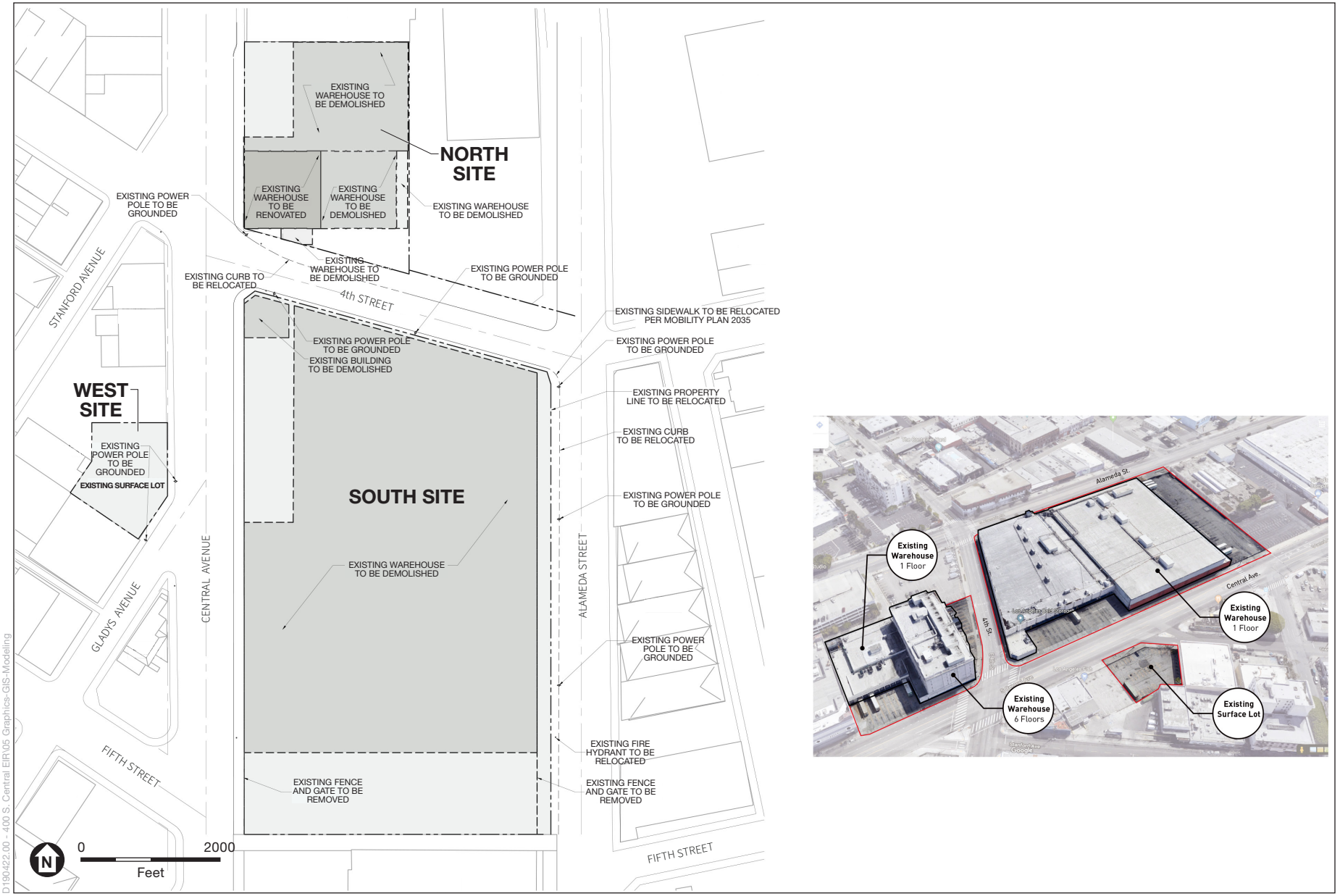
SOURCE: ESRI Imagery.

Fourth & Central Project

Figure 1
Regional and Local Vicinity Map

ESA

EXHIBIT 4



SOURCE: Studio One Eleven, 2021

Fourth & Central Project

Figure 2
Existing On-site Uses

ESA

EXHIBIT 4



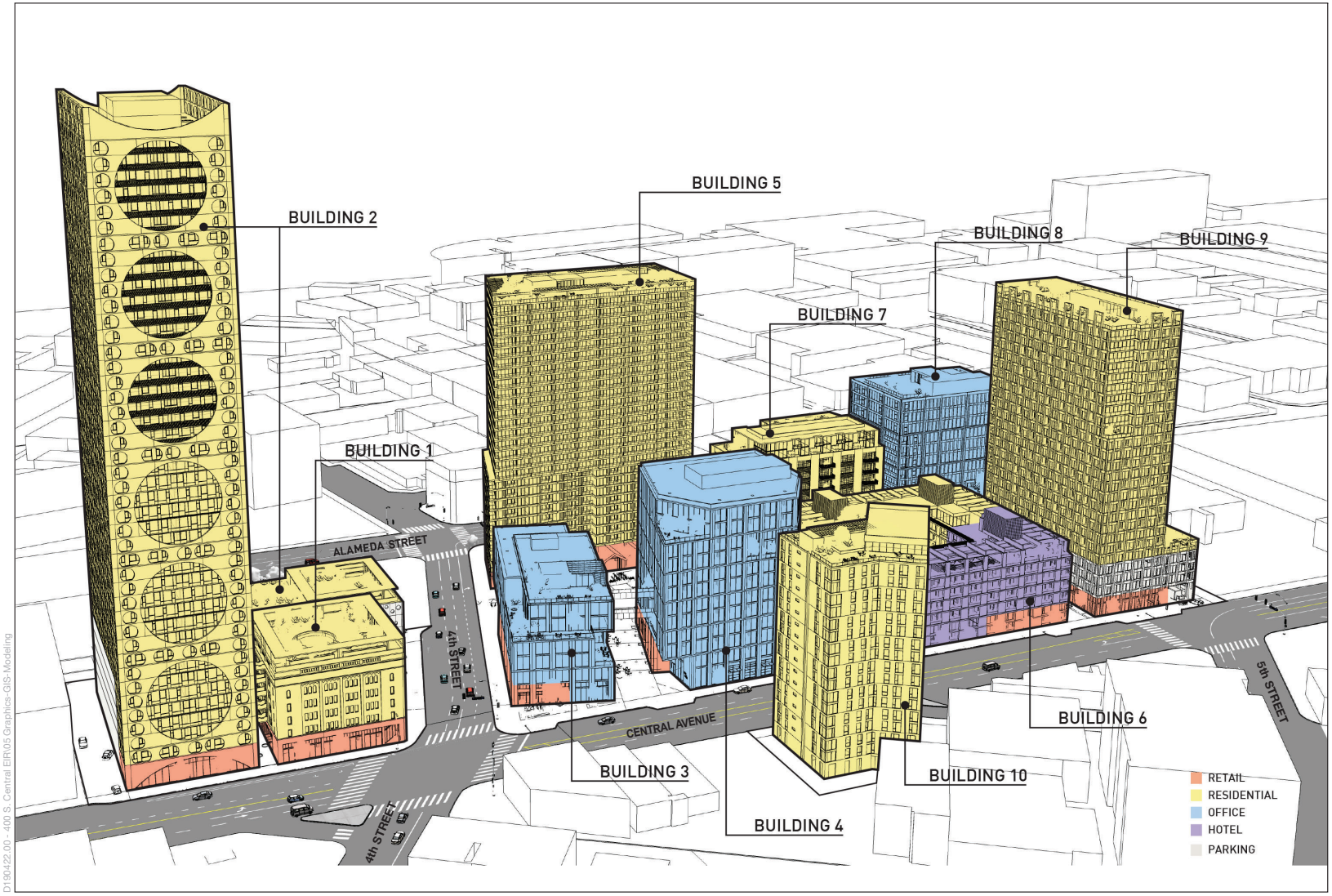
SOURCE: Studio One Eleven, 2021

Fourth & Central Project

Figure 3
Conceptual Site Plan

ESA

EXHIBIT 4



SOURCE: Studio One Eleven, 2021

Fourth & Central Project

Figure 4
Proposed Program Diagram

ESA

EXHIBIT 4



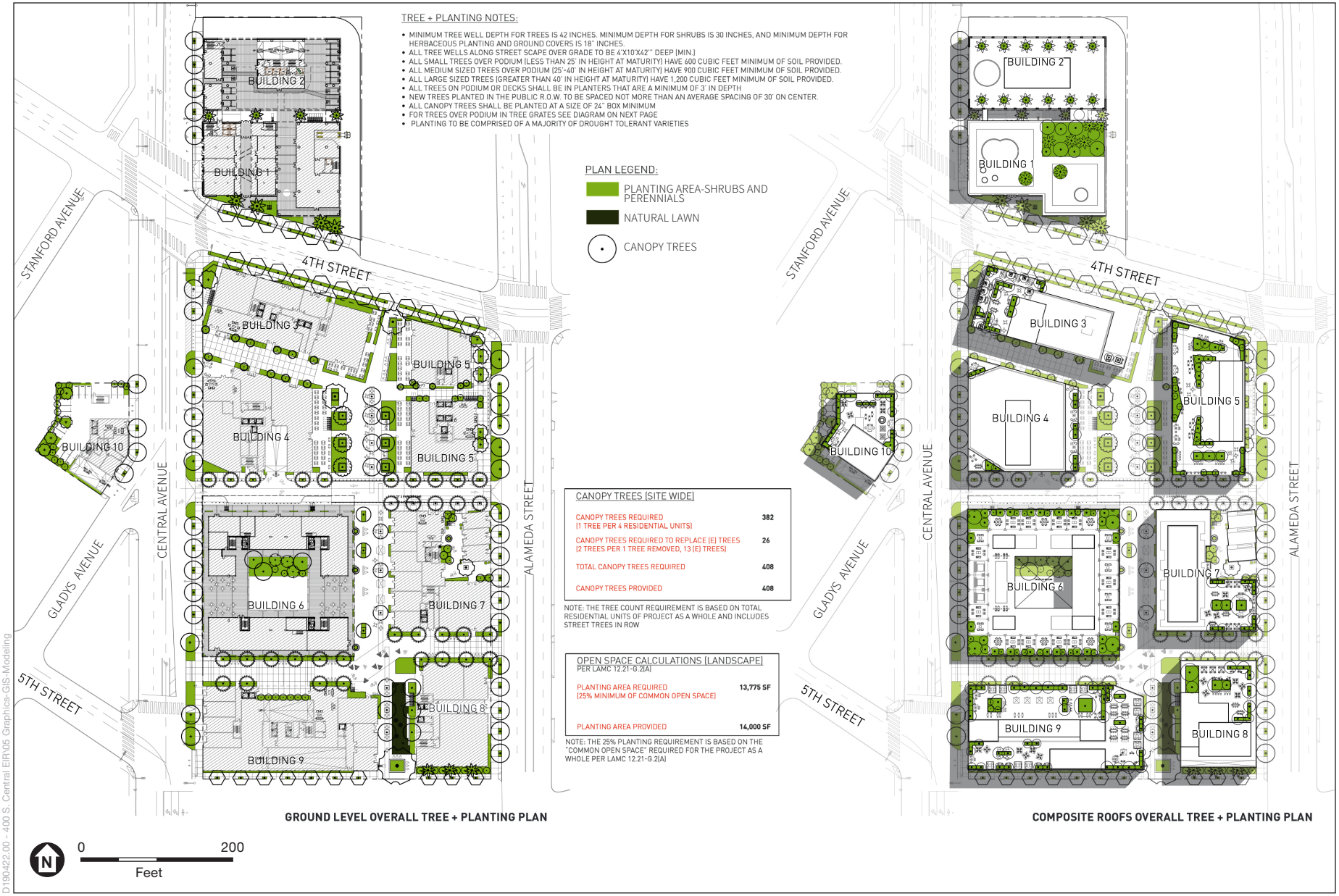
SOURCE: Studio One Eleven, 2021

Fourth and Central Project

Figure 5
Ground Level Plan

ESA

EXHIBIT 4



SOURCE: Studio One Eleven, 2021

Fourth & Central Project

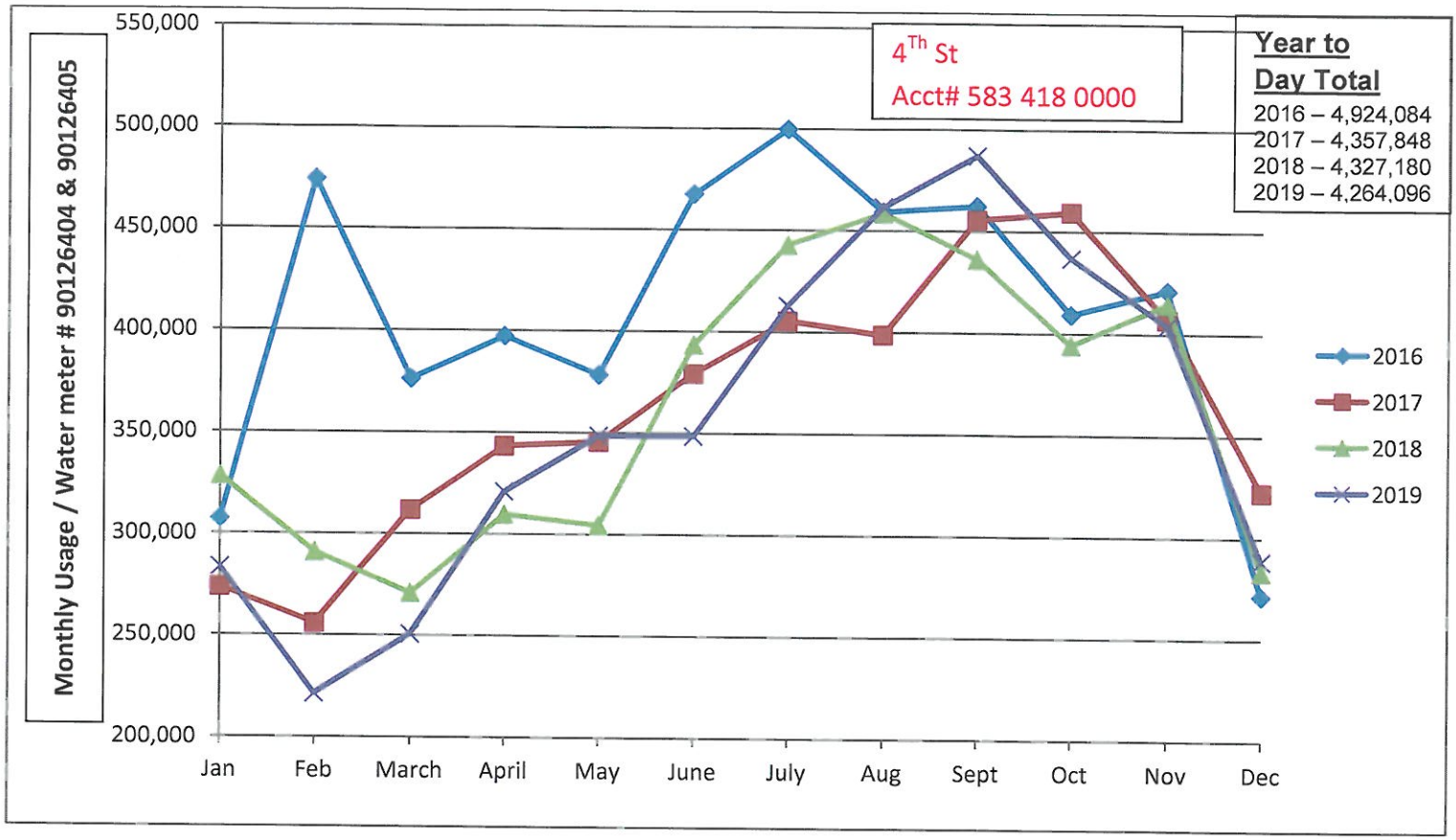
Figure 6
Overall Tree Planting Plan

ESA

Los Angeles Cold Storage Company

EXHIBIT 4

2016 - 2019 Monthly Water Usage



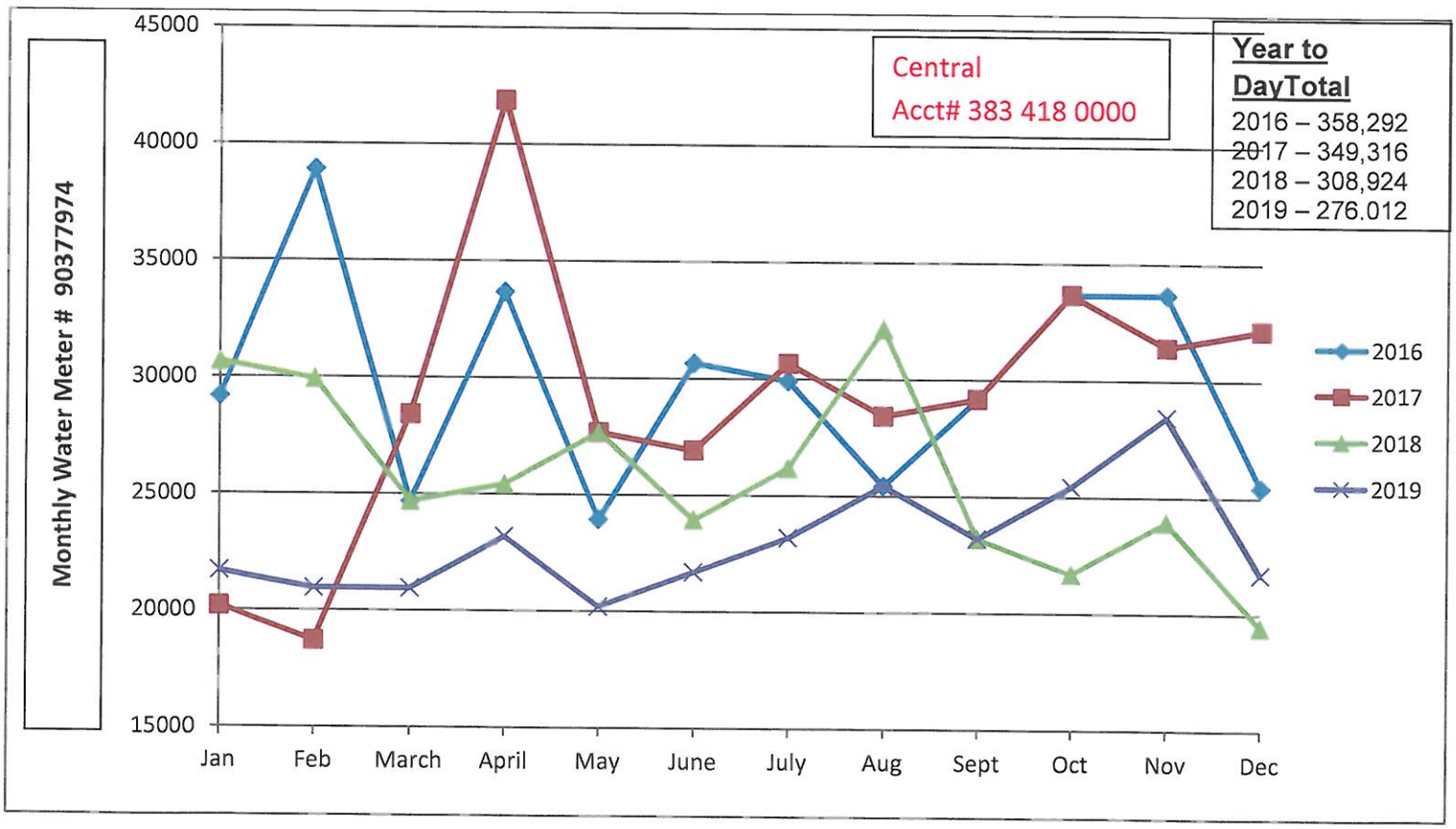


EXHIBIT 4

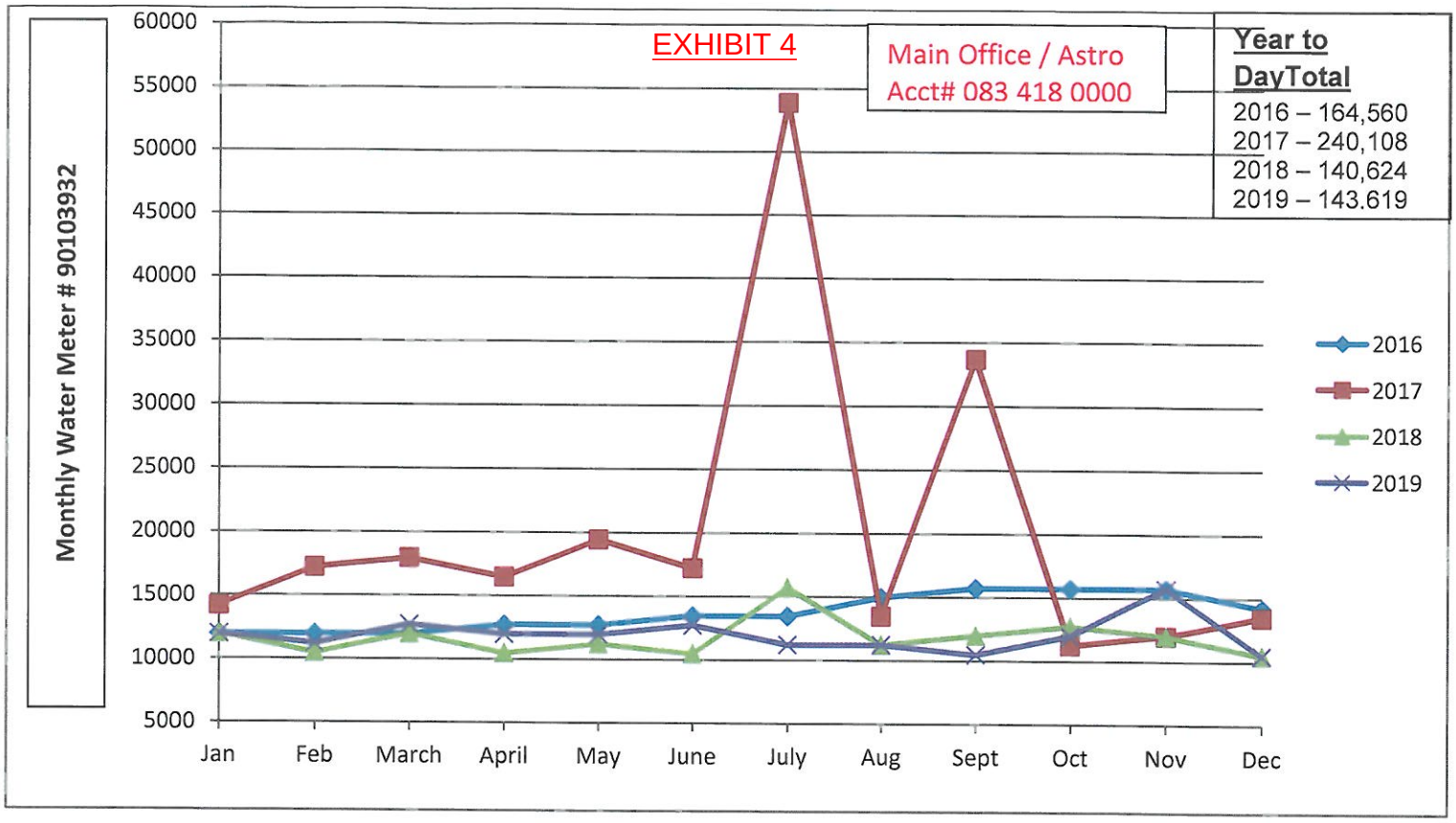
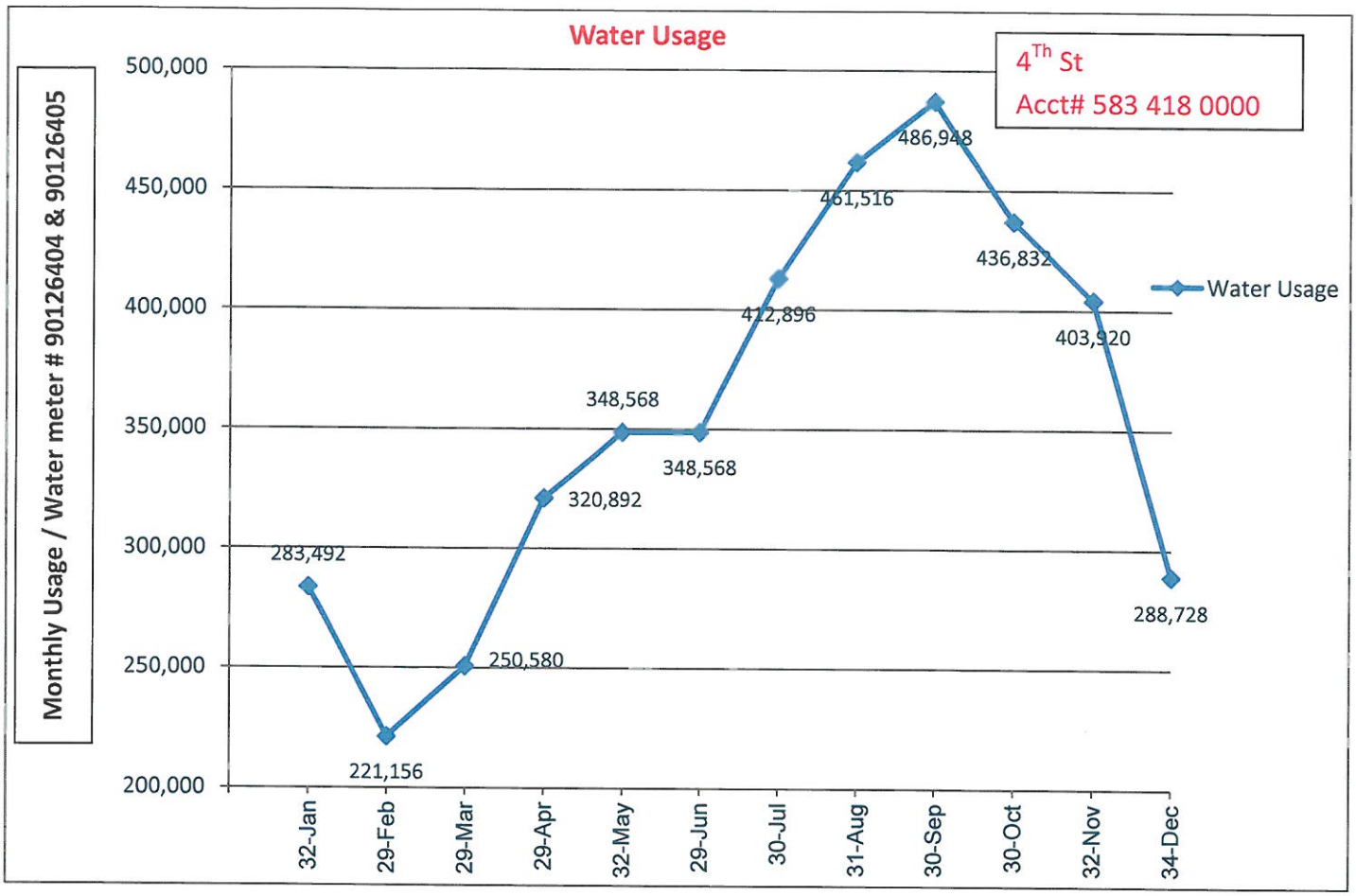

Main Office / Astro
Acct# 083 418 0000
Year to DayTotal
2016 – 164,560
2017 – 240,108
2018 – 140,624
2019 – 143.619
Monthly Water Meter # 90103932
60000
55000
50000
45000
40000
35000
30000
25000
20000
15000
10000
5000
Jan
Feb
March
April
May
June
July
Aug
Sept
Oct
Nov
Dec
2016
2017
2018
2019

EXHIBIT 4

2019 LACS – Monthly Usage Water Meter Charts



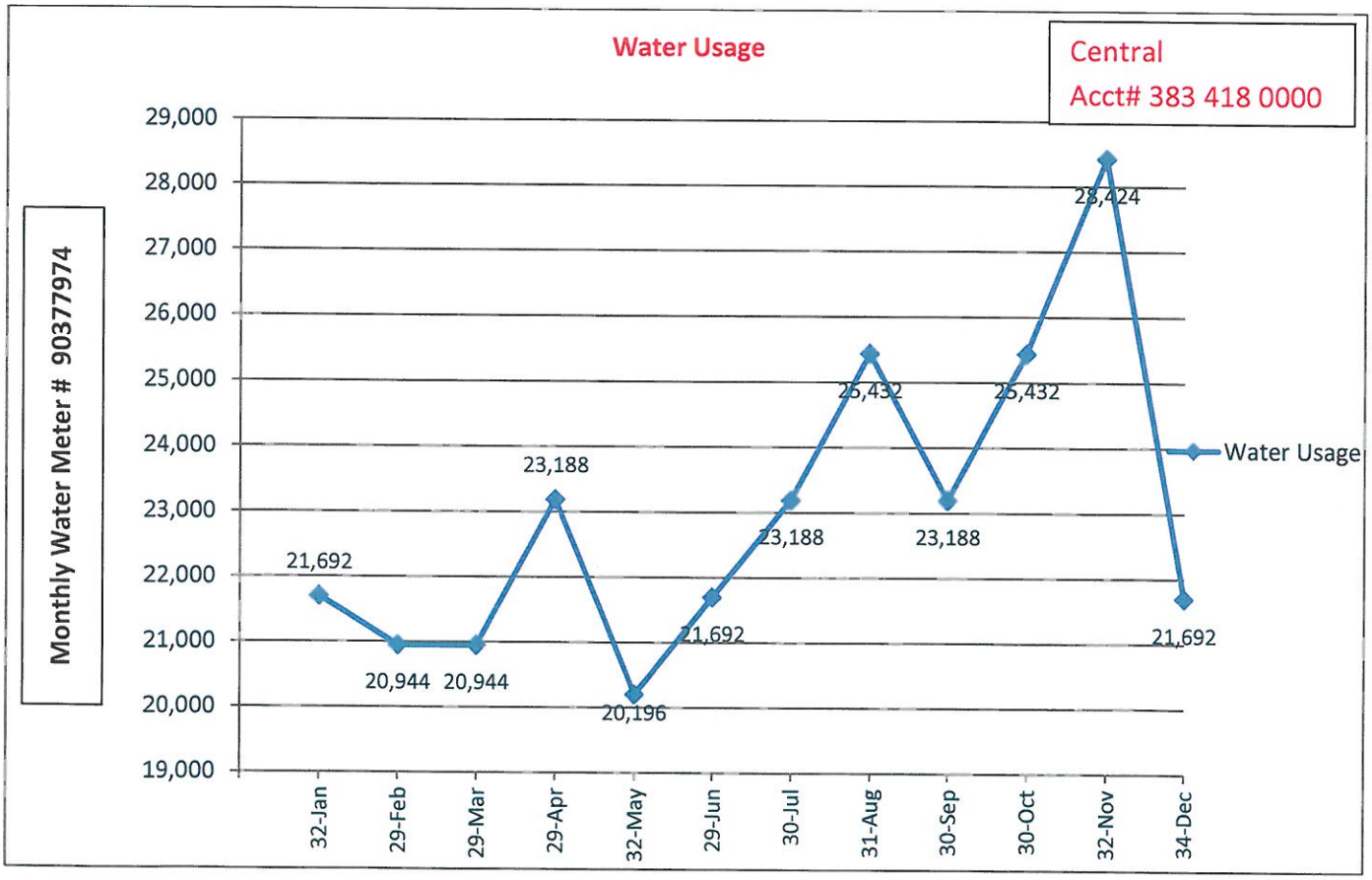


EXHIBIT 4

2019 LACS - Monthly Usage Water Meter Chart

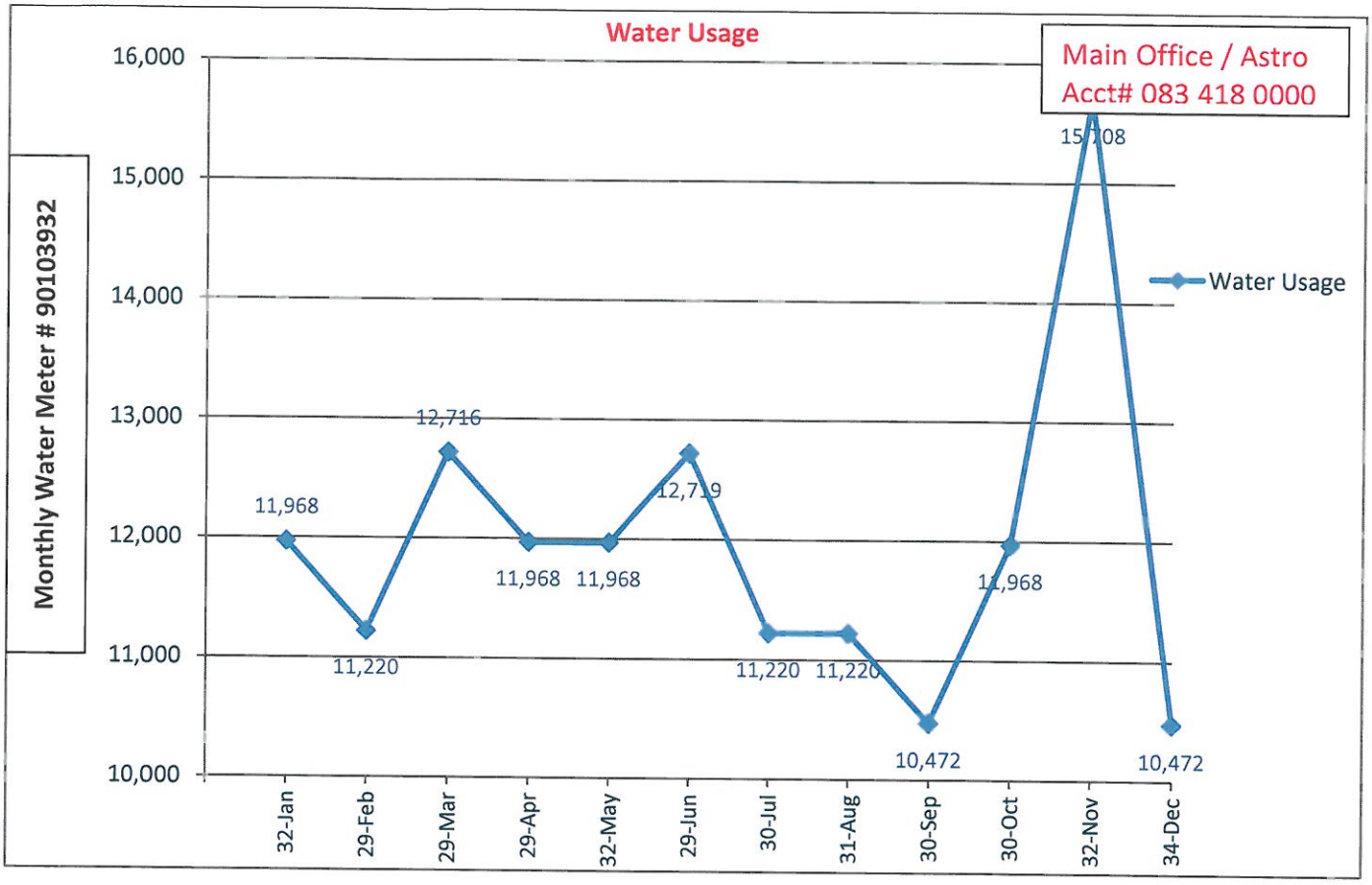


EXHIBIT 4

From: Alan Como
To: Kim, Theresa
Subject: [EXTERNAL] Re: REVISED - Fourth and Central Project - Project"s Scope Confirmation for Water Supply
Date: Tuesday, May 31, 2022 7:29:04 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.

Theresa,

Yes, the scope of the Project as described in your email is correct. Sorry for the delay, I needed to verify a few calculations with the consultant.

On Tue, May 31, 2022 at 7:18 AM Kim, Theresa <Theresa.Kim@ladwp.com> wrote:

> Hi Alan,
>
> I hope you had a good weekend. I'm checking in to verify If you can confirm the Fourth and Central Project's scope of work that is used to calculate the projected water demand for the Water Supply Assessment. Thank you for your assistance.
>
> Theresa Vu Kim
>
> Los Angeles Department of Water and Power
>
> 111 N. Hope Street, Room 314
>
> Los Angeles, CA 90012
>
> O: (213) 367-1491
>
> **From:** Kim, Theresa <>
> **Sent:** Tuesday, May 24, 2022 1:57 PM
> **To:** 'alan.como@lacity.org' <alan.como@lacity.org>; 'Mike Harden' <MHarden@esassoc.com>
> **Cc:** Duho Jung <duho.jung@studio-111.com>
> **Subject:** REVISED - Fourth and Central Project - Project's Scope Confirmation for Water Supply
>
> Hi Alan,
>
> We are in the process of completing the Water Supply Assessment (WSA) Board Package for the Fourth and Central Project within the City of Los Angeles (Project). The Los Angeles Department of Water and Power (LADWP) requests that the City of Los Angeles Department of City Planning (Planning Department) confirm, by e-mail, the correct detailed scope (shown below) for the Project. Your scope confirming e-mail will be included as part of the WSA, and the confirmed scope will be used for calculating the water demand in the

WSA.

LADWP received the WSA Request Letter for the proposed Project on March 31, 2022 and updated on May 10, 2022. The project's scope of work considered in LADWP's water demand calculations, as received in the WSA Request Letter and from the Applicant team, is as follows:

Existing uses to be Demolished:

Existing to be Removed and Remodeled	Quantity
Cold Storage Facilities - Warehouse and associated offices	360,734 sf

Proposed:

Proposed Use[1]	Quantity
Residential:	
Residential Studio - Building 2, 5, 7, 9, 10	428 units
Residential 1 Bedroom - Building 2, 5, 6,7, 9, 10	720 units
Residential 2 Bedroom - Building 2, 5,6, 7, 9, 10	323 units
Residential 3 bedroom - Building 2	42 units
Residential Live/Work - Building 7, 9	8 units
Total dwelling units	1,521 units
Hotel:	
Hotel Rooms in Building 6	68 rooms
Residential Amenities:	
Gymnasium (Building 1,2,5,6,7,9,10)	11,000 SF
Health Club (Building 1, 2, 5, 6,7,9,10)	8,000 SF
Community room/Conference Rooms (Building 1, 2, 5,6,9,10)	41,360 SF
Pet Grooming (Building 1,2,5,6,7,9,10)	3,500 SF
Rooftop Terrace/Lounge Area with pool (Building 2,5,6,7,9)	54,608 SF
Commercial:	
Retail (Building 1, 2, 3, 4, 5, 6, 7, 8, 9)	45,266 SF
Office (Building 3, 4, 8)	411,113 SF
Restaurant, which includes indoor and outdoor space (Building 1, 2,3, 4, 5, 6, 7,8 9 - seating area)	68,299 SF (Indoor Restaurant Area = 55,822 SF) (Outdoor Restaurant Area = 12,477 SF) (Total seats are 4,553 seats)
Hotel Bar (Building 6)	547 SF (36 seats)
Car Wash (Building 1,5,6,7,8,9,10)	42 cars

EXHIBIT 4

	(Total area is 4200 SF)
Landscaping and Pools	60,189 SF
Residential:	31,566 SF (includes 5,261 SF of pool area)
Non-Residential:	28,623 SF
Covered Parking and Bicycle Parking (excludes car wash area of 4,200 SF)	1,014,982 sf
Cooling Towers (for 8 of 10 buildings)	4,000 ton

Notes

1. Proposed uses that do not have a water demand are not shown.

Additional Project Information

1. The Project requires a General Plan Amendment to conform to the uses and intensity of development permitted by the City of Los Angeles' General Plan.
2. The Project is consistent with the demographic projections in the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy of the Southern California Association of Governments for the City of Los Angeles.

If the above listed scope is accurate and consistent with the proposed Project, please reply to this e-mail and confirm the Project's scope. 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----------
This electronic message transmission contains information from the Los Angeles Department of Water and Power, which may be confidential. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of the content of this information is prohibited. If you have received this communication in error, please notify us immediately by e-mail and delete the original message and any attachment without reading or saving in any manner.

--

Alan Como, AICP
City Planner
Los Angeles City Planning
221 N. Figueroa St., Room 1350
Los Angeles, CA 90012
T: (213) 847-3633| Planning4LA.org

EXHIBIT 4

Appendix B

Water Conservation Commitment Letter

EXHIBIT 4

CP LA Cold Storage Land, LLC
1881 16th Street, Suite 500
Denver, Colorado 80202

May 16, 2022

Anselmo G. Collins
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 FOURTH & CENTRAL PROJECT

Dear Mr. Collins:

CP LA Cold Storage Land, LLC ("**Applicant**") proposes to develop the Fourth & Central project ("**Project**") within the Central City Community Plan Area of the City of Los Angeles. The Project site, which encompasses approximately a total of 7.6 acres comprised of the following areas: North Site (1.35 acres) located at the northeast corner of 4th Street and Central Avenue; South Site (5.98 acres) located south of 4th Street between Central Avenue and Alameda Street; and West Site (0.32 acres) located at the northwestern intersection of Gladys Avenue and Central Avenue. The Project would include a mix of residential, office, restaurant/retail, and hotel uses within 10 distinct buildings over the Project site totaling approximately 2,318,534 sf. The Project would include: 1,521 residential units, including affordable housing units, totaling approximately 1,731,849 sf; approximately 411,113 sf of office uses; approximately 101,088 sf of restaurant/retail uses[1]; and 68 hotel rooms (74,484 sf of hotel floor area). The Project would also include approximately 1,019,182 of covered parking and 54,928 of landscaping.

The existing on-site development (North, South and West Sites) collectively comprise(s) approximately 360,734 square feet of floor area ("**Cold Storage Facilities**"). The Project would demolish the existing surface parking and Cold Storage Facilities uses on the West and South Sites. The Project intends to adaptively reuse, if feasible, a portion of a six-story cold storage warehouse building located on the North Site, while demolishing the remaining attached single-story warehouse building on the North Site.

---

1 The 101,088 square foot restaurant/retail floor area includes floor areas for purposes of calculating floor area per Los Angeles Municipal Code (LAMC) requirements. An additional potential 13,024 square feet of outdoor dining/patio space may be incorporated into the Project, which does not count towards the LAMC calculation of floor area. To provide a conservative analysis of environmental impacts associated with the Project's retail/restaurant uses, the environmental analyses included in Chapter 4, Environmental Impact Analysis, of this Draft EIR evaluates a total of 114,112 square feet of restaurant/retail uses. It is assumed there would be 45,266 square feet of retail uses and 68,846 square feet of restaurant uses.

The Applicant understands the City of Los Angeles' plans to meet future water needs by expanding local water supply programs and reducing demands on purchased imported water through local groundwater, recycled water, stormwater capture, and water conservation and use efficiency. Therefore, 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, unless noted otherwise below, to reduce the Project's baseline water demand:

Fixtures

- ENERGY STAR Certified Commercial Clothes Washers – *utilizing less than a* Water Factor of "4" and a max capacity of "6" cubic feet
- ENERGY STAR Certified Residential Clothes Washers – Front-loading or Top-loading with Integrated Water Factor and capacity as follows:
    - Front-loading with capacity greater than "2.5" cubic feet: Integrated Water Factor of less than "3.2"
    - Top-loading with capacity greater than "2.5" cubic feet: Integrated Water Factor of less than "4.3" or less
    - Either front- or top-loading with capacity of less than or equal to "2.5" cubic feet: Integrated Water Factor of "4.0" or less
- ENERGY STAR Certified Residential Dishwashers – standard with 3.2 gallons/cycle or less or compact with less than "3.1" gallons/cycle
- Hybrid Waterless Urinals with a flush volume of 1 gallon per 72 hours, (WaterSense labels are not available for hybrid or waterless urinals)
- WaterSense-labeled High Efficiency Toilets with a flush volume of "1.1" gallons per flush, or less
- WaterSense-labeled Showerheads with a flow rate of 1.5 gallons per minute, or less in all residential units.

Landscape and irrigation

- California Friendly® plants or native plants (Information can be found at http://www.bewaterwise.com/assets/top-10-california-friendly-plants-%28web%29.pdf, http://www.bewaterwise.com/assets/50-favorites-for-california-friendly-landscapes-%28web%29.pdf, and http://www.ladwp.cafriendlylandscaping.com/)
- Drip/ Subsurface Irrigation (Micro-Irrigation)
- Irrigation Controls programmed to real-time weather conditions
- Leak Detection System for irrigation
- Micro-Spray

- Design and use where feasible water-efficient flowing/recirculating water features such as fountains in ways to reduce evaporation and makeup water
- Proper Hydro-zoning/Zoned Irrigation–(groups plants with similar water requirements together)
- Rainwater Harvesting and Grey Water Use/Storage where and when feasible and if space is available for the system (e.g., tanks, pumps, and filtration systems). Greywater sources may include bathroom faucets, showers, clothes washers, and mechanical cooling condensate, among other allowable sources.
- Xeriscaping (landscaping that reduces or eliminates the need for irrigation), while still ensuring that heat island effects are mitigated

Pool

- Install a meter on the pool make-up line so water use can be monitored and leaks can be identified and repaired
- Pool splash troughs around the perimeter that drain back into the pool
- Pool/Spa recirculating filtration equipment
- Reuse pool backwash water for irrigation
- Water-Saving Pool Filter

Utilities

- Individual metering and billing for water use for every commercial unit
- Individual meters for water supply and water subsystems to analyze water demand and identify additional water savings by tracking water consumption
- Allocate space and clearance to support non-potable water (purple pipe) infrastructure with a connecting port for future connection to a municipal recycled water system when made available.

The Applicant will additionally consider implementing air-cooled HVAC systems instead of water-cooled HVAC systems as a means of conserving water. If water-cooled HVAC systems are used, the Project team will follow LEED Cooling Tower Water Use credit guidelines to reduce potable water use for cooling tower makeup water.

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:

Stormwater Management

- Catch Basin Insert – a device that can be inserted into an existing catch basin design to provide some level of runoff contaminant removal.
- Catch Basin Screens
- Cistern – captures stormwater runoff as it comes down through the roof gutter system.
- Infiltration Basin (drainage area of 5-50 acres) – captures first-flush stormwater, removes particulate pollutants and some soluble pollutants, and contributes toward recharging groundwater.
- Infiltration Trench (drainage area of less than 5 acres) – similar to infiltration basin but used for smaller drainage areas to capture and infiltrate rainwater.
- Pervious Pavements – captures runoff by allowing stormwater to pass through the pavement surface and then infiltrate into the groundwater basin.

Should you have any questions, please do not hesitate to call at 720.946.4671.

Sincerely,

CP LA Cold Storage Land, LLC
a Colorado limited liability company

By: _____
Mark G. Falcone
Manager

EXHIBIT 4

Appendix C

Project Location Maps

EXHIBIT 4



Path: U:\GIS\GIS\Projects\19xxxxD190422.00_400 S. Central\03_MXDs_Projects\Archive\Fig3-1_ProjectSite.mxd, sgeissler 6/1/2021

SOURCE: ESRI Imagery.

Fourth & Central Project

Figure 1
Regional and Local Vicinity Map

ESA

EXHIBIT 4



SOURCE: Studio One Eleven, 2021

Fourth & Central Project

Figure 3
Conceptual Site Plan

ESA

EXHIBIT 4

Appendix D

Adjudicated Groundwater Basin Judgments

- San Fernando Basin – Judgment No. 650079
- Sylmar Basin – Judgment No. 650079
- Central Basin – Judgment No, 786656

EXHIBIT 4

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.

4.2.3 Separate Ground Water Basins. The physical and geologic characteristics of each of the ground water basins, Eagle rock, Sylmar, Verdugo and San Fernando, cause impediments to inter-basin ground water flow whereby there is created separate underground reservoirs. Each of said basins contains a common source of water supply to parties extracting ground water from each of said basins. The amount of underflow from Sylmar Basin, Verdugo Basin and Eagle Rock Basin to San Fernando Basin is relatively small, and on the average has been approximately 540 acre feet per year from the Sylmar Basin; 80 acre feet per year from Verdugo Basin; and 50 acre feet per year from Eagle Rock Basin. Each has physiographic, geologic and hydrologic differences, one from the other, and each meets the hydrologic definition of "basin". The extractions of water in the respective basins affect the other water users within that basin but do not significantly or materially affect the ground water levels in any of the other basins. The underground reservoirs of Eagle Rock, Verdugo and Sylmar Basins are independent of one another and of the San Fernando Basin.

4.2.4 Safe Yield and Native Safe Yield. The safe yield and native safe yield, stated in acre feet, of the three largest basins for the year 1964-65 was as follows:

Basin	Safe Yield	Native Safe Yield
San Fernando	90,680	43,660
Sylmar	6,210	3,850
Verdugo	7,150	3,590

The safe yield of Eagle Rock Basin is derived from imported water delivered by Los Angeles. There is no measurable native safe yield.

4.2.5 Separate Basins -- Separate Rights. The rights of the parties to extract ground water within ULARA are separate and distinct as within each of the several ground water basins within said watershed.

4.2.6 Hydrologic Condition of Basins. The several basins within ULARA are in varying hydrologic conditions, which result in different legal consequences.

4.2.6.1 San Fernando Basin. The first full year of overdraft in San Fernando Basin was 1954-55. It remained in overdraft continuously until 1968, when an injunction

EXHIBIT 4

LAGERLOF, SENICAL, DRESCHER & SWIFT
301 North Lake Avenue, 10th Floor
Pasadena, California 91101
(818) 793-9400 or (213) 385-4345

SUPERIOR COURT OF THE STATE OF CALIFORNIA

FOR THE COUNTY OF LOS ANGELES

CENTRAL AND WEST BASIN WATER REPLENISHMENT DISTRICT, etc., Plaintiff, v. CHARLES E. ADAMS, et al., Defendants. CITY OF LAKEWOOD, a municipal corporation, Cross-Complaint, v. CHARLES E. ADAMS, et al., Cross-Defendants.	No. 786,656 SECOND AMENDED JUDGMENT (Declaring and establishing water rights in Central Basin and enjoining extractions therefrom in excess of specified quantities.)

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,

of the close of the water year ending September 30, 1978 in accordance with the Watermaster Reports on file with this Court and the records of the Plaintiff. This tabulation does not take into account additions or subtractions from any Allowed Pumping Allocation of a producer for the 1978-79 water year, nor other adjustments not representing change in fee title to water rights, such as leases of water rights, nor does it include the names of lessees of landowners where the lessees are exercising the water rights. The exercise of all water rights is subject, however, to the provisions of this Judgment is hereinafter contained. All of said rights are of the same legal force and effect and are without priority with reference to each other. Each party whose name is hereinafter set forth in the tabulation set forth in Appendix "2" of this judgment, and after whose name there appears under the column "Total Water Right" the figure "0" owns no rights to extract any ground water from Central Basin, and has no right to extract any ground water from Central Basin.

(b) Defendant The City of Los Angeles is the owner of the right to extract fifteen thousand (15,000) acre feet per annum of ground water from Central Basin. Defendant Department of Water and Power of the City of Los Angeles has no right to extract ground water from Central Basin except insofar as it has the right, power, duty or obligation on behalf of defendant The City of Los Angeles to exercise the water rights in Central Basin of defendant The City of Los Angeles. The exercise of said rights are subject, however, to the provisions of this judgment hereafter contained, including but not limited to, sharing with other parties in any subsequent decreases or increases in the quantity of extractions permitted from Central Basin, pursuant to continuing jurisdiction of the Court, on the basis that fifteen thousand (15,000) acre feet bears to the Allowed Pumping Allocations of the other parties.

(c) No party to this action is the owner of or has any right to extract ground water from Central Basin except as herein affirmatively determined.

2. Parties Enjoined as Regards Quantities of Extractions.

EXHIBIT 4

Appendix E

Water Supply Assessment Provisions
California Water Code Section 10910-10915

STATE OF CALIFORNIA
LEGISLATIVE COUNSEL BUREAU
AUTHENTICATED
ELECTRONIC LEGAL MATERIAL

EXHIBIT 4

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
LEGISLATIVE COUNSEL BUREAU
AUTHENTICATED
ELECTRONIC LEGAL MATERIAL

EXHIBIT 4

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
LEGISLATIVE COUNSEL BUREAU
AUTHENTICATED
ELECTRONIC LEGAL MATERIAL

EXHIBIT 4

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
LEGISLATIVE COUNSEL BUREAU
AUTHENTICATED
ELECTRONIC LEGAL MATERIAL

EXHIBIT 4

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
LEGISLATIVE COUNSEL BUREAU
AUTHENTICATED
ELECTRONIC LEGAL MATERIAL

EXHIBIT 4

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.)

EXHIBIT 4

Appendix F

Metropolitan Water District of Southern California

(APPENDIX A)

EXHIBIT 4

APPENDIX A

The Metropolitan Water District of Southern California



EXHIBIT 4

THIS PAGE INTENTIONALLY LEFT BLANK

EXHIBIT 4

TABLE OF CONTENTS

Page

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-7
- Risk Management A-8
- Cybersecurity A-8

METROPOLITAN'S WATER SUPPLY A-8
- General A-8
- Current Water Conditions and Response Actions 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-31
- Storage Capacity and Water in Storage A-37

CONSERVATION AND WATER SHORTAGE MEASURES A-39
- General A-39
- Water Surplus and Drought Management Plan A-40
- Water Supply Allocation Plan A-40
- Increased Drought Resiliency A-41

REGIONAL WATER RESOURCES A-41
- Los Angeles Aqueduct A-42
- Local Water Supplies A-43

METROPOLITAN'S WATER DELIVERY SYSTEM A-46
- Primary Facilities and Method of Delivery A-46
- Water Quality and Treatment A-47
- Seismic Considerations and Emergency Response Measures A-50
- Security Measures A-53

CAPITAL INVESTMENT PLAN A-53
- General Description A-53
- Projection of Capital Investment Plan Expenditures A-53
- Capital Investment Plan Financing A-54
- Major Projects of Metropolitan's Capital Investment Plan A-55

METROPOLITAN REVENUES A-57
- General A-57
- Summary of Revenues by Source A-57
- Revenue Allocation Policy and Tax Revenues A-58

EXHIBIT 4

TABLE OF CONTENTS
(Continued)

Page

Water Revenues A-58
Principal Customers A-59
Rate Structure A-60
Member Agency Purchase Orders A-61
Other Charges A-62
Classes of Water Service A-63
Water Rates A-65
Financial Reserve Policy A-65
California Ballot Initiatives A-66
Preferential Rights A-67
Litigation Challenging Rate Structure A-68
Other Revenue Sources A-74
Investment of Moneys in Funds and Accounts A-74

METROPOLITAN EXPENSES A-76

General A-76
Revenue Bond Indebtedness and Other Obligations A-76
Limitations on Additional Revenue Bonds A-77
Variable Rate Exposure Policy A-78
Outstanding Senior Revenue Bonds and Senior Parity Obligations A-79
Outstanding Subordinate Revenue Bonds and Subordinate Parity Obligations A-85
Other Junior Obligations A-89
General Obligation Bonds A-89
State Water Contract Obligations A-89
Power Sources and Costs; Related Long-Term Commitments A-92
Defined Benefit Pension Plan and Other Post-Employment Benefits A-94

HISTORICAL AND PROJECTED REVENUES AND EXPENSES A-99

MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES A-103

Water Transactions Projections A-103
Water Revenues A-104
Projected Fiscal Year 2020-21 Results A-104

EXHIBIT 4

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 local supplies and 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. 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. 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). Metropolitan's member agencies may develop additional sources of water and Metropolitan provides support for several programs to develop these local resources. See also "REGIONAL WATER RESOURCES–Local Water Supplies."

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[1]
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	

(1) 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 2020, 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"). Recent population projections prepared by SCAG in 2020 and by SANDAG in 2019, which will be used as base data for Metropolitan's 2020 Integrated Water Resources Plan, show expected population growth of approximately 17 percent in Metropolitan's service area between 2010 and 2035, which is slightly lower than the approximately 18 percent population growth rate projected by SCAG in 2012 and SANDAG in 2013 (which projections were used as base data for Metropolitan's prior 2015 Integrated Water Resources Plan update). 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 late 2019 outbreak of the new highly transmissible strain of coronavirus and the disease it causes (known as COVID-19), has spread across the globe. The World Health Organization (the "WHO") declared the outbreak of COVID-19 to be a pandemic, and states of emergency were 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. Metropolitan's General Manager declared a state of emergency at Metropolitan in March 2020. The COVID-19 pandemic and the governmental actions to respond to and control the outbreak materially altered the behavior of people and disrupted business activity, resulting in a significant contraction of the national, state and local economies. Employment data released since the imposition of governmental restrictions on activities showed a dramatic increase in unemployment rates and, while some recovery of jobs has occurred, unemployment rates remain significantly above pre-pandemic levels. In addition, domestic and international stock markets experienced declines in market value following the onset of the outbreak. Although rebounds in the global financial markets have since occurred, price volatility remains.

With widespread vaccination currently underway worldwide, some of the domestic governmental-imposed "stay-at-home" orders and restrictions on operations of schools and businesses implemented to respond to and control the outbreak have been eased. The Governor of California has announced most statewide COVID-19 restrictions may be lifted by June 15, 2021, contingent on the status of certain public health metrics to be assessed at that time. Restrictions, however, may be re-imposed in various jurisdictions from time to time as local conditions warrant. It is not known with any level of certainty when a full re-opening of the economy will be achieved and sustained. The negative effects of the COVID–19 pandemic and its aftermath on global, national and local economies is widely expected to continue at least for the foreseeable future.

Metropolitan is monitoring and responding to the COVID-19 pandemic and ongoing developments surrounding it. Metropolitan has taken, and is taking, a number of steps to maintain continuity of its critical and essential business functions and avoid widespread impacts to its workforce from the COVID-19 outbreak. Metropolitan's water system is deemed federally designated critical infrastructure, entitled to exemptions under governmental "stay-at-home" orders as needed to maintain continuity of operations. Metropolitan personnel necessary to the operation and delivery of water supplies remain on-site, with staffing strategies being utilized to protect the health of its employees and promote "social distancing." Enhanced facility cleaning and disinfection practices have 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 taken steps to ensure it has the necessary backup equipment, supplies and treatment chemicals in the event of disruptions to the procurement supply chain. To date, Metropolitan's ability to treat and deliver water has not been impaired. Metropolitan has experienced an increase in certain costs, primarily expenses for personal protective equipment, enhanced cleaning procedures, technology costs to accommodate teleworking and other related expenditures. In aggregate, these increased expenses have been modest and are generally offset by reductions in travel and other office expenses. 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" in this Appendix A.

Metropolitan also proactively responded to the anticipated effects of the ongoing COVID-19 pandemic likely to be experienced by its member agencies. Following the onset of the pandemic and response actions, many 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, implemented measures to assist their customers facing financial hardship as a result of the COVID-19 outbreak. In addition, as a measure to assure access to water service for citizens likely to be adversely impacted financially due to the economic effects of the ongoing COVID–19 pandemic, on April 2, 2020, Governor Newsom issued an executive order which, among other things, ordered the restoration of water service to residential customers in occupied residences whose service was discontinued for nonpayment during the state of emergency, and suspended the authority of retail water service providers to discontinue water service to residential and qualifying small business customers for non-payment for the duration of the state of emergency. These measures were expected to result in more late or non-payment of utility bills than normal and forecasted for retail water service providers generally, with the potential to 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 WHO in March 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" in this Appendix A.

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 owed 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. As of May 1, 2021, no member agencies have applied for the COVID-19 Member Agency Deferment Program.

On March 11, 2021, President Biden signed the American Rescue Plan Act of 2021 (the "ARP Act"), a $1.9 trillion economic stimulus package designed to help the United States' economy recover from the adverse impacts of the COVID-19 pandemic. The ARP Act includes approximately $350 billion in aid to state and local governments, consisting of both direct funding from the United States Department of Treasury and program moneys that will flow from other federal agencies. Half of the aid to state and local governments will be distributed in spring 2021, with the other half following in 2022. Although Metropolitan may seek ARP Act funds from the State, it is unclear at this time how the State will allocate such funds. The State Treasury is expected to release future guidance in the coming weeks. Metropolitan may also receive refundable employee tax credits for paid sick and family medical leaves provided due to the COVID-19 pandemic.

The COVID-19 outbreak is ongoing and developments will continue. The ultimate 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 stay-at-home orders and the extent to which the disruption to or decline in the local and global economies and financial markets persists; (ii) the effectiveness of and ability to reach wide spread distribution of vaccines and the period of time therefor; (iii) the degree to which business closures, continued increased unemployment, housing foreclosures and/or other economic consequences occur that could reduce water demands in the region and, in turn, Metropolitan's water transactions, or that could negatively affect future property values in Metropolitan's service area and/or Metropolitan's property tax levy receipts which singularly or collectively could reduce Metropolitan's projected revenues; (iv) the ramifications of future actions that may be taken or required by governmental authorities to respond to the effects of the pandemic, including additional stimulus efforts by the federal government; (v) the pace at which the economy can re-open; and (vi) the speed of the ensuing economic recovery. 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. 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. Mr. Kightlinger will continue as General Manager until a successor assumes the position of General Manager of Metropolitan. On June 8, 2021, the Board approved the terms of the employment contract for the appointment of Mr. Adel Hagekhalil as General Manager. Mr. Hagekhalil currently serves as Executive Director and General Manager of the City of Los Angeles Bureau of Street Services. Mr. Hagekhalil is expected to commence his service as Metropolitan's General Manager on June 30, 2021.

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 polices 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 served 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 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, security, board administration 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 April 1, 2021 was 1,907 with 1,793 positions filled, and the remaining 114 positions under recruitment or vacant. Of the filled positions, 1,241 were represented by AFSCME Local 1902, 93 by the Supervisors Association, 304 by the Management

and Professional Employees Association and 124 by the Association of Confidential Employees. The remaining 31 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. Bargaining for new MOUs will begin later in 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 and Response Actions

California is experiencing its second consecutive dry year. As of May 9, 2021, northern Sierra precipitation was 48 percent of the 50-year average for the time of year, and the northern Sierra April 1, 2021 snowpack peaked on March 24 and measured at 72 percent of the April 1 average. As of May 1, 2021, the water year runoff forecast for the Sacramento River was 6.7 million acre-feet or 38% of average. Unimpaired flows through April 2021 for the Sacramento Valley were the 4th driest in the historical record dating back to 1906, behind only 1977, 1931 and 1924. Dry soil moisture conditions combined with low precipitation are the main drivers for the low runoff forecast. As a result of the continuing dry conditions, on March 23, 2021, the California Department of Water Resources ("DWR") notified State Water Contractors (defined below) that its calendar year 2021 allocation estimate of State Water Project water was decreased from the initial allocation estimate of 10 percent to 5 percent, or 95,575 acre-feet for Metropolitan. Further changes to the 2021 allocation are extremely unlikely to occur this late in the season. The allocation estimate for 2021 follows a reduced allocation of State Water Project to State Water Contractors of 20 percent of contracted amounts in calendar year 2020. (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.) See "–State Water Project."

An extended drought period is ongoing in the Colorado River Basin. The Upper Colorado River Basin snowpack accumulation peaked on March 29, 2021 and measured at 88 percent of the 30-year April 1 median. As of May 4, 2021, the water year runoff forecast into Lake Powell was 34% of average, or the 3rd driest since Lake Powell was filled in 1964, behind only 2002 and 1997. As with the Sierra Nevada, dry soil moisture conditions and low precipitation are the main drivers for the low runoff forecast. As of May 9, 2021, the total system storage in the Colorado River Basin was 43 percent of capacity, a decrease of nine percent or 5.38 million acre-feet from the same time the prior year. The dry conditions are not affecting Metropolitan's supplies this year, which are projected to be 1,008,700 acre-feet. According to the Bureau of Reclamation's

latest forecast, if current projections hold or conditions worsen, a first-ever shortage is anticipated to be declared in August 2021 for calendar year 2022, which would reduce deliveries to Arizona, Nevada, and Mexico. Because of its higher priority, Metropolitan will not be directly affected by this shortage in 2022 and will be able to continue to take ICS out of Lake Mead and fill the CRA if needed. See "–Colorado River Aqueduct."

On April 21, 2021, Governor Newsom proclaimed a state of emergency in Mendocino and Sonoma counties due to drought conditions in the Russian River Watershed. The Russian River Watershed is not a source of water for Metropolitan and the region is not connected to either the State Water Project or the federal Central Valley Project. On May 10, 2021, Governor Newson expanded the drought emergency proclamation to cover Klamath River, Sacramento-San Joaquin Delta and Tulare Lake watersheds bringing the total number of counties under emergency proclamation to 41. The declaration of a drought emergency has not yet been extended to include Southern California counties.

Metropolitan has planned and prepared for dry conditions by investing in vital infrastructure to increase its storage capacity. Metropolitan's storage as of January 1, 2021 is estimated to be 3.91 million acre-feet. See "–Storage Capacity and Water in Storage." Metropolitan is prepared to meet water demands in its service area in calendar year 2021 using a combination of CRA deliveries, storage reserves and, if so determined, supplemental water transfers and purchases. Metropolitan has initiated the process to withdraw from its dry-year storage reserves in the State Water Project banking programs and flexible storage accounts. On April 13, 2021, the Board authorized the General Manager to secure up to 65,000 acre-feet of additional water pursuant to one-year water transfers from water districts located north of the Sacramento-San Joaquin River Delta. If secured, the authorized water transfers would allow Metropolitan to preserve some water stored in surface water reservoirs on the State Water Project system for next year, should the critically dry pattern continue into 2022. See "– Water Transfer, Storage and Exchange Programs – State Water Project Agreements and Programs – Other Ongoing Activities." Metropolitan also continues to encourage responsible and efficient water use to lower demands. See "CONSERVATION AND WATER SHORTAGE MEASURES" in this Appendix A.

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, Metropolitan's new 2020 IRP is under development and a draft is expected to be released in 2021. See "–2020 IRP."

2015 IRP Update. Metropolitan's 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 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 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. It provides an adaptive management approach to address future uncertainty, including uncertainty from climate change. 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 a diversified portfolio approach to water management.

Specifically, the 2015 IRP Update identifies the goals, approaches and regional targets for water resource development that are needed to ensure reliability under planned conditions through the year 2040, which are described below.

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. Metropolitan's 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. 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. 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. Preliminary assumptions and gap analyses of the draft scenarios were presented to the Board in December 2020. As of March 2021, Metropolitan staff has worked with input received from the Board, member agencies, and expert consultants to develop refined analyses of draft scenarios for member agency and Board review. A draft of the 2020 IRP is expected to be available in 2021.

Metropolitan's 2015 IRP Update and associated materials are available on Metropolitan's website at: http://www.mwdh2o.com/AboutYourWater/Planning/Planning-Documents/Pages/default.aspx. Information and materials relating to Metropolitan's ongoing development of its 2020 IRP are available at: http://www.mwdwatertomorrow.com/IRP/index.html. The materials and other information set forth on Metropolitan's website are not incorporated into this Appendix A and should not be construed to be a part of this Appendix A by virtue of the foregoing reference to such materials and website.

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.

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 year 2006 through 2020, 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. On March 23, 2021, DWR decreased the allocation estimate to 5 percent as California experiences a second

consecutive dry year. See also "–Current Water Conditions" above. Further changes to the 2021 allocation are highly unlikely at this time of the year.

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. To date, 22 of the 29 State Water Contractors have executed the amendment, exceeding the DWR established threshold needed for it to be implemented. However, 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 that included consideration of a potential single-tunnel Bay-Delta conveyance facility ("Delta Conveyance 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 amendment allows for greater flexibility for transfers and exchanges among the State Water Contractors. Specifically, the amendment confirms existing practices for exchanges, allows more flexibility for non-permanent water transfers, and allows for the transfer and exchange of certain portions of Article 56 carryover water. In September 2020, North Coast Rivers Alliance, California Water Impact Network and others separately filed two lawsuits challenging DWR's final EIR and approval of the State water supply contract water management provisions

amendment under CEQA. North Coast Rivers Alliance also alleges violations of the Delta Reform Act, and public trust doctrine, and seeks declaratory and injunctive relief. The cases were deemed related and assigned to the same judge. DWR is in the process of compiling the administrative record. Any adverse impact of this litigation and rulings on Metropolitan's State Water Project supplies cannot be determined at this time. In late 2020 and early 2021, a sufficient number of the State Water Contractors approved and executed the amendments as required by DWR for it to be deemed fully executed. The amendments went into effect on February 28, 2021.

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. Pursuant to the terms of the Monterey settlement (referenced below), negotiations for this State Water Project contract amendment were completed in public. In March of 2021, DWR and the State Water Contractors concluded public negotiations and reached an Agreement in Principle (the "Delta Conveyance AIP") that will be the basis for amendment of the State water supply contracts. The future contract amendment contemplated by the Delta Conveyance AIP would provide a mechanism that would allow for the costs related to any Delta Conveyance Project to be allocated 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. DWR will maintain a table reflecting decisions made by public agency boards regarding that agency'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 January 7, 2021, DWR estimates that repair costs will total $1.2 billion and has submitted $815 million to FEMA as eligible costs for reimbursement under the Public Assistance Program. FEMA has approved $567 million in reimbursement funding through February 2021 as its 75 percent share of eligible costs. DWR expects reimbursement of a total of $630 million from FEMA's Public Assistance Program. FEMA denied claims for reimbursement of $278 million of emergency spillway costs; however, DWR is seeking reimbursement of $100 million of these costs through FEMA's Hazard Mitigation Grant Program ("HMGP"). On April 22, 2021, FEMA notified the California Governor's Office of Emergency Services that DWR's first appeal for a waiver request under the HGMP was denied. As a result, DWR is currently reviewing this correspondence. Any unrecovered costs (including the $100 million for which DWR seeks reimbursement through FEMA's HMGP, if not reimbursed) 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 ("Mojave"), 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, but the case was dismissed after the court granted DWR's motion for summary judgment, which mooted the motion to intervene.

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 was dismissed by the trial court. The judgment was entered on January 11, 2021. The Butte County DA filed a notice of appeal on February 9, 2021. On March 30, 2021, the Third District Court of Appeal ordered this case to mediation. As a result, the deadlines for designation of the record on appeal and submission of a proposed briefing schedule have been suspended. 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.

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. Planned water conveyance improvements, California WaterFix, would be implemented by DWR and the Bureau of Reclamation as a stand-alone project with the required habitat restoration limited to that directly related to construction mitigation. Ecosystem improvements and habitat restoration more generally, California EcoRestore, would be undertaken under a more phased approach.

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. The overall estimated cost to complete the current list of EcoRestore projects is $750-950 million, with approximately half expected to be paid from the State Water Project by State Water Contractors and half from other funding sources. Over the first five years (which is 2015-2020), EcoRestore represents an investment of approximately $500 million 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.

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, directing 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. Consistent with the Governor's direction, 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.

Approximately $340.7 million of investment is estimated to be needed over four years (2021 through 2024) to fund planning and pre-construction costs for the proposed Delta Conveyance Project. 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 four years 2021 through 2024. Eighteen other State Water Contractors also have approved funding a share of the planning and pre-construction costs. 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.

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. Preliminary average annual net diversions for 2011 through 2020 were 871,947 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 2020, preliminary 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.

[Remainder of page intentionally left blank.]

EXHIBIT 4

PRIORITIES UNDER THE 1931 CALIFORNIA SEVEN-PARTY AGREEMENT[1]

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[2] 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
	SUBTOTAL	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[3]	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	
	TOTAL	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 the 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 2020, preliminary estimates of water delivered to Metropolitan by SDCWA for exchange was approximately 269,700, consisting of 192,000 acre-feet of IID conservation plus 77,700 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, as described above, 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 in a shared amount of 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 1,294,000 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 2021 was 1,084 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. On April 12, 2021, IID appealed the court's ruling denying its petition. Metropolitan is unable to assess at this time the likelihood of success of this litigation, or of any future claims, or their potential effect on future implementation of the Lower Basin DCP or the development of new shortage guidelines for the management and operation of the Colorado River.

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 reinitiate 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 California 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 2020, 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 Biden issued an Executive Order on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis (the "President's Executive Order on Public Health and the Environment") 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 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 Gorgonio 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 Central Valley Project 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 was assigned and addresses the stay. On May 7, 2021 the coordination trial judge ordered the CEQA and CESA causes of action as well as certain other administrative record-based claims alleged by petitioners in several other cases bifurcated from the State Water Contractors' respective contractual and unconstitutional takings causes of action, with the CEQA and CESA causes of action to be tried first. The court also ordered

that the discovery stay remain in place pending final resolution of the CEQA, CESA and other administrative record claims. 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 monitoring for mussel larvae is conducted at various locations in the CRA system and at select non-infested areas of Metropolitan's system and some 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 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 2019, Metropolitan entered 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.

Other Ongoing Activities. 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." In April 2021, in light of the persistent dry hydrological conditions, the Board authorized the General Manager to secure up to 65,000 acre-feet of additional water supplies pursuant to one-year water transfers from water districts located north of the Sacramento-San Joaquin River Delta, at a maximum cost of up to $44 million. If secured, the authorized water transfers would allow Metropolitan to preserve some water stored in surface water reservoirs on the State Water Project system for next year, should the critically dry pattern continue into 2022. As part of the Board authorization, the General Manager was granted final decision-making authority to determine whether or not to move forward with such water transfers following completion of any environmental reviews that may be required under CEQA.

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. Fallowing began on January 1, 2005. The following table shows annual volumes of water saved and made available to Metropolitan during the 10 calendar years 2012 through 2021 under the Land Management, Crop Rotation and Water Supply Program with PVID:

[Remainder of page intentionally left blank.]

EXHIBIT 4

WATER AVAILABLE FROM PVID LAND MANAGEMENT, CROP ROTATION AND WATER SUPPLY PROGRAM

Calendar Year	Volume (acre-feet)
2012	73,700
2013	32,800
2014	43,000
2015	94,500
2016	125,400
2017	111,800
2018	95,800
2019	44,500
2020	43,900
2021	40,000[(1)]

Source: Metropolitan.

(1) Estimate.

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 6,300 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 conservations 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. SNWA has not yet requested the return of any of the water stored with Metropolitan and it is not expected that SNWA will request return of any of the stored water 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.

State Water Project and Colorado River Aqueduct Arrangements

Metropolitan/CVWD/Desert Water Agency Amended and Restated Agreement for the Exchange and Advance Delivery of Water. Metropolitan has agreements with CVWD and the Desert Water Agency ("DWA") under which Metropolitan exchanges its Colorado River water for the 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 these agreements, 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, in lieu of delivering 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 CVWD/DWA 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 3.91 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.

EXHIBIT 4

METROPOLITAN'S WATER STORAGE CAPACITY AND WATER IN STORAGE[1]
(in Acre-Feet)

Water Storage Resource	Storage Capacity	Water in Storage January 1, 2021	Water in Storage January 1, 2020	Water in Storage January 1, 2019
Colorado River Aqueduct				
DWA / CVWD Advance Delivery Account	800,000	313,000	296,000	235,000
Lake Mead ICS	1,657,000	1,294,000	980,000	625,000
Subtotal	**2,457,000**	**1,607,000**	**1,276,000**	**860,000**
State Water Project				
Arvin-Edison Storage Program[2]	350,000	142,000	143,000	154,000
Semitropic Storage Program	350,000	261,000	265,000	187,000
Kern Delta Storage Program	250,000	177,000	189,000	138,000
Mojave Storage Program	330,000[5]	19,000[5]	19,000[5]	19,000[5]
AVEK Storage Program	30,000	27,000	27,000	9,000
Castaic Lake and Lake Perris[3]	219,000	219,000	219,000	219,000
State Water Project Carryover[4]	350,000[6]	207,000	331,000	93,000
Emergency Storage	381,000	381,000	381,000	328,000
Subtotal	**2,260,000**	**1,433,000**	**1,574,000**	**1,147,000**
Within Metropolitan's Service Area				
Diamond Valley Lake	810,000	704,000	796,000	702,000
Lake Mathews	182,000	86,000	152,000	141,000
Lake Skinner	44,000	41,000	38,000	37,000
Subtotal[7]	**1,036,000**	**831,000**	**986,000**	**880,000**
Member Agency Storage Programs				
Conjunctive Use[8]	210,000	41,000	59,000	47,000
Total	**5,963,000**	**3,912,000**	**3,895,000**	**2,934,000**

Source: Metropolitan

(1) Water storage capacity and water in storage are measured based on engineering estimates and are subject to change.

(2) 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.

(3) Flexible storage allocated to Metropolitan under its State Water Contract. Withdrawals must be returned within five years.

(4) 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.

(5) 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.

(6) 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.

(7) 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.

(8) Cyclic storage water was removed from this line item and is now categorized as a pre-delivery.

EXHIBIT 4

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 2015 IRP Update 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 DWR State Water Project allocation estimates and Metropolitan's existing storage balances, implementation of the Water Supply Allocation Plan for fiscal year 2021-22 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 53 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.

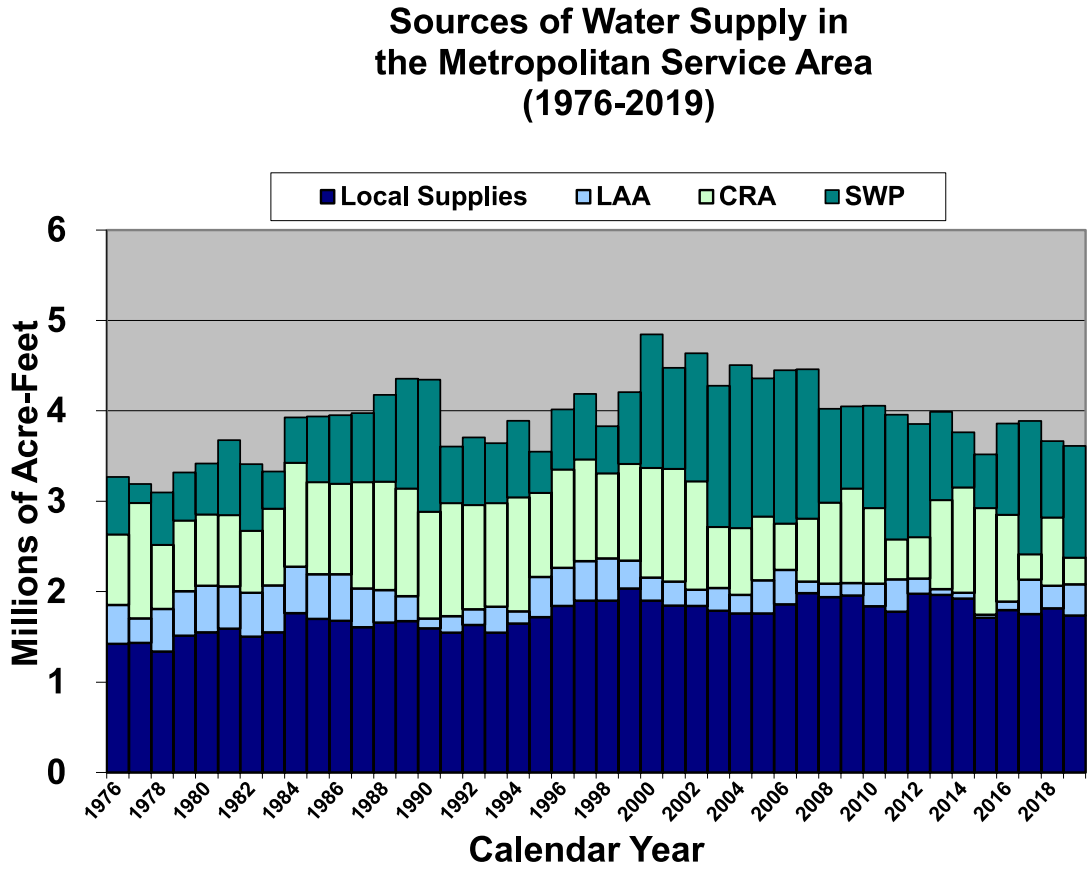
Metropolitan's member agencies are not required to purchase or use any of the water available from Metropolitan. Some agencies depend on Metropolitan to supply nearly all of their water needs, regardless of the weather. Other agencies, with local surface reservoirs or aqueducts that capture rain or snowfall, 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.

EXHIBIT 4

The following graph shows a summary of the regional sources of water supply for the years 1976 to 2019. It includes updated local supply numbers that include Santa Ana River baseflow below Prado Dam, which was previously not included from 1980 through 2009. Additional local supply updates from 2010 through 2018 include changes due to reconciliation from 2020 local supply survey. These values reflect the 2020 Urban Water Management Plan.



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 5.22 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 2015 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 through the Local Resources Program ("LRP"). Since the inception of the LRP, Metropolitan has executed agreements with local agencies to provide financial incentives to 83 recycled water projects with total expected contract yields of about 360,000 acre-feet per year. During fiscal year 2019-20, Metropolitan provided incentives for approximately 128,400 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 115,000 acre-feet annually by the end of fiscal year 2020-21. 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 LRP 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 2015 IRP Update 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. SDCWA 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 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 5,600 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.

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.

EXHIBIT 4

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 5 parts per trillion ("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 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 impact Metropolitan's ability to put water into storage and 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 (µg/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 µg/L, the USEPA sought comment on three alternative regulatory options: (1) setting an MCL for perchlorate at 18 µg/L; (2) setting an MCL for perchlorate at 90 µg/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. Thus, there is currently no federal drinking water standard for perchlorate. 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. The case is currently on hold while the USEPA is reviewing its prior decision not to set a federal MCL for perchlorate for compliance with the President's Executive Order on Public Health and the Environment.

California is 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 ("NLs") for PFOS from 13 ppt to 6.5 ppt and for PFOA from 14 ppt to 5.1 ppt. NLs 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 NL 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 the response levels ("RLs") for PFOA and PFOS from 70 ppt for individual or combined concentrations to 10 ppt for PFOA and 40 ppt for PFOS. An RL is set higher than an NL 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 RL must either take a drinking water source out of use or provide specified public notification if they continue to supply water above the RL. In March 2021, DDW issued an NL of 0.5 parts per billion ("ppb") and an RL of 5 ppb for perfluorobutane sulfonic acid (PFBS), another PFAS chemical. The NL for PFBS is 100 times higher than the NLs for PFOA and PFOS.

DDW has asked OEHHA to recommend NLs for six other PFAS compounds consistently detected in California drinking water sources: perfluorohexane sulfonic acid (PFHxS), perfluorohexanoic acid (PFHxA), perfluoroheptanoic acid (PFHpA), perfluorononanoic acid (PFNA), perfluorodecanoic acid (PFDA), and 4,8-dioxia-3H-perflourononanoic acid (ADONA). DDW has also requested that OEHHA develop PHGs for both PFOA and PFOS, the next step in the process of establishing MCLs in drinking water. On March 19, 2021, OEHHA announced its intent to list PFOA as a carcinogen under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65). On March 26, 2021, OEHHA announced its review of the

carcinogenic hazard of PFOS for possible listing under Proposition 65. That same day, OEHHA also announced its assessment of the reproductive toxicity of PFDA, PFHxS, PFNA, and perfluoroundecanoic acid (PFUnDA) for possible listing under Proposition 65. Comments regarding whether PFOA meets the criteria to be listed as a carcinogen under Proposition 65 were due by May 3, 2021. The public had until May 10, 2021, to submit information relevant to the assessment of the carcinogenicity of PFOS and the reproductive toxicity of PFDA, PFHxS, PFNA, and PFUnDA. In November 2017, OEHHA listed PFOA and PFOS as chemicals known to cause reproductive toxicity under Proposition 65. Proposition 65 requires businesses to provide warnings to Californians about significant exposures to chemicals that cause cancer, birth defects or other reproductive harm. Proposition 65 also prohibits California businesses from knowingly discharging significant amounts of listed chemicals into sources of drinking water.

PFOA, PFOS, and PFBS have not been detected in Metropolitan's imported or treated water supplies. In 2019, Metropolitan detected in its supplies low levels of 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. Metropolitan has not yet evaluated potential PFBS impacts on its member agencies' sources. On January 19, 2021, the USEPA announced 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. On February 22, 2021, 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. On March 3, 2021, USEPA published its final regulatory determination to regulate PFOA and PFOS in drinking water. EPA has 24 months to propose maximum contaminant level goals (MCLG) and MCLs for PFOA and PFOS. Following that deadline, EPA has 18 months to publish final MCLGs and MCLs for PFOA and PFOS. 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. In February 2021 DWR completed arbitration of contractor claims. The final repair costs, inclusive of environmental and right-of-way work is $145 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 $53.7 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.

EXHIBIT 4

CAPITAL INVESTMENT PLAN
PROJECTION OF EXPENDITURES[1]
(Fiscal Years Ended June 30 - Dollars in Thousands)

	2021	2022	2023	2024	2025	Total
Infrastructure R&R	$127,600	$100,500	$124,500	$147,700	$147,900	$ 648,200
Infrastructure Upgrade	130,300	81,400	127,300	127,200	135,700	604,900
Regulatory Compliance	1,100	500	1,000	500	400	3,500
Stewardship	4,600	3,900	7,600	10,000	8,000	34,100
Supply Reliability	300	0	200	100	3,400	4,000
System Flexibility	15,400	20,200	34,700	0	0	70,300
Water Quality	7,500	2,300	4,700	14,500	4,600	33,600
Total	$286,800[2]	$208,800[2]	$300,000	$300,000	$300,000	$1,395,600

Source: Metropolitan.

(1) 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.

(2) 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, although not currently anticipated, 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. To facilitate efficient execution of the pump and motor replacement or refurbishment, new isolation coupling assemblies have been installed at each of the pump discharge pipelines at all five pumping plants during February 2021 CRA shutdown. 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 February 2021 were $365.6 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 2021 were $100.7 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 spring 2021. 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 February 2021 for all PCCP work (including the $100.7 million of repairs costs noted above) were $284.3 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 $472.5 million through February 2021. 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 $552.3 million, with $253.2 million spent through February 2021. 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 $304.1 million spent through February 2021. 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 $319.3 million spent through February 2021. Budgeted aggregate capital expenditures for improvements at the Diemer plant for fiscal years 2020-21 and 2021-22 are $22.9 million.

EXHIBIT 4

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 NINE MONTHS ENDED MARCH 31, 2021 AND 2020 (UNAUDITED)."

SUMMARY OF REVENUES BY SOURCE[1]
Fiscal Years Ended June 30
(Dollars in Millions)

	2016	2017	2018	2019	2020
Water Revenues[2]	$1,166	$1,151	$1,285	$1,149	$1,188
Taxes, Net[3]	108	116	131	145	147
Additional Revenue Sources[4]	200	184	172	170	165
Interest on Investments	18	4	8	34	20
Hydroelectric Power Sales	7	21	24	18	16
Other Revenues[5]	245	51	28	22	14
Total Revenues	$1,744	$1,527	$1,648	$1,538	$1,550

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[1]	Water Revenues[2] (in millions)	Dollars Per Acre-Foot	Average Dollars Per 1,000 Gallons
2016	1,624,861	$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.

(1) Water Transactions include water sales, exchanges, and wheeling with member agencies and third parties.

(2) 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. SDCWA has filed litigation challenging Metropolitan's rates. See "–Litigation Challenging Rate Structure."

[Remainder of page intentionally left blank.]

EXHIBIT 4

TEN LARGEST WATER CUSTOMERS
Year Ended June 30, 2020
Accrual Basis

Agency	Water Revenues[1] (in Millions)	Percent of Total	Water Transactions in Acre-Feet[2]	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
Total	$ 984.5	82.9%	1,172,602	82.6%
Total Water Revenues[1]	$1,188.0	**Total Acre-Feet[2]**	1,419,156	

Source: Metropolitan.

(1) Water Revenues include revenues from water sales, exchanges, and wheeling.
(2) 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 any 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 IRP 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. All wheeling transactions are pursuant to individual contracts, which may typically provide for wheeling parties to pay for the actual cost (not system average) of power needed to move the water. 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

	Rates & Charges That Apply						
Service	**System Access**	**Water Stewardship**[1]	**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[2]	No[2]	No[2]	No[2][3]	No[2]	No[2]	No[2]	No[2]

(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) In August 2020, the Board terminated the pre-set wheeling rate for transactions for a period of up to one year with member agencies, pursuant to Sections 4119 and 4405 of the Metropolitan Administrative Code. This change became effective on January 1, 2021. The price for wheeling to member agencies for transactions of up to one year will be established by contract on a case-by-case basis, as is currently the case for wheeling to member agencies for more than one year and wheeling to third parties.

(3) Under Metropolitan's prior pre-set wheeling rate for wheeling service under Sections 4119 and 4405 of the Metropolitan Administrative Code, wheeling parties were required to pay for their own cost for power (if such power could be scheduled by Metropolitan) or were required to pay Metropolitan for the actual cost (not system average) of power service utilized for delivery of the wheeled water. In addition, wheeling parties were assessed an administration fee of not less than $5,000 per transaction.

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

	Rates & Charges That Apply						
Program	**Supply**	**System Access**	**Water Stewardship[1]**	**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[2]

(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) 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.

SUMMARY OF WATER RATES
(Dollars Per Acre-Foot)

	SUPPLY RATE		SYSTEM ACCESS RATE	WATER STEWARDSHIP RATE[1]	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[2]		FULL SERVICE UNTREATED[3]	
	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 March 31, 2021, Metropolitan held $26.45 million in the Exchange Agreement Set-Aside Fund. This amount contains current disputed charges, after Metropolitan's payment to SDCWA, on February 16, 2021, of the final judgment contract damages amount in the 2010 and 2012 SDCWA v. Metropolitan cases for Water Stewardship Rate payments under the Exchange Agreement in 2011 through 2014, plus interest. The amount currently held in the Exchange Agreement Set-Aside Fund contains the disputed Water Stewardship Rate payments under the Exchange Agreement from 2015 through 2017 and interest earned thereon based on the rate earned by Metropolitan's investment portfolio. The amounts held do not include the attorneys' fees or costs awards in the 2010 and 2012 cases, which the Exchange Agreement does not require to be held. Metropolitan ceased charging the Water Stewardship Rate under the Exchange Agreement in January 2018, and SDCWA has not filed litigation disputing charges after 2020, so amounts held pursuant to the Exchange Agreement will not continue to accumulate further disputed charges, but will continue to accumulate interest based on Metropolitan's investment portfolio, 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 $510 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 XIIIC and XIIID to the California Constitution. Article XIIID 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 XIIID. Fees for

retail water service by Metropolitan's member agencies or their agencies are subject to the requirements of Article XIIID.

Article XIIID also imposes certain procedures with respect to assessments. Under Article XIIID, "standby charges" are considered "assessments" and must follow the procedures required for "assessments," unless they were in existence on the effective date of Article XIIID. Metropolitan has imposed its water standby charges since 1992 and therefore its current standby charges are exempt from the Article XIIID 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 XIIID 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 XIIIC 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 XIIIC 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 XIIIC 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 XIIID 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 alleged 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 alleged 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 stated 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 were 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 issued 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 XIIIC, §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 the prevailing party 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, if any.

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 was 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 was not entitled in the remand proceedings to litigate the issue of "offsetting benefits" (described below) under the wheeling statutes for the parties' Exchange Agreement. The Superior Court found that such claim was both outside the scope of remand and waived.

The Superior Court also ruled that SDCWA was 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, and that SDCWA was entitled to further proceedings to litigate the issue of an entitlement to monetary restitution for 2011 through 2014 and 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 would 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.

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. On March 7, 2019, SDCWA rejected the tendered payment and returned the uncashed check for the tendered payment. 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 and 2012 cases, as well as the 2016 and 2017 SDCWA v. Metropolitan cases described below, 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 (described below) is already pending. All cases are now pending before the Honorable Anne-Christine Massullo.

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.

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. Metropolitan filed its opening brief on February 4, 2021. SDCWA filed its responding brief on appeal on May 7, 2021.

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 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. 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.

On January 13, 2021, the court issued an order finding SDCWA is the prevailing party on the contract in the 2010 and 2012 cases, entitled to its attorneys' fees and costs under the contract. On February 10, 2021, the court issued an order awarding SDCWA statutory costs, on the basis it is the prevailing party. On February 25, 2021, Metropolitan filed a notice of appeal of the January 13 and February 10 orders regarding prevailing party and costs.

On February 11, 2021, Metropolitan received a demand for payment of the final judgment in the 2010 and 2012 SDCWA v. Metropolitan cases. Metropolitan tendered payment to SDCWA on February 16, 2021 in the amount of $44,373,872.29, which included the award for damages, prejudgment interest through November 19, 2015, and post-judgment interest through February 15, 2019. The payment included $31.6 million of amounts withdrawn from the Exchange Agreement Set-Aside Fund (the Water Stewardship Rate payments under the Exchange Agreement from 2011 through 2014, and a portion of the statutory interest), and $12.8 million withdrawn from reserves (the remainder of the statutory interest).

On March 31, 2021, the parties stipulated to the amount of SDCWA's attorneys' fees that may be awarded under the Exchange Agreement, without waiver of Metropolitan's pending appeals. On April 6, 2021, the court entered the stipulated order awarding SDCWA $13,397,575.66 in attorneys' fees under the Exchange Agreement.

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 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.

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 in the 2014 and 2016 cases. The amended petitions/complaints 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 2018 case, discussed below, had included an offsetting benefits claim). In its offsetting benefits claim under the Exchange Agreement, SDCWA seeks to reduce the contract price.

On September 28, 2020, Metropolitan filed demurrers to, or in the alternative motions to strike, portions of the amended petitions/complaints in the 2014 and 2016 cases, which the court heard on February 10, 2021. The motions sought 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 February 16, 2021, the court denied the demurrers and motions to strike, allowing SDCWA to retain the contested allegations in its petitions/complaints.

On March 22, 2021, Metropolitan filed answers to the amended petitions/complaints in the 2014 and 2016 cases, along with cross-complaints asserting causes of action for declaratory relief with respect to, among other things, that the inclusion of the Water Stewardship Rate in transportation rates is lawful, that the transportation rates as charged under the Exchange Agreement are lawful as to offsetting benefits, and the inapplicability of Proposition 26 to Metropolitan's rates; judicial estoppel with respect to SDCWA's past statements regarding the Exchange Agreement; and for reformation of the Exchange Agreement price in the

event the court were to find that the Exchange Agreement is subject to, based on, or incorporates the "offsetting benefits" provisions of the wheeling statutes. On April 23, 2021, SDCWA filed answers to the cross-complaints. SDCWA's answers to Metropolitan's cross-complaints assert affirmative defenses.

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. On November 13, 2020, the court ordered the case complex and assigned to Judge Massullo's court.

On April 20, 2021, based on the parties' stipulation, the court ordered the stay in the 2018 case lifted and granted SDCWA leave to file an amended petition/complaint. On April 21, 2021, SDCWA filed its amended petition/complaint. SDCWA removed claims in this amended petition/complaint comparably to those it removed in the 2014 and 2016 cases. The amended petition/complaint retains claims concerning the Water Stewardship Rate's inclusion in the wheeling rate and the Exchange Agreement price (notwithstanding that Metropolitan ceased charging the Water Stewardship Rate under the Exchange Agreement in January 2018), the inclusion of WaterFix costs in the wheeling rate and the Exchange Agreement price, and offsetting benefits with respect to the wheeling rate and the Exchange Agreement price.

In a Case Management Conference on April 22, 2021, the court stated the 2014, 2016, and 2018 cases will be consolidated. The court set a trial date in the three cases for May 16 through 27, 2022.

Due to SDCWA's litigation challenging Metropolitan's rates, and pursuant to the Exchange Agreement between Metropolitan and SDCWA, as of March 31, 2021, Metropolitan held $26.45 million in the Exchange Agreement Set-Aside Fund. See "–Financial Reserve Policy." This amount includes the disputed Water Stewardship Rate payments for calendar years 2015 through 2017, and interest earned by Metropolitan thereon. The amount held does not include statutory interest, attorneys' fees, costs, or any other amount the court may award.

Metropolitan is unable to assess at this time the likelihood of success of the pending 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. Metropolitan's current investments comply with the Statement of Investment Policy.

As of March 31, 2021, the total market value (cash-basis) of all Metropolitan invested funds was $1.3 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 March 31, 2021 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 NINE MONTHS ENDED MARCH 31, 2021 AND 2020 (UNAUDITED)" for a description of Metropolitan's investments at June 30, 2020 and March 31, 2021.

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 March 31, 2021, this manager was managing approximately $195.6 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 March 31, 2021, this firm managed approximately $1.1 billion. 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[1]	$ 799	$ 559	$ 568	$ 569	$ 641
Total State Water Project[2]	512	506	527	482	519
Total Debt Service	332	330	360	347	285
Construction Expenses from Revenues[3]	273	132	98	128	39
Other[4]	6	4	5	6	6
Total Expenses (net of reimbursements)	$1,922	$1,531	$1,558	$1,532	$1,490

Source: Metropolitan.

(1) 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.

(2) Includes both operating and capital expense portions.

(3) 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.

(4) Includes operating equipment.

Revenue Bond Indebtedness and Other Obligations

As of May 1, 2021, Metropolitan had total outstanding indebtedness secured by a lien on Net Operating Revenues of $3.99 billion. This indebtedness was comprised of $2.58 billion of Senior Revenue Bonds issued under the Senior Debt Resolutions (each as defined below), which includes $2.25 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	$2,253,110,000	$2,584,985,000
Subordinate Lien Revenue Bonds	446,255,000	915,865,000	1,362,120,000
Subordinate Lien Short-Term Certificates	46,800,000	--	46,800,000
Total	**$ 824,930,000**	**$3,168,975,000**	**$3,993,905,000**
Fixed-Payor Interest Rate Swaps	(438,665,000)	438,665,000	--
Net Amount (after giving effect to Swaps)	**$ 386,265,000**	**$3,607,640,000**	**$3,993,905,000**

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 May 1, 2021, outstanding general obligation bonds, water revenue bonds and other evidences of indebtedness in the amount of $4.02 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 May 1, 2021 was $3.95 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 NINE MONTHS ENDED MARCH 31, 2021 AND 2020 (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 May 1, 2021, 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 May 1, 2021, $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 May 1, 2021, 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 9.7 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 May 1, 2021.

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"). Following a consultation announced in November 2020 by the Intercontinental Exchange Benchmark Administration ("IBA"), the administrator of LIBOR authorized and regulated by the FCA, with the support of the Federal Reserve Board and the FCA, the

IBA made a formal announcement on March 5, 2021 that the date for the cessation of the publication of various tenors of USD LIBOR (or date on which any published USD LIBOR rate for such tenors would cease to be representative) would be: (1) December 31, 2021, for the one-week and two-month USD LIBOR, and (2) June 30, 2023, for 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. Metropolitan staff is monitoring alternate benchmark rates. Metropolitan is unable to predict the outcome of 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 May 1, 2021, 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[(1)]	78,900,000
Water Revenue Refunding Bonds, 2011 Series C[(2)]	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[(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[(1)]	82,905,000
Water Revenue Bonds, 2017, Authorization, Series A[(1)]	80,000,000
Special Variable Water Revenue Refunding Bonds, 2018 Series A-1 and A-2[(1)]	90,070,000
Water Revenue Refunding Bonds, 2018 Series B	129,125,000
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[(4)]	271,815,000
Water Revenue Refunding Bonds, 2020 Series C	267,995,000
Water Revenue Bonds, 2021 Series A	188,890,000
Total	**$2,584,985,000**

Source: Metropolitan.

(1) Outstanding variable rate obligation.
(2) To be refunded in part by Metropolitan's Water Revenue Refunding Bonds, 2021 Series B.
(3) To be refunded in full by Metropolitan's Water Revenue Refunding Bonds, 2021 Series B.
(4) Currently in a long mode at a fixed interest rate to April 2, 2024.

Variable Rate and Swap Obligations

As of May 1, 2021, 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 May 1, 2021, 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 60th 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 current liquidity providers, the current expiration date of each facility, and the principal amount of outstanding variable rate demand obligations covered under each facility as of May 1, 2021.

Liquidity Facilities and Expiration Dates

Liquidity Provider	Bond Issue	Principal Outstanding	Facility Expiration
TD Bank, N.A.[(1)]	2018 Series A-1 and Series A-2	$ 90,070,000	June 2024[(1)]
TD Bank, N.A.[(1)]	2016 Series B-1 and Series B-2	$ 82,905,000	June 2024[(1)]
PNC Bank, N.A.	2017 Authorization Series A	$ 80,000,000	March 2023
PNC Bank, N.A.	2000 Authorization Series B-3	$ 78,900,000	March 2023
Total		**$331,875,000**	

Source: Metropolitan.

(1) Liquidity provider and facility effective as of June 4, 2021.

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 May 1, 2021:

FIXED PAYOR SWAPS:

Designation	Notional Amount Outstanding	Swap Counterparty	Fixed Payor Rate	Metropolitan Receives	Maturity Date
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	29,057,500	Citigroup Financial Products, Inc.	3.360	70% of 3-month LIBOR	7/1/2030
Total	**$438,665,000**				

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 March 31, 2021, 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 $52.2 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 March 31, 2021, 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, as amended by the Paying Agent Agreement Amendment No. 1, dated as of April 1, 2021 (together, 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 currently bear interest in a Long Mode under the 2020B Paying Agent Agreement at a Long Rate equal to 0.46 percent per annum for the Long Period ending on April 2, 2024. If not earlier prepaid or redeemed pursuant to the terms of the 2020 Direct Purchase Agreement and the 2020B Paying Agent Agreement, the 2020B Senior Revenue Bonds are subject to mandatory tender for purchase on April 2, 2024 (the "Mandatory Tender Date"), the last day of the new 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 May 1, 2021, 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 May 1, 2021, are summarized in the following table:

Term Mode Bonds

Series	Original Principal Amount Issued	Next Scheduled Mandatory Tender Date
2014 C-3	$ 2,810,000	October 1, 2021[(1)]

Source: Metropolitan.

(1) The Term Mode Bonds are to be refunded by Metropolitan's Water Revenue Refunding Bonds, 2021 Series B.

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 May 1, 2021, Metropolitan had outstanding $0 of short-term notes under the RBC Short-Term Revolving Credit Facility. Metropolitan expects to make a draw on the RBC Short-Term Revolving Credit Facility on or before June 30, 2021 and issue $35,645,000 principal amount of short-term notes thereunder to provide temporary financing for the refunding of a portion of its outstanding Subordinate Water Revenue Refunding Bonds, 2017 Series B. A portion of the proceeds of Metropolitan's Water Revenue Refunding Bonds, 2021 Series B is expected to be applied to repay and redeem all of the then outstanding 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 May 1, 2021, are set forth below:

[Remainder of page intentionally left blank.]

Name of Issue	Principal Outstanding
Subordinate Water Revenue Bonds, 2016 Authorization Series A[(1)(2)]	$ 175,000,000
Subordinate Water Revenue Refunding Bonds, 2017 Series A	232,715,000
Subordinate Water Revenue Refunding Bonds, 2017 Series B[(3)]	142,575,000
Subordinate Water Revenue Bonds, 2017 Series C[(1)]	80,000,000
Subordinate Water Revenue Refunding Bonds, 2017 Series D[(1)]	95,630,000
Subordinate Water Revenue Refunding Bonds, 2017 Series E[(1)]	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
Total	**$1,362,120,000**

Source: Metropolitan.

(1) Outstanding variable rate obligation.

(2) Refunded by Metropolitan's Variable Rate Subordinate Water Revenue Refunding Bonds, 2021 Series A, which were issued on June 16, 2021.

(3) 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 with notes issued under the RBC Short-Term Revolving Credit Facility as described above.

Variable Rate Bonds

As of May 1, 2021, 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 bore 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 was 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 had 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 secured its obligation to pay principal and interest under the 2016 BANA Agreement as a Subordinate Parity Obligation. The Subordinate 2016 Series A Bonds were Index Tender Bonds 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 had the right to request an extension

of the 2016 BANA Agreement for another tender period or to request BANA to purchase the Subordinate 2016 Series A Bonds in another interest rate mode, or Metropolitan could seek to remarket the Subordinate 2016 Series A Bonds to another bank or in the public debt markets. Under the 2016 BANA Agreement, in the event the 2016 BANA Agreement was not extended, Metropolitan would be obligated 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 was 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. Metropolitan refunded the Subordinate 2016 Series A Bonds on June 16, 2021 with proceeds of its Variable Rate Subordinate Water Revenue Refunding Bonds, 2021 Series A.

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 current mandatory tender dates and related tender periods for the Index Tender Bonds outstanding as of May 1, 2021, are summarized in the following table:

Index Tender Bonds

Series	Date of Issuance	Original Principal Amount Issued	Next Scheduled Mandatory Tender Date	Maturity Date
Subordinate 2016 Authorization Series A	December 21, 2016	$175,000,000	June 21, 2021[(1)]	July 1, 2045
Subordinate 2017 Series C	July 3, 2017	80,000,000	May 21, 2024[(2)]	July 1, 2047
Subordinate 2017 Refunding Series D	July 3, 2017	95,630,000	May 21, 2024[(2)]	July 1, 2037
Subordinate 2017 Refunding Series E	July 3, 2017	95,625,000	May 21, 2024[(2)]	July 1, 2037
Total		**$446,255,000**		

Source: Metropolitan.

(1) Refunded by Metropolitan's Variable Rate Subordinate Water Revenue Refunding Bonds, 2021 Series A, which were issued on June 16, 2021.

(2) Scheduled mandatory tender date established in connection with the remarketing of the bonds on May 19, 2021 in a new tender period.

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 bore interest at a fluctuating per annum interest rate, equal to one-month LIBOR plus a spread of 0.32 percent (which spread was 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 was 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 had the right to request BANA to extend its commitment and to refund and exchange the 2019A Subordinate Short-Term Refunding Notes with new refunding notes, or Metropolitan could 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. Metropolitan refunded the 2019A Subordinate Short-Term Refunding Notes on June 16, 2021 with proceeds of its Variable Rate Subordinate Water Revenue Refunding Bonds, 2021 Series A.

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 May 1, 2021, 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 May 1, 2021, $26,830,000 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.

General Obligation Bonds	Amount Issued[(1)]	Principal Outstanding
Waterworks General Obligation Refunding Bonds, 2019 Series A	$16,755,000	$13,165,000
Water Works General Obligation Refunding Bonds, 2020 Series A	13,665,000	13,665,000
Total	**$30,420,000**	**$26,830,000**

Source: Metropolitan.

(1) 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 March 2021. 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.

PROJECTED COSTS OF METROPOLITAN
FOR STATE WATER CONTRACT AND DELTA CONVEYANCE
(Dollars in Millions)

Year Ending June 30	Capital Costs[1]	Minimum OMP&R[1]	Power Costs[2]	Refunds & Credits[1]	Delta Conveyance[3]	Total[4]
2021	$180.4	$262.0	$106.7	$(39.9)	$25.0	$534.3
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 ("AEPCO") 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:

Fiscal Year	Actuarial Valuation	Discount Rate
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.

Valuation Date	Accrued Liability ($ in billions)	Market Value of Assets ($ in billions)	Unfunded Accrued Liability ($ in billions)	Funded Ratio
6/30/19[(1)]	$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%

(1) 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.

EXHIBIT 4

(Dollars in thousands)	06/30/20	6/30/19	Increase/ (Decrease)
Total Pension Liability	$2,479,307	$2,376,778	$102,529
Plan Fiduciary Net Position	1,810,312	1,742,741	67,571
Plan Net Pension Liability	$ 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)
Total Pension Liability	$2,376,778	$2,315,248	$61,530
Plan Fiduciary Net Position	1,742,741	1,654,331	88,410
Plan Net Pension Liability	$ 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 NINE MONTHS ENDED MARCH 31, 2021 AND 2020 (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.

[Remainder of page intentionally left blank.]

EXHIBIT 4

(Dollars in thousands)	06/30/20	6/30/19	Increase/ (Decrease)
Total OPEB Liability	$434,759	$468,185	$(33,426)
Plan Fiduciary Net Position	266,773	239,851	26,922
Plan Net OPEB Liability	$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%	

(Dollars in thousands)	06/30/19	6/30/18	Increase/ (Decrease)
Total OPEB Liability	$468,185	$448,095	$ 20,090
Plan Fiduciary Net Position	239,851	207,526	32,325
Plan Net OPEB Liability	$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 evolving development that is currently 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 March 2021, and the financial projections for fiscal years 2021-22 through 2025-26 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 March 2021. Financial projections for fiscal years 2021-22 through 2025-26 reflect the biennial budget for fiscal year 2020-21 and 2021-22 and ten-year financial forecast provided therein. This includes the issuance of $675 million of bonds for fiscal years 2020-21 through 2025-26 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 1.54 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, 1.69 million acre-feet for fiscal year 2024-25 and 1.74 million acre-feet for fiscal year 2025-26. 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, 4.0 percent for calendar year 2025, and 3.0 percent for calendar year 2026. 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.

EXHIBIT 4

HISTORICAL AND PROJECTED REVENUES AND EXPENSES[a]
Fiscal Years Ended June 30
(Dollars in Millions)

	Actual			Projected					
	2018	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**
Water Revenues[b]	$1,285	$1,149	$1,188	$1,375	$1,476	$1,542	$1,667	$1,793	$1,888
Additional Revenue Sources[c]	172	170	165	165	175	183	189	202	213
Total Operating Revenues	1,457	1,319	1,353	1,540	1,651	1,725	1,856	1,995	2,101
O&M, CRA Power and Water Transfer Costs[d]	(568)	(569)	(642)	(710)	(750)	(796)	(847)	(877)	(914)
Total SWC OMP&R and Power Costs[e]	(395)	(347)	(384)	(403)	(513)	(546)	(507)	(529)	(552)
Total Operation and Maintenance	(963)	(916)	(1,026)	(1,113)	(1,263)	(1,342)	(1,354)	(1,406)	(1,466)
Net Operating Revenues	$ 494	$ 403	$ 327	$ 427	$ 388	$ 383	$ 502	$ 589	$ 635
Miscellaneous Revenue[f]	27	22	14	11	26	27	27	28	28
Transfer from Reserve Funds[g]	1	--	--	--	--	--	--	--	--
Sales of Hydroelectric Power[h]	24	18	16	18	22	23	14	14	15
Interest on Investments[i]	8	34	20	10	18	18	18	19	20
Adjusted Net Operating Revenues[j]	554	477	377	466	454	451	561	650	698
Senior and Subordinate Obligations[k]	(340)	(333)	(272)	(279)	(298)	(306)	(323)	(320)	(326)
Funds Available from Operations	$ 214	$ 144	$ 105	$ 187	$ 156	$ 145	$ 238	$ 330	$ 372
Debt Service Coverage on all Senior and Subordinate Bonds[l]	1.63	1.43	1.39	1.67	1.52	1.47	1.74	2.03	2.14
Funds Available from Operations	$ 214	$ 144	$ 105	$187	$ 156	$ 145	$ 238	$ 330	$ 372
Other Revenues (Expenses)	(5)	(6)	(6)	(7)	(7)	(7)	(8)	(8)	(8)
Pay-As-You Go Construction	(98)	(128)	(39)	(110)	(135)	(180)	(180)	(210)	(210)
Pay-As-You Go Funded from Replacement & Refurbishment Fund Reserves	1	--	1	--	--	--	--	--	--
Total SWC Capital Costs Paid from Current Year Operations	(21)	(4)	(1)	15	(10)	12	(8)	(24)	(46)
Remaining Funds Available from Operations	91	6	60	84	4	(30)	42	88	108
Fixed Charge Coverage[m]	1.53	1.42	1.38	1.76	1.47	1.53	1.69	1.89	1.88
Property Taxes	131	145	147	153	140	140	140	140	143
General Obligation Bonds Debt Service	(20)	(14)	(13)	(7)	(8)	(2)	(2)	(2)	(2)
SWC Capital Costs Paid from Taxes	(111)	(131)	(134)	(146)	(132)	(138)	(138)	(138)	(141)
Net Funds Available from Current Year	$ 91	$ 6	$ 60	$ 85	$ 4	$ (30)	$ 42	$ 88	$ 108

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 March 2021 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 2025-26 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 1.54 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, 1.69 million acre-feet for fiscal year 2024-25 and 1.74 million acre-feet for fiscal year 2025-26. 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 5.0 percent for each of the calendar years 2023 and 2024, 4.0 percent for calendar year 2025 and 3.0 percent for calendar year 2026, 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 of $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. Includes net gain or loss on investments.

(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 each of fiscal years 2024-25 and 2025-26. 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 and additional Revenue Bonds (projected). See "METROPOLITAN EXPENSES–Outstanding Senior Revenue Bonds and Senior Parity Obligations" and "–Outstanding Subordinate Revenue Bonds and Subordinate Parity Obligations" in this Appendix A.

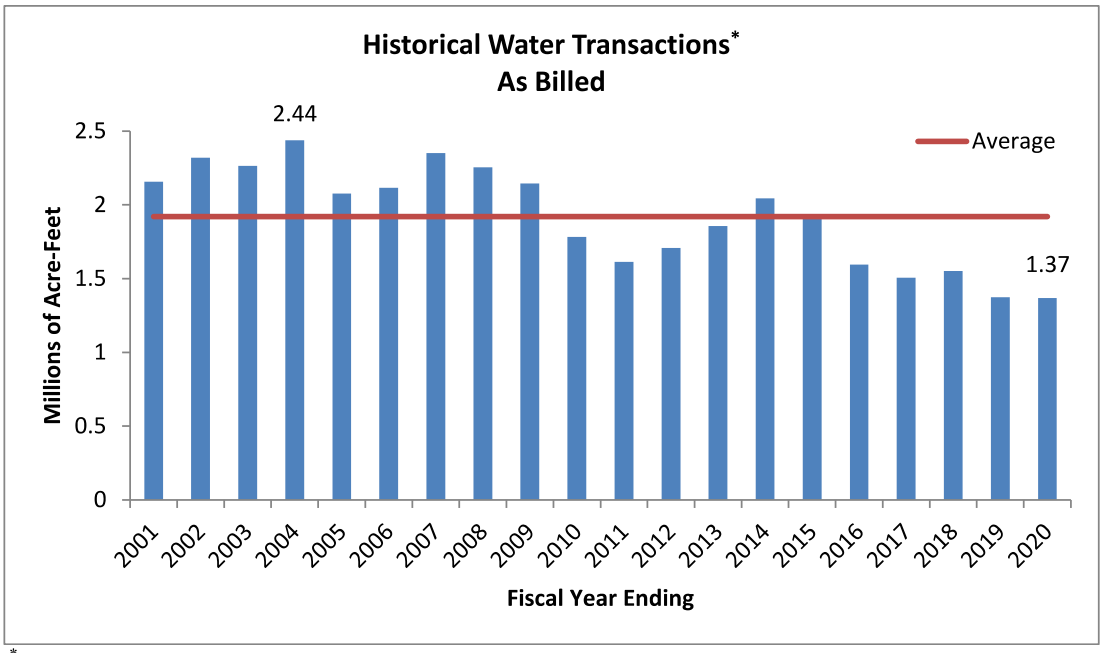
(m) Adjusted Net Operating Revenues, divided by the sum of State Water Contract capital costs paid from current year operations and debt service on outstanding Senior Revenue Bonds, Senior Parity Obligations, Subordinate Revenue Bonds and Subordinate Parity Obligations, and additional Revenue Bonds (projected).

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 1.54 million acre-feet for fiscal year 2020-21 (reflecting the revised projections based on results through March 2021), and 1.60 million acre-feet for fiscal years 2021-22 and 2022-23, 1.64 million acre-feet for fiscal year 2023-24, 1.69 million acre-feet for fiscal year 2024-25, and 1.74 million acre-feet for fiscal year 2025-26 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.

EXHIBIT 4



*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, 4.0 percent for calendar year 2025, and 3.0 percent for calendar year 2026. 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 March 2021. Financial projections for fiscal years 2021-22 through 2025-26 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, 4.0 percent for calendar year 2025, and 3.0 percent for calendar year 2026. 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 $1,113 million, which represents approximately 67.7 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 $117 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 $1.6 billion. This is $134 million, or 7.5 percent, less than budgeted expenses.

Fiscal year 2020-21 revenue bond debt service coverage is projected to be 1.67x and fixed charge coverage to be 1.76x. Fiscal year 2020-21 capital expenditures, currently estimated at $286.8 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 $510 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 March 2021. 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 2025-26 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 2025-26 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 NINE MONTHS ENDED MARCH 31, 2021 AND 2020 (UNAUDITED)."

EXHIBIT 4

THIS PAGE INTENTIONALLY LEFT BLANK

EXHIBIT 4

Appendix G

Water Supply Assessment Checklist

EXHIBIT 4

Water Supply Assessment Checklist

Water Code Section	Water Supply Assessment Content	Page # in WSA
10910(c)(2)	Incorporate data from UWMP.	4-21
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.	11-21
10910(d)(2)(A)	Written contracts or other proof of entitlement to an identified water supply.	21
10910(d)(2)(B)	Capital outlay program for financing the delivery of a water supply that has been adopted.	21
10910(d)(2)(C)	Federal, state, and local permits for construction of necessary infrastructure associated with delivering the water supply.	11-21
10910(d)(2)(D)	Any necessary regulatory approval to deliver/convey the water supply.	11-21
10910(f)(1)	Review of any information contained in the UWMP relevant to the identified water supply for the proposed project.	4-21
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.	12-15 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.	12-15
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.	12-15
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.	12-15

EXHIBIT 5

City of Los Angeles
Bureau of Engineering

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 Proposed Facility Description section of the SCAR, sewer ejector use is prohibited.**

Job Address:	**400 S CENTRAL AVE**	Sanitation Scar ID:	**70-6475-0223**
Date Submitted	02/25/2023	Request Will Serve Letter?	Yes
BOE District:	Central District		
Applicant:	Rickard Severinsson		
Address:	700 S Flower St., Suite 2100	City :	Los Angeles
State:	CA	Zip:	90017
Phone:	2132665277	Fax:	
Email:	rickard.severinsson@kpff.com	BPA No.	
S-Map:		Wye Map:	

SIMM Map - Maintenance Hole Locations

No.	Street Name	U/S MH	D/S MH	Diam. (in)	Approved Flow %	Notes
1	Central Ave	51612058	51612082	10	65.00	MAXIMUM DISCHARGE 382,381GPD.
2	Alameda St	51612060	51612083	20	35.00	MAXIMUM DISCHARGE 205,897 GPD.

Proposed Facility Description

No.	Proposed Use Description	Sewage Generation (GPD)	Unit	Qty	GPD
1	OFFICE BUILDING W/COOLING TOWER	170	KGSF	403,715	68,632
2	RESIDENTIAL: APT - BACHELOR	75	DU	436	32,700
3	RESIDENTIAL: APT - 1 BDRM. *6	110	DU	720	79,200
4	RESIDENTIAL: APT - 2 BDRMS *6	150	DU	323	48,450
5	RESIDENTIAL: APT - 3 BDRMS *6	190	DU	42	7,980
6	RESTAURANT: FULL SERVICE INDOOR SEAT	30	SEAT	3,722	111,660
7	RESTAURANT: FULL SERVICE OUTDOOR SEAT	30	SEAT	833	24,990
8	GYMNASIUM - BASKETBALL, VOLLEYBALL *10	200	KGSF	11,000	2,200
9	HOTEL: USE GUEST ROOMS ONLY	120	ROOM	68	8,160
10	BAR: COCKTAIL, FIXED SEAT *4	15	SEAT	37	555
11	RETAIL AREA (LESS THAN 100,000 SF)	25	KGSF	45,266	1,132
12	HEALTH CLUB/SPA *10	650	KGSF	8,000	5,200
13	LOBBY OF RETAIL AREA *1	50	KGSF	16,232	812
14	CAR WASH: HAND WASH *7		GPD	4,200	4,200
15	AUTO PARKING	20	KGSF	1,200	24
16	CONFERENCE ROOM OF OFFICE BLDG.		GPD	4,963	4,963

Scar Request Number: 5096

EXHIBIT 5

17	BARBER SHOP	120	KGSF	3,500	420
18	LOUNGE *1	50	KGSF	98,481	4,924
19	SWIMMING POOL (COMMERCIAL WITH BACKWASH FILTERS)		GPD	182,077	182,077

Proposed Total Flow (gpd): **588,278**

Remarks 1] Approved for the maximum allowable capacity of 588,278 GPD (408.53 gpm). 2] Developer to install and maintain a private odor trap in the public ROW outside of the property line and before the mainline that adheres to standard plan S-112 for the 20-inch connection on Alameda St. BOE to confirm connection methods. 3] IWMD permit required. 4] Discharge as indicated in flow %s.

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

Date Processed: 03/14/2023 Expires On: 09/10/2023

Processed by: Albert Lew
Bureau of Sanitation
Phone: 323-342-6207
Sanitation Status: Approved
Reviewed by: Ricardo Avendano
on 03/07/2023

Submitted by: Trevor Quan
Bureau of Engineering
Central District
Phone:

Fees Collected Yes SCAR FEE (W:37 / QC:709) $3,135.00

Date Collected 02/28/2023 SCAR Status: **Completed**

Scar Request Number: 5096

EXHIBIT 5

City of Los Angeles
Bureau of Engineering

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

Scar Request Number: 5096

EXHIBIT 6

BOARD OF PUBLIC WORKS MEMBERS
AURA GARCIA
PRESIDENT
M. TERESA VILLEGAS
VICE PRESIDENT
DR. MICHAEL R. DAVIS
PRESIDENT PRO TEMPORE
VAHID KHORSAND
COMMISSIONER
SUSANA REYES
COMMISSIONER
DR. FERNANDO CAMPOS
EXECUTIVE OFFICER

CITY OF LOS ANGELES
CALIFORNIA

ERIC GARCETTI
MAYOR

DEPARTMENT OF PUBLIC WORKS

BUREAU OF ENGINEERING

GARY LEE MOORE, PE, ENV SP
CITY ENGINEER

1149 S BROADWAY, SUITE 700
LOS ANGELES, CA 90015-2213

http://eng.lacity.org

07/01/2022

RICKARD SEVERINSSON
700 S FLOWER ST SUITE 2100
LOS ANGELES, CA, 90017

Dear Rickard Severinsson,

SEWER AVAILABILITY: 400 S Central Ave

The Bureau of Sanitation has reviewed your request of 06/23/2022 for sewer availability at **400 S CENTRAL AVE**. Based on their analysis, it has been determined on 07/01/2022 that there is capacity available to handle the anticipated discharge from your proposed project(s) as indicated in the attached copy of the Sewer Capacity Availability Request (SCAR) .

This determination is valid for 180 days from the date shown on the Sewer Capacity Availability request (SCAR) approved by the Bureau of Sanitation.

While there is hydraulic capacity available in the local sewer system at this time, availability of sewer treatment capacity will be determined at the Bureau of Engineering Public Counter upon presentation of this letter. A Sewer Connection Permit may also be obtained at the same counter provided treatment capacity is available at the time of application.

A Sewerage Facilities Charge is due on all new buildings constructed within the City. The amount of this charge will be determined when application is made for your building permit and the Bureau of Engineering has the opportunity to review the building plans. To facilitate this determination a preliminary set of plans should be submitted to Bureau of Engineering District Office, Public Counter.

Provision for a clean out structure and/or a sewer trap satisfactory to the Department of Building and Safety may be required as part of the sewer connection permit.

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.**

EXHIBIT 6

Sincerely,

Jeanette Vong
CE ASSOCIATE
Central District, Bureau of Engineering

EXHIBIT 6

City of Los Angeles
Bureau of Engineering

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 7

LA DWP Los Angeles Department of Water & Power

CUSTOMERS FIRST

Eric Garcetti, Mayor

Board of Commissioners
Mel Levine, President
Cynthia McClain-Hill, Vice President
Jill Banks Barad
Susana Reyes
Susan A. Rodriguez, Secretary

Martin L. Adams, General Manager and Chief Engineer

October 22, 2019

Ms. Amy Truong
kpff
700 S. Flower Street, Suite 2100
Los Angeles, CA 90017

Subject: 400 South Central Ave
Los Angeles, CA 90013

Dear Ms. Truong:

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) 367-2440.

Sincerely,

T. LINH DOAN
Engineer of Customer Station Design

TLH:sl

C/enc:
ENGR: Mr. T. Linh Doan
FileNet

EXHIBIT 8

701 N. Bullis Rd.
Compton, CA 90224-9099

November 7, 2019

KPFF
700 South Flower Street, Suite 2100
Los Angeles, CA 90017
Attn: Amy Truong

Subject: Maps & Will Serve - 400 South Central Ave Los Angeles, CA 90043

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 (CPUC) 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,

William Perez

William Perez
Pipeline Planning Assistant
SoCalGas-Compton HQ

EXHIBIT 9

626 Wilshire Boulevard
Suite 1100
Los Angeles, CA 90017
213.599.4300 phone
213.599.4301 fax

esassoc.com

memorandum

date	January 18, 2023
to	Rickard Severinsson, EIT, KPFF
cc	
from	Mike Harden, Alan Sako, ESA
subject	Fourth & Central Operational Energy Memorandum

Purpose

The purpose of this memorandum is to provide an estimate of the energy demand for the Fourth & Central Project (Project). Energy estimates are based on energy demand factors contained in the California Emissions Estimator Model (CalEEMod), version 2020.4.0. CalEEMod provides a uniform platform for government agencies, land use planners, and environmental professionals to estimate potential emissions associated with both construction and operational use of land use projects and is suitable for environmental analyses for the preparation of California Environmental Quality Act (CEQA) documents.

Project Summary

The Project involves the redevelopment of three distinct sites (North, South, and West Sites) of approximately 7.6-acre (333,602 square foot) for 10 distinct buildings across all sites to serve as residential, office, restaurant/retail, and hotel uses. The Project would require demolition of the existing surface parking and cold storage facilities from the West and South Sites, respectively and adaptively reuse a portion of six-story cold storage building on the North Site. The Project would include: 1,521 residential units, including affordable housing units, totaling approximately 1,687,189 sf; approximately 420,394 sf of office uses; approximately 68,852 sf of restaurant uses; 61,217 sf of residential amenities; 45,266 sf of retail uses; and 68 hotel rooms (74,484 sf of hotel floor area). The overall floor area also includes approximately 237,127 sf of "covered open space," which includes outside areas that have an over-hang or roof, such as building entrances and the covering over the hotel courtyard. The Project would include approximately 105,218 sf of publicly accessible open space, including paseos passing between S. Central Avenue and S. Alameda Street, plazas, and pocket parks within the North and South Sites. The proposed buildings would range in height from 2 to 44 stories, with a maximum height of approximately 497 feet. The Project would provide 2,475 vehicle parking spaces within subterranean parking (up to 4 levels) and podium parking, which accounts for reduced parking requirements from the inclusion of 742 bicycle parking spaces.

Limitations

The energy demand estimates provided in this analysis are based on Project information reasonably known and available as of the date of this memorandum and reasonably conservative assumptions. Future clarifications or refinements to Project information may result in the need to update this energy demand analysis. This analysis does not account for energy savings that might occur from the incorporation of building designs features that would achieve credits towards the United States Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) certification.

Summary of Project Energy Demand

As shown in Table 1, the Project-related annual electricity consumption (including electricity usage associated with the supply and conveyance of water) was estimated to be 29,589.6 MWh. The existing uses-related annual electricity consumption found in the provided utility data to be 6,542.8MWh. Therefore, the Project-related net increase in annual electricity consumption was estimated to be 23,046.8 MWh.

As shown in Table 2, the Project-related annual natural gas consumption was estimated to be 2,830,007 cubic feet. The existing uses-related annual natural gas consumption found in the provided utility data was 407,786 cubic feet. Therefore, the Project-related increase in annual natural gas consumption was estimated to be 2,422,221 cubic feet.

Assumptions

Project

- Apartment High-Rise and Apartment Mid-Rise buildings were modeled in accordance with CalEEMod User's Guide definitions: Apartment High-Rise buildings are defined as apartment buildings with more than 10 levels. Apartment Mid-Rise buildings are defined as apartments buildings with 3 to 10 levels.
- Parking Lot lighting electricity usage factors added to land uses modeled as City Park to account for general lighting uses.
- Number of parking spaces with charging stations based on City Ordinance No. 186485 that requires at least 10% of parking spaces to have electric vehicle charging stations for nonresidential buildings.
- Residential amenities' land use subtype was assumed to be 50/50 split of Health Club and General Office
- Restaurant/Retail land use subtype were assumed to be Restaurant to be conservative
- Water usage and solid waste were based on CalEEMod defaults.
- All land uses were assumed to be all-electric and natural gas values derived from CalEEMod were converted to electricity use.

Existing

- Existing utility usage was based on utility data provided by the existing site operator, LA Cold Storage. CalEEMod data was not relied upon for existing utility usage.

Project land use and existing land use assumptions, calculation worksheets, and model outputs are included in Exhibit A of this memorandum.

TABLE 1
ESTIMATED PROJECT NET ELECTRICITY DEMAND [a]

Land Use	Land Use Subtype	Amount	Electricity Demand (MWh/year)	Electrified Natural Gas Uses (MWh/year)	Water Electricity Demand (MWh/year)	Total Electricity Demand (MWh/year)
Project						
General Office Building + Residential Amenities	General Office Building	420,394 sf	5,254.9	1,158.0	-	6,413.0
Enclosed Parking with Elevator	Enclosed Parking with Elevator	2,462 Spaces	6,000.7	-	3.2	6,004.0
Covered Open Space + Parking	Other Non-Asphalt Surfaces	237,127 sf	83.0	-	11.9	94.9
Residential Amenities	Health Club	61,217 sf	664.8	99.7	951.8	1,716.3
Restaurant/Retail	High Turnover (Sit Down Restaurant)	34,426 sf	1,489.6	767.5	-	2,257.1
Restaurant	Quality Restaurant	34,426 sf				
Hotel	Hotel	68 Rooms	544.5	527.2	37.7	1,109.4
Residential Units	Apartments High Rise	740 DU	2,849.4	633.3	640.2	4,122.9
Residential Units	Apartments Mid Rise	209 DU	804.8	178.9	-	983.6
Residential Units	Condo/Townhouse High Rise	572 DU	2,770.9	821.7	-	3,592.6
Retail	Regional Shopping Center	45,266 sf	591.6	34.7	-	626.3
Parking	Other Asphalt Surface	30 spaces	10.5	-	-	10.5
Parking	Parking Lot	13 spaces	4.6	-	-	4.6
Total Project			**22,956.5**	**4,988.3**	**1,644.7**	**29,589.6**
Existing						
715 E. 4th Street	-	-	-	-	-	3,684.4
418 S. Central	-	-	-	-	-	2,767.7
Main Office	-	-	-	-	-	30.3
Total Existing			**-**	**-**	**60.4**	**6,542.8**
Total Net Project			**-**		**-**	**23,046.8**

[a] Totals may not add up exactly due to rounding in the modeling calculations. Detailed calculations are provided in Exhibit A.

SOURCE: LA Cold Storage 2022; ESA 2022

TABLE 2
ESTIMATED PROJECT NET NATURAL GAS DEMAND [a]

Land Use	Land Use Subtype	Amount	Total Natural Gas demand (Cubic feet/yr)
Project			
General Office Building + Residential Amenities	General Office Building	420,394 sf	-
Enclosed Parking with Elevator	Enclosed Parking with Elevator	2,462 Spaces	-
Covered Open Space + Parking	Other Non-Asphalt Surfaces	237,127 sf	-
Residential Amenities	Health Club	61,217 sf	-
Restaurant	High Turnover (Sit Down Restaurant)	34,426 sf	-
Restaurant	Quality Restaurant	34,426 sf	-
Hotel	Hotel	68 Rooms	-
Residential Units	Apartments High Rise	740 DU	-
Residential Units	Apartments Mid Rise	209 DU	-
Residential Units	Condo/Townhouse High Rise	572 DU	-
Retail	Regional Shopping Center	45,266 sf	-
Parking	Other Asphalt Surface	30 spaces	-
Parking	Parking Lot	13 spaces	-
Mobile Sources	Natural Gas Vehicles	94,181 VMT	2,830,007
Total Project			**2,830,007**
Existing			
Parking Lot	Parking Lot	39 Spaces	-
Refrigerated Warehouse-No Rail	Refrigerated Warehouse-No Rail	360,734 sf	407,786
Total Existing			**407,786**
Total Net Project			**2,422,221**

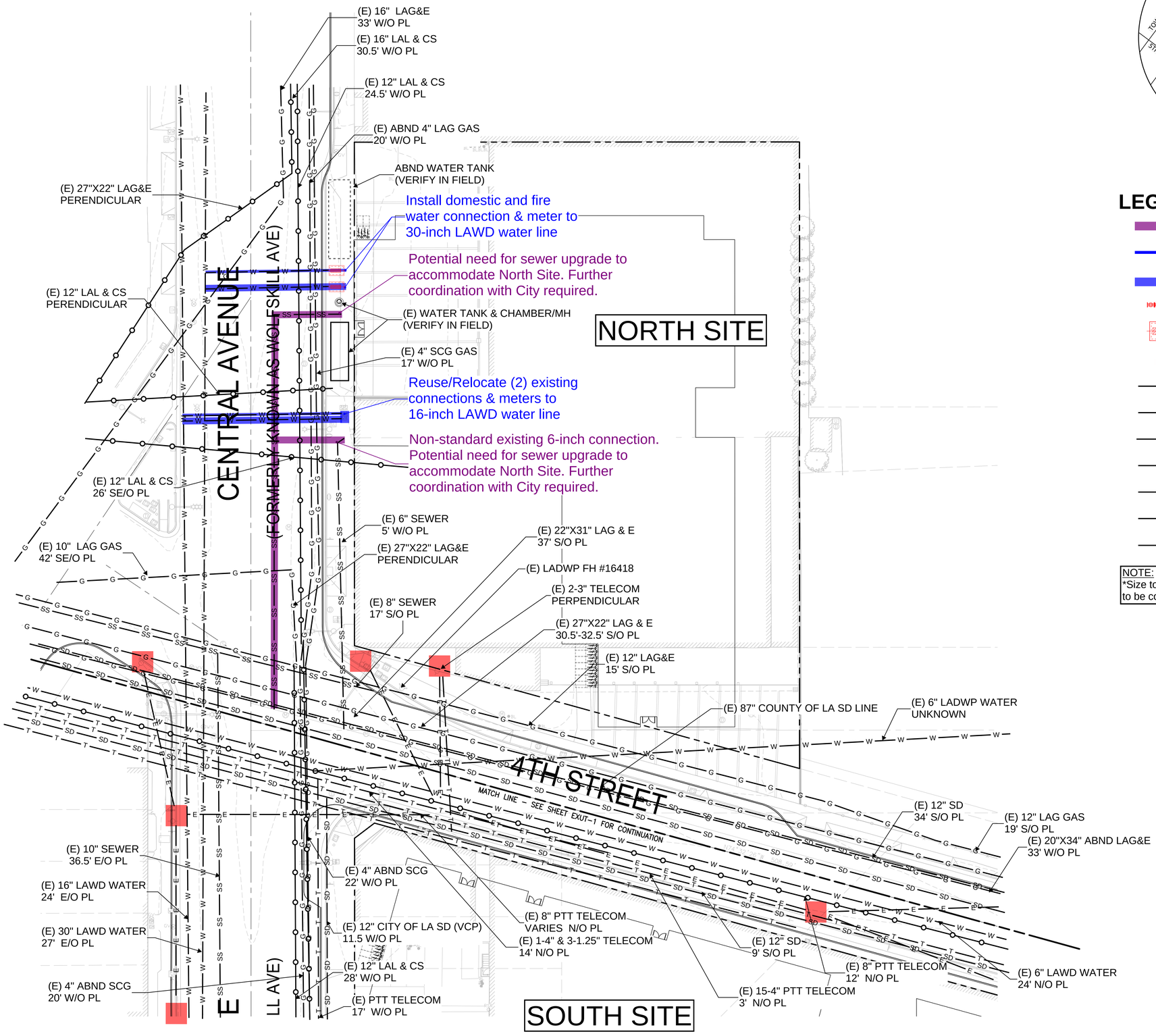
[a] Totals may not add up exactly due to rounding in the modeling calculations. Detailed calculations are provided in Exhibit A.

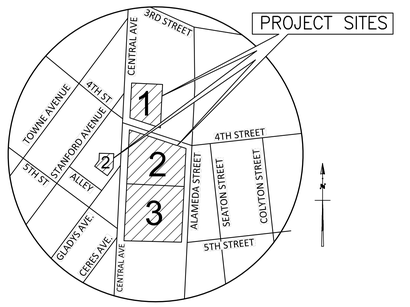
SOURCE: ESA 2022

400 S CENTRAL WET UTILITY EXHIBIT

kpff 03/24/2021

FIGURE 1





KEY MAP
(NOT TO SCALE)

LEGEND:

- PROPOSED SEWER LINE*
- PROPOSED DOMESTIC WATER LINE*
- PROPOSED FIRE WATER LINE*
- PROPOSED BACKFLOW PREVENTOR*
- PROPOSED WATER METER*
- (E) POWER POLE
- SS — (E) SEWER
- SD — (E) STORM DRAIN
- W — (E) WATER
- G — (E) GAS
- T — (E) TELECOM
- E — (E) ELECTRICAL
- (E) UNKNOWN LINE

NOTE:
*Size to be verified by Plumbing/Architect/Landscape, Location to be coordinated with Architect/Landscape (as needed)

kpff
700 South Flower Street
Suite 2100
Los Angeles, CA 90017
O: 213.418.0201
F: 213.266.5294
www.kpff.com

CONSULTANTS

STAMP

REVISIONS

DATE		ISSUED FOR

DATE	03/24/2021
PROJECT NUMBER	2000776
DESIGNED BY	AT
DRAWN BY	DC
CHECKED BY	RS
SCALE	AS SPECIFIED

KEY MAP

PROJECT DESCRIPTION

400 S. CENTRAL

400 S. CENTRAL AVENUE
LOS ANGELES, CA 90013

DRAWING TITLE

UTILITY EXHIBIT

SHEET NUMBER (EXHIBIT NUMBER)

EXUT-1

400 S CENTRAL WET UTILITY EXHIBIT

FIGURE 1

STANFORD

4TH STREET

CENTRAL AVENUE (FORMERLY KNOWN AS WOLFSKILL AVE)

ADYS AVENUE

ALAMEDA STREET

WEST SITE

SOUTH SITE

Upsize/Relocate (2) existing connections & meters to 16-inch LAWD water line

Connect to existing sewer lateral to tie into the 10-inch sewer main on Central

(E) 10" SEWER
36.5' E/O PL

(E) 16" LAWD WATER
24' E/O PL

(E) 30" LAWD WATER
27' E/O PL

(E) 4" LAWD WATER
20' E/O PL

(E) 2"-4" ABND SCG GAS
18.5' NW/O PL

(E) LADWP FH #9031

(E) 2"-4" ABND SCG GAS
18' NW/O PL

(E) 2"-4" SCG GAS
16' NW/O PL

(E) 10"x12" SCT
14.5' NW/O PL

(E) 22"X31" LAG & E
37' S/O PL

(E) 8" SEWER
17' S/O PL

(E) 2-3" TELECOM
PERPENDICULAR

(E) 27"X22" LAG & E
30.5'-32.5' S/O PL

(E) 12" LAG&E
15' S/O PL

(E) COUNTY OF LA SD LINE
UNKNOWN

(E) 6" LADWP WATER
UNKNOWN

(E) 12" SD
34' S/O PL

(E) 12" LAG GAS
19' S/O PL

(E) 6" LAWD WATER
24' N/O PL

(E) 8" PTT TELECOM
VARIES N/O PL

(E) LADWP FH #9377

(E) 1-4" & 3-1.25" TELECOM
14' N/O PL

(E) 12" SD
9' S/O PL

(E) 15-4" PTT TELECOM
3' N/O PL

PTT TELECOM
12' N/O PL

MATCH LINE SD SEE SHEET EXUT-3 FOR CONTINUATION

(E) 4" ABND SCG
22' W/O PL

(E) 12" CITY OF LA SD (VCP)
11.5 W/O PL

(E) 12" LAL & CS
28' W/O PL

Install domestic and fire water connection & meter to 30-inch LAWD water line

Connect to existing sewer lateral to tie into the 10-inch sewer main on Central

(E) 16"x7.5" SCT
1' W/O PL

Connect to existing sewer lateral to tie into the 10-inch sewer main on Central

(E) PTT TELECOM
17' W/O PL

(E) 4" ABND SCG
20' W/O PL

(E) 4" ABND LAG&E
23' W/O PL

(E) 8" CALIF CONSUMERS CORP?
14' W/O PL

MATCH LINE – SEE SHEET EXUT-3 FOR CONTINUATION

Install domestic and fire water connection & meter to 6-inch LAWD water line

ELECTRICAL TO BE RELOCATED DUE TO STREET WIDENING IMPROVEMENTS.

(E) 20"X34" ABND LAG&E
33' W/O PL

Connect to existing sewer lateral to tie into the 20-inch sewer main on Alameda

(E) 18" SEWER
35' W/O PL

(E) LADWP WATER
21' W/O PL

(E) 20" SEWER
33' W/O PL

Install domestic and fire water connection & meter to LADWP water line

Connect to existing sewer lateral to tie into the 20-inch sewer main on Alameda

(E) 30" CITY OF LA SD (BRICK)
13.5' W/O PL

ELECTRICAL TO BE RELOCATED DUE TO STREET WIDENING IMPROVEMENTS.

(E) 10" LAG&E
18' W/O PL

(E) 20" SEWER
24' W/O PL

(E) 22"X33" LAG&E
26' W/O PL

(E) 3"X10" CSG
18' W/O PL

(E) 6" ABND ASSOCIA OIL CO
16' W/O PL

(E) 3" WUT LINE?
VARIES
(12.5' E/O PL)

(E) ABND 8" SCG GAS
16' E/O PL

N

0 10' 20'
SCALE: 1"=20'

kpff
700 South Flower Street
Suite 2100
Los Angeles, CA 90017
O: 213.418.0201
F: 213.266.5294
www.kpff.com

CONSULTANTS

PROJECT SITES

KEY MAP
(NOT TO SCALE)

LEGEND:

- PROPOSED SEWER LINE*
- PROPOSED DOMESTIC WATER LINE*
- PROPOSED FIRE WATER LINE*
- PROPOSED BACKFLOW PREVENTOR*
- PROPOSED WATER METER*
- (E) POWER POLE
- (E) SEWER
- (E) STORM DRAIN
- (E) WATER
- (E) GAS
- (E) TELECOM
- (E) ELECTRICAL
- (E) UNKNOWN LINE

NOTE:
*Size to be verified by Plumbing/Architect/Landscape, Location to be coordinated with Architect/Landscape (as needed)

STAMP

REVISIONS		
DATE		ISSUED FOR
XX/XX/XX	1	DESCRIPTION

DATE	XX.XX.XX
PROJECT NUMBER	XXXXXX
DESIGNED BY	XX
DRAWN BY	XX
CHECKED BY	XX
SCALE	AS SPECIFIED

KEY MAP

PROJECT DESCRIPTION
PROJECT NAME

XXXX LOS ANGELES AVENUE
LOS ANGELES, CA 9XXXX

DRAWING TITLE
UTILITY EXHIBIT

SHEET NUMBER (EXHIBIT NUMBER)
EXUT-2

400 S CENTRAL WET UTILITY EXHIBIT

FIGURE 1

MATCH LINE – SEE SHEET EXUT-2 FOR CONTINUATION

GLADYS AVENUE

CENTRAL AVENUE

(FORMERLY KNOWN AS WOLFSKILL AVE)

ALAMEDA STREET

SOUTH SITE

VACATED 5TH STREET

(E) 2"-4" ABND SCG GAS
18.5' NW/O PL

(E) 4" LAWD WATER
20' E/O PL

(E) LADWP FH #9031

(E) 10"x12" SCT
14.5' NW/O PL

(E) 2"-4" SCG GAS
16' NW/O PL

(E) 2"-4" ABND SCG GAS
18' NW/O PL

Connect to existing sewer lateral to tie into the 10-inch sewer main on Central

Install domestic and fire water connection & meter to 16-inch LAWD water line

(E) 4" ABND SCG
22' W/O PL

(E) 8" CALIF CONSUMERS CORP?
14' W/O PL

(E) LADWP FH #3837

Upsize/Relocate (2) existing connections & meters to LAWD water line

(E) 10" SEWER
36.5' E/O PL

(E) 12" CITY OF LA SD (VCP)
11.5 W/O PL

(E) 30" LAWD WATER
21' E/O PL

(E) ABND SCG GAS
22' W/O PL

(E) 16" LAWD WATER
24' E/O PL

(E) 12" LAL & CS
28' W/O PL

Connect to existing sewer lateral to tie into the 10-inch sewer main on Central

(E) LADWP FH #9025

Install domestic and fire water connection & meter to LADWP water line

Connect to existing sewer lateral to tie into the 20-inch sewer main on Alameda

(E) 3" WUT LINE?
VARIES
(12.5' E/O PL)

Upsize/Relocate existing water meter and install additional water connection & meter to LADWP water line

H #3841

Connect to existing sewer lateral to tie into the 20-inch sewer main on Alameda

(E) ABND 8" SCG GAS
16' E/O PL

(E) 30" CITY OF LA SD (BRICK)
13.5' W/O PL

(E) 10" LAG&E
18' W/O PL

(E) LADWP WATER
21' W/O PL

(E) 27 X"33 LAG&E
26' W/O PL

(E) 20" SEWER
22.5' W/O PL

(E) 20" SEWER
33' W/O PL

(E) 20"X"34 ABND LAG&E
33' W/O PL

(E) 18' ABND ASSOCIA OIL CO. 6"
18' W/O PL

0 10' 20'
SCALE: 1"=20'

kpff
700 South Flower Street
Suite 2100
Los Angeles, CA 90017
O: 213.418.0201
F: 213.266.5294
www.kpff.com

CONSULTANTS

PROJECT SITES

KEY MAP
(NOT TO SCALE)

LEGEND:

- PROPOSED SEWER LINE*
- PROPOSED DOMESTIC WATER LINE*
- PROPOSED FIRE WATER LINE*
- PROPOSED BACKFLOW PREVENTOR*
- PROPOSED WATER METER*
- (E) POWER POLE
- (E) SEWER
- (E) STORM DRAIN
- (E) WATER
- (E) GAS
- (E) TELECOM
- (E) ELECTRICAL
- (E) UNKNOWN LINE

NOTE:
*Size to be verified by Plumbing/Architect/Landscape, Location to be coordinated with Architect/Landscape (as needed)

STAMP

REVISIONS

DATE		ISSUED FOR
XX/XX/XX	1	DESCRIPTION

DATE	XX.XX.XX
PROJECT NUMBER	XXXXXX
DESIGNED BY	XX
DRAWN BY	XX
CHECKED BY	XX
SCALE	AS SPECIFIED

KEY MAP

PROJECT DESCRIPTION
PROJECT NAME

XXXX LOS ANGELES AVENUE
LOS ANGELES, CA 9XXXX

DRAWING TITLE
UTILITY EXHIBIT

SHEET NUMBER (EXHIBIT NUMBER)
EXUT-3