

PRELIMINARY OFFICIAL STATEMENT DATED NOVEMBER 4, 2021**NEW ISSUE – FULL BOOK-ENTRY ONLY****RATINGS**Fitch: “___”
S&P “___”

(See “RATINGS” herein)

In the opinion of Bond Counsel, under existing law and assuming compliance with the tax covenants described herein, and the accuracy of certain representations and certifications made by the City described herein, interest on the 2021A Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986, as amended (the “Code”). Bond Counsel is also of the opinion that such interest is not treated as a preference item in calculating the alternative minimum tax imposed under the Code. Bond Counsel is further of the opinion that interest on the 2021A Bonds is exempt from personal income taxes of the State of California (the “State”) under present State law. See “TAX MATTERS” herein regarding certain other tax considerations.”

[INSERT CITY LOGO]

\$ _____ *

City of Pasadena, California
Water Revenue/Refunding Bonds, 2021A Series

Dated: Date of Delivery

Due: June 1, as shown on the inside cover

This cover page contains certain information for general reference only. It is not intended to be a summary of the security or terms of this issue. Investors must read the entire Official Statement to obtain information essential to the making of an informed investment decision. Capitalized terms used on this cover page not otherwise defined shall have the meanings set forth herein.

The City of Pasadena, California (the “City”) is issuing its Water Revenue/Refunding Bonds, 2021A Series (the “2021A Bonds”) pursuant to a Water Revenue Bond Indenture, dated as of August 1, 2003, by and between the City and The Bank of New York Mellon Trust Company, N.A. (successor to BNY Western Trust Company), as trustee (the “Trustee”), as amended and supplemented, including as amended and supplemented by a Seventh Supplement to Water Revenue Bond Indenture, dated as of December 1, 2021 (the “Seventh Supplement”) (as so amended and supplemented, the “Indenture”).

The 2021A Bonds are being issued to provide moneys, together with certain other available funds, to (i) refund substantially all of the City’s Water Revenue Refunding Bonds, 2011A Series, (ii) finance the costs of acquisition and construction of certain capital improvements to the Water System, (iii) make an additional deposit to the Parity Reserve Fund, and (iv) pay costs of issuance of the 2021A Bonds, as more fully described herein. See “PLAN OF FINANCING” herein.

The 2021A Bonds are being issued in fully registered form and, when issued, will be registered in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York (“DTC”). DTC will act as securities depository of the 2021A Bonds. Beneficial ownership interests in the 2021A Bonds may be purchased in book-entry form only in denominations of \$5,000 principal amount or any integral multiple thereof. Interest on the 2021A Bonds will be payable semiannually on June 1 and December 1 of each year, commencing June 1, 2022. Payments of principal of, premium, if any, and interest on, the 2021A Bonds will be paid by the Trustee to DTC, which is obligated in turn to remit such principal, premium, if any, and interest to its DTC participants for subsequent disbursement to the beneficial owners of the 2021A Bonds.

The 2021A Bonds are subject to redemption prior to maturity as described herein. See “DESCRIPTION OF THE 2021A BONDS – Redemption” herein.

The 2021A Bonds are obligations payable only from the Water Fund of the City and certain other funds and accounts pledged under the Indenture on a parity with certain Bonds and Parity Debt heretofore or hereafter issued by the City in accordance with the Indenture as more fully described herein.

THE 2021A BONDS ARE SPECIAL, LIMITED OBLIGATIONS OF THE CITY. THE 2021A BONDS SHALL NOT BE DEEMED TO CONSTITUTE A DEBT OR LIABILITY OF THE CITY, THE STATE OF CALIFORNIA (THE “STATE”) OR OF ANY POLITICAL SUBDIVISION THEREOF WITHIN THE MEANING OF ANY CONSTITUTIONAL OR STATUTORY PROVISION, OR A PLEDGE OF THE FAITH AND CREDIT OF THE CITY, THE STATE OR OF ANY POLITICAL SUBDIVISION THEREOF, BUT SHALL BE PAYABLE, EXCEPT TO THE EXTENT OF CERTAIN AMOUNTS HELD UNDER THE INDENTURE PLEDGED THEREFOR, SOLELY FROM THE WATER FUND OF THE CITY. NEITHER THE FAITH AND CREDIT NOR THE TAXING POWER OF THE CITY, THE STATE OR OF ANY POLITICAL SUBDIVISION THEREOF IS PLEDGED TO THE PAYMENT OF THE PRINCIPAL OF, PREMIUM, IF ANY, OR THE INTEREST ON THE 2021A BONDS. THE ISSUANCE OF THE 2021A BONDS SHALL NOT DIRECTLY OR INDIRECTLY OR CONTINGENTLY OBLIGATE THE CITY, THE STATE OR ANY POLITICAL SUBDIVISION THEREOF TO LEVY OR TO PLEDGE ANY FORM OF TAXATION WHATSOEVER THEREFOR OR TO MAKE ANY APPROPRIATION FOR THEIR PAYMENT.

MATURITY SCHEDULE
(SEE INSIDE COVER)

The 2021A Bonds will be sold by competitive sale on or about November 15, 2021 pursuant to the Notice Inviting Bids dated November 4, 2021. For additional information concerning the competitive sale of the 2021A Bonds, contact the City’s municipal advisor, Public Resources Advisory Group, Los Angeles, California. The 2021A Bonds will be offered when, as and if issued, sold and received by the Initial Purchaser, subject to the approval of Nixon Peabody LLP, Los Angeles, California, Bond Counsel, and certain other conditions. Public Resources Advisory Group, Los Angeles, California, is serving as Municipal Advisor to the City in connection with the issuance of the 2021A Bonds. Certain legal matters will be passed upon for the City by Michele Beal Bagneris, City Attorney of the City, and by Nixon Peabody LLP, Los Angeles, California, Disclosure Counsel. It is anticipated that the 2021A Bonds in definitive form will be available for delivery to DTC in New York, New York by Fast Automated Securities Transfer (FAST) on or about December 1, 2021.

Dated: November ___, 2021

* Preliminary; subject to change.

MATURITY SCHEDULE

\$ _____
CITY OF PASADENA, CALIFORNIA
WATER REVENUE/REFUNDING BONDS, 2021A SERIES

Maturity Date (June 1)	Principal Amount	Interest Rate	Yield	CUSIP[†]
---------------------------------------	-----------------------------	--------------------------	--------------	--------------------------

\$ _____	_____ %	Term 2021A Bonds due June 1, 20____	; Yield _____ %	; CUSIP _____
\$ _____	_____ %	Term 2021A Bonds due June 1, 20____	; Yield _____ %	; CUSIP _____

CITY OF PASADENA

[†] CUSIP is a registered trademark of The American Bankers Association. CUSIP data herein is provided by CUSIP Global Services, managed by S&P Capital IQ Financial Services LLC on behalf of The American Bankers Association. CUSIP numbers have been assigned by an independent company not affiliated with the City, Pasadena Water and Power ("PWP") or the initial Purchaser and are included solely for the convenience of the holders of the 2021A Bonds. This data is not intended to create a database and does not serve in any way as a substitute for the CUSIP Services. None of the City, PWP or the Initial Purchaser shall be responsible for the selection or correctness of the CUSIP numbers set forth herein. The CUSIP number for a specific maturity is subject to being changed after the delivery of the 2021A Bonds as a result of various subsequent actions including, but not limited to, a refunding in whole or in part of such maturity or as a result of the procurement of secondary market portfolio insurance or other similar enhancement by investors that is applicable to all or a portion of the 2021A Bonds.

CITY COUNCIL

Victor Gordo, *Mayor*
Andy Wilson, *Vice Mayor*
Tyron A.L. Hampton, *Council Member*
Felicia Williams, *Council Member*
John J. Kennedy, *Council Member*
Gene Masuda, *Council Member*
Jessica C. Rivas, *Council Member*
Steven Madison, *Council Member*

CITY STAFF

Steve Mermell, *City Manager*
Matthew E. Hawkesworth, *Director of Finance*
Vicken Erganian, *Treasurer and Deputy Director of Finance*

CITY ATTORNEY

Michele Beal Bagneris

PASADENA WATER AND POWER STAFF

Gurcharan Bawa, *General Manager*
Eric Klinkner, *Assistant General Manager & Chief Deputy*
Shari M. Thomas, *Assistant General Manager for Finance, Administration and Customer Service*
Vacant, *Assistant General Manager for Water Delivery*
Kelly Nguyen, *Assistant General Manager for Power Supply*
Marvin Moon, *Assistant General Manager for Power Delivery*

SPECIAL SERVICES

MUNICIPAL ADVISOR

Public Resources Advisory Group
Los Angeles, California

BOND AND DISCLOSURE COUNSEL

Nixon Peabody LLP
Los Angeles, California

TRUSTEE

The Bank of New York Mellon Trust Company, N.A.
Los Angeles, California

No dealer, broker, salesperson or other person has been authorized by the City to give any information or to make any representations, other than those contained herein, and if given or made, such other information or representations must not be relied upon as having been authorized by any of the foregoing. This Official Statement does not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of the 2021A Bonds in any jurisdiction in which such offer, solicitation or sale would be unlawful.

This Official Statement is not to be construed as a contract with the purchasers of the 2021A Bonds. Statements contained in this Official Statement involving any estimates, forecasts or matters of opinion, whether or not expressly so stated, are intended solely as such and not as a representation of fact.

The information set forth herein has been furnished by the City and other sources which are believed to be reliable, but is not guaranteed as to accuracy or completeness. The information and expressions of opinions herein are subject to change without notice and neither the delivery of this Official Statement nor any sale made hereunder shall, under any circumstances, create any implication that there has been no change in the affairs of the City or the Water System since the date hereof.

IN CONNECTION WITH THE OFFERING OF THE 2021A BONDS, THE INITIAL PURCHASER MAY OVER-ALLOT OR EFFECT TRANSACTIONS THAT MAY STABILIZE OR MAINTAIN THE MARKET PRICE OF SUCH 2021A BONDS AT A LEVEL ABOVE THAT WHICH MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH STABILIZING, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME. THE INITIAL PURCHASER IN CONNECTION WITH ANY REOFFERING MAY OFFER AND SELL THE 2021A BONDS TO CERTAIN DEALERS, INSTITUTIONAL INVESTORS AND OTHERS AT PRICES LOWER THAN THE PUBLIC OFFERING PRICES STATED ON THE INSIDE COVER PAGE HEREOF AND SUCH PUBLIC OFFERING PRICES MAY BE CHANGED FROM TIME TO TIME BY THE INITIAL PURCHASER.

This Official Statement, including any supplement or amendment hereto, is intended to be filed with the Municipal Securities Rulemaking Board through the Electronic Municipal Market Access (EMMA) website. The City maintains a website. However, the information presented therein is not part of this Official Statement and should not be relied upon in making investment decisions with respect to the 2021A Bonds.

References to website addresses presented herein are for informational purposes only and may be in the form of a hyperlink solely for the reader's convenience. Unless specified otherwise, such websites and the information or links contained therein are not incorporated into, and are not part of, this Official Statement for purposes of, and as that term is defined in, Securities and Exchange Commission Rule 15c2-12.

CAUTIONARY STATEMENTS REGARDING FORWARD-LOOKING STATEMENTS IN THIS OFFICIAL STATEMENT

Certain statements included or incorporated by reference in this Official Statement constitute "forward-looking statements." Such statements are generally identifiable by the terminology used such as "plan," "expect," "estimate," "budget" or other similar words. The achievement of certain results or other expectations contained in such forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause actual results, performance or achievements described to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. The City does not plan to issue any updates or revisions to those forward-looking statements if or when its expectations or events, conditions or circumstances on which such statements are based occur.

TABLE OF CONTENTS

	Page
INTRODUCTION	1
Purpose.....	1
Authority for Issuance.....	1
The City and the Water System	1
Security and Sources of Payment for the 2021A Bonds	2
Parity Reserve Fund.....	2
Rate Covenant.....	3
Other Matters	3
Forward-Looking Statements.....	3
Additional Information	4
PLAN OF FINANCING	4
ESTIMATED SOURCES AND USES OF FUNDS	5
DESCRIPTION OF THE 2021A BONDS	5
General.....	5
Redemption.....	5
Debt Service Requirements.....	8
SECURITY AND SOURCES OF PAYMENT FOR THE 2021A BONDS	9
General.....	9
Rate Covenant.....	10
The Water Fund	10
Capital Improvements Charge Account.....	11
Parity Reserve Fund.....	11
Outstanding Bonds.....	12
Additional Bonds and Parity Debt	12
Other Covenants of the City	14
Investment of Funds.....	14
Limitations on Remedies	14
PASADENA WATER AND POWER	15
Organization and Management.....	15
Municipal Services Committee.....	17
THE WATER SYSTEM.....	17
General.....	17
Water Production	18
Current Water Supply	19
Future Sources of Water Supply and/or Reliability	25
Water Conservation Programs	26
Water System Resource Plan	26
Risks to Water Supply	27
Water Quality.....	28
Environmental Regulation	29
Cybersecurity	30
Seismic Considerations.....	30
Water System Master Plan Capital Projects	31
Capital Improvement Program.....	31
Water Sales	33

TABLE OF CONTENTS

(continued)

	Page
Largest Customers	34
Rate Structure	34
Billing and Collection Procedures	37
COVID-19 Pandemic.....	38
Basis of Financial Reporting.....	39
Employees.....	39
Insurance.....	41
Historical Operating Results and Cash Flows.....	42
Projected Coverage and Five-Year Forecast.....	43
CONSTITUTIONAL AND STATUTORY LIMITATIONS ON TAXES AND APPROPRIATIONS.....	44
Article XIII A of the California Constitution.....	44
Article XIII B of the California Constitution.....	45
Article XIII C and XIII D of the California Constitution	45
Proposition 26	47
Future Initiatives	48
RATINGS	48
TAX MATTERS.....	48
Federal Income Taxes	48
State Taxes.....	49
Original Issue Discount.....	49
Original Issue Premium	49
Ancillary Tax Matters	49
Changes in Law and Post Issuance Events	50
LITIGATION.....	50
AUDITED FINANCIAL STATEMENTS	51
FORWARD-LOOKING STATEMENTS	51
MUNICIPAL ADVISOR.....	52
PURCHASE AND REOFFERING	52
CERTAIN LEGAL MATTERS.....	52
CONTINUING DISCLOSURE.....	52
EXECUTION AND DELIVERY	53
APPENDIX A – THE CITY OF PASADENA.....	A-1
APPENDIX B – AUDITED FINANCIAL STATEMENTS OF PASADENA WATER AND POWER ENTERPRISE FUNDS FOR THE FISCAL YEAR ENDED JUNE 30, 2020.....	B-1
APPENDIX C – BOOK-ENTRY ONLY SYSTEM	C-1
APPENDIX D – SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE	D-1
APPENDIX E – FORM OF CONTINUING DISCLOSURE AGREEMENT	E-1
APPENDIX F – PROPOSED FORM OF OPINION OF BOND COUNSEL	F-1

OFFICIAL STATEMENT

\$ _____ *

City of Pasadena, California Water Revenue/Refunding Bonds, 2021A Series

INTRODUCTION

This Introduction is not a summary of this Official Statement, and is qualified by more complete and detailed information contained in the entire Official Statement. A full review should be made of the entire Official Statement, including the cover page and attached appendices. The offering of the 2021A Bonds to potential investors is made only by means of the entire Official Statement. Capitalized terms used but not defined in this Introduction shall have the meanings given such terms elsewhere in this Official Statement. Certain definitions of capitalized terms used and not otherwise defined in this Official Statement are set forth in APPENDIX D – “SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE.”

Purpose

The purpose of this Official Statement, which includes the cover page and Appendices hereto, is to set forth certain information in connection with the issuance and sale by the City of Pasadena, California (the “City”) of \$ _____* aggregate principal amount of its Water Revenue/Refunding Bonds, 2021A Series (the “2021A Bonds”). The 2021A Bonds are being issued to provide moneys, together with certain other available funds, to (i) refund substantially all of the City’s Water Revenue Refunding Bonds, 2011A Series, currently outstanding in the principal amount of \$ _____ (the “2011A Bonds”), (ii) finance the costs of acquisition and construction of certain capital improvements to the Water System, (iii) make an additional deposit to the Parity Reserve Fund, and (iv) pay costs of issuance of the 2021A Bonds, as more fully described herein. See “PLAN OF FINANCING.”

Authority for Issuance

The 2021A Bonds are authorized and issued pursuant to Article XIV of the Charter of the City, as amended (the “Charter”), an Ordinance adopted by the City Council of the City (the “City Council”) on September 20, 2021, and by a Water Revenue Bond Indenture, dated as of August 1, 2003, by and between the City and The Bank of New York Mellon Trust Company, N.A. (successor to BNY Western Trust Company), as trustee (the “Trustee”), as amended and supplemented, including as amended and supplemented by a Seventh Supplement to Water Revenue Bond Indenture, dated as of December 1, 2021 (the “Seventh Supplement”) (as so amended and supplemented, the “Indenture”). All Water Revenue Bonds issued pursuant to the Indenture are collectively referred to herein as the “Bonds.”

The City and the Water System

The City is a charter city of the State of California (the “State”), comprising approximately 23 square miles, in Los Angeles County in the northwestern portion of the San Gabriel Valley. See APPENDIX A – “THE CITY OF PASADENA.” The City owns and operates a municipal water public utility (the “Water System”), established by the Charter. The Water System is managed and controlled by a department of the City, the Pasadena Water and Power Department (“PWP”), and supplies water to the water customers within the City limits as well as water customers within a 3.2 square mile area outside the

* Preliminary; subject to change.

City limits, through its water facilities. For the Fiscal Year ended June 30, 2021, the Water System served approximately 38,000 metered accounts, and total water sales were approximately 12.4 million billing units. See “THE WATER SYSTEM.”

Security and Sources of Payment for the 2021A Bonds

On December 20, 2011, the City issued the 2011A Bonds in the aggregate principal amount of \$29,770,000, of which \$13,855,000 currently remain outstanding. Upon issuance of the 2021A Bonds and refunding of substantially all the 2011A Bonds, the 2011A Bonds will remain outstanding in the principal amount of \$1,210,000. The final maturity date of the 2011A Bonds will be June 1, 2022.

On April 5, 2017, the City issued its Water Revenue Refunding Bonds, 2017A Series (the “2017A Bonds”) in the aggregate principal amount of \$15,395,000, of which \$12,540,000 currently remain outstanding.

On December 1, 2020, the City issued its Water Revenue/Refunding Bonds, 2020A Series (the “2020A Bonds”) in the aggregate principal amount of \$30,130,000, of which \$29,310,000 currently remain outstanding.

The 2011A Bonds, 2017A Bonds and the 2020A Bonds, together with the 2021A Bonds and any additional bonds hereafter issued under the Indenture, are referred to herein as the “Bonds.”

The 2021A Bonds are an obligation payable exclusively from the Water Fund of the City and certain other funds and accounts pledged under the Indenture. The 2021A Bonds are secured by a pledge of and lien upon the Pledged Revenues of the Water System on a parity with other obligations of the Water System payable from the Water Fund and issued from time to time pursuant to the Indenture, including the outstanding 2011A Bonds, 2017A Bonds, 2020A Bonds and any additional Bonds or Parity Debt (as defined in the Indenture). See “SECURITY AND SOURCES OF PAYMENT FOR THE 2021A BONDS – Outstanding Bonds” and “– Additional Bonds and Parity Debt.”

The 2021A Bonds are special, limited obligations of the City. The 2021A Bonds shall not be deemed to constitute a debt or liability of the City, the State or of any political subdivision thereof within the meaning of any constitutional or statutory provision, or a pledge of the faith and credit of the City, the State or of any political subdivision thereof, but shall be payable, except to the extent of certain amounts held under the Indenture pledged therefor, solely from the Water Fund of the City. Neither the faith and credit nor the taxing power of the City, the State or of any political subdivision thereof is pledged to the payment of the principal of, premium, if any, or the interest on the 2021A Bonds. The issuance of the 2021A Bonds shall not directly or indirectly or contingently obligate the City, the State or any political subdivision thereof to levy or to pledge any form of taxation whatsoever therefor or to make any appropriation for their payment.

Nothing in the Indenture shall preclude the issuance or incurrence by the City of any indebtedness, installment sale obligation, lease obligation or other obligation of the City for borrowed money or interest rate swap agreement, which in the indenture, agreement, resolution or other instrument pursuant to which it is incurred or issued is expressly made subordinate and junior in right of payment from the Pledged Revenues or any portion thereof to the payment of Bonds and Parity Debt (“Subordinate Debt”).

Parity Reserve Fund

Pursuant to Section 1413 of Article XIV of the Charter, the City has established the Parity Reserve Fund. Upon the issuance of the 2021A Bonds, there will be on deposit in the Parity Reserve Fund an

amount equal to the Reserve Fund Requirement (\$_____). Moneys held in the Parity Reserve Fund are pledged to and may be used solely for payment of debt service on the 2011A Bonds, 2017A Bonds, the 2020A Bonds, the 2021A Bonds, any additional Bonds or any other Parity Debt secured thereby in the event that money in the Debt Service Fund or any comparable fund established for the payment of principal and interest on the 2011A Bonds, the 2017A Bonds, the 2020A Bonds, the 2021A Bonds any additional Bonds and any other Parity Debt secured thereby is insufficient therefor.

On such date the 2011A Bonds and the 2017A Bonds are defeased, paid or discharged in accordance with their terms and are no longer Outstanding for purposes of the Indenture, the Parity Reserve Requirement shall be zero dollars and accordingly, all of the amounts held in the Parity Reserve Fund shall be released to the City to be used for lawful purposes. See “SECURITY AND SOURCES OF PAYMENT FOR THE 2021A BONDS – Parity Reserve Fund.”

Rate Covenant

The City has covenanted in the Indenture to prescribe, revise and collect such charges for the services, facilities and water furnished by the Water System so as to provide Gross Aggregate Revenues (as defined herein) at least sufficient to pay, as the same become due, interest on, and the principal of and redemption price of, the 2011A Bonds, the 2017A Bonds, the 2020A Bonds, the 2021A Bonds any additional Bonds and any other Parity Debt; all payments required for compliance with the Indenture, including payments required to be made into any Parity Reserve Fund; all payments required to be made with respect to any Subordinate Debt; all Operation and Maintenance Expenses; and all payments required to meet any other obligations of the City which are charges, liens, encumbrances upon or payable from the Gross Aggregate Revenues or any portion thereof and the charges shall be fixed so that in each Fiscal Year the Gross Aggregate Revenues less Operation and Maintenance Expenses will be at least equal to 1.10 times the amount necessary to pay principal and interest as the same become due on all the 2011A Bonds, the 2017A Bonds, the 2020A Bonds, the 2021A Bonds, any additional Bonds and any other Parity Debt. See “SECURITY AND SOURCES OF PAYMENT FOR THE 2021A BONDS – Rate Covenant.”

Other Matters

This Official Statement includes summaries of the terms of the 2021A Bonds, the Indenture, the Continuing Disclosure Agreement and certain contracts and other arrangements for the supply of water. The summaries of and references to all documents, statutes, reports and other instruments referred to herein do not purport to be complete, comprehensive or definitive, and each such summary and reference is qualified in its entirety by reference to each document, statute, report or instrument. The capitalization of any word not conventionally capitalized, or otherwise defined herein, indicates that such word is defined in a particular agreement or other document and, as used herein, has the meaning given it in such agreement or document.

Copies of the Indenture and the Continuing Disclosure Agreement are available for inspection at the offices of the City in Pasadena, California, and will be available upon request and payment of duplication costs from the Trustee.

Forward-Looking Statements

The statements contained in this Official Statement and in the Appendices hereto, and in any other information provided by PWP or the City, that are not purely historical, are forward-looking statements, including statements regarding PWP or the City’s expectations, hopes, intentions or strategies regarding the future. Prospective investors should not place undue reliance on forward-looking statements. All forward-looking statements included in this Official Statement are based on information available to PWP

and the City on the date hereof, and PWP and the City assume no obligation to update any such forward-looking statements. It is important to note that PWP's actual results could differ materially from those in such forward-looking statements.

The forward-looking statements herein are necessarily based on various assumptions and estimates and are inherently subject to various risks and uncertainties, including risks and uncertainties relating to the possible invalidity of the underlying assumptions and estimates and possible changes or developments in social, economic, business, industry, market, legal and regulatory circumstances and conditions and actions taken or omitted to be taken by third parties, including customers, suppliers and competitors, and legislative, judicial and other governmental authorities and officials. Assumptions related to the foregoing involve judgments with respect to, among other things, future economic, competitive and market conditions and future business decisions, all of which are difficult or impossible to predict accurately and many of which are beyond the control of PWP and the City. Any of such assumptions could be inaccurate and, therefore, there can be no assurance that the forward-looking statements included in this Official Statement would prove to be accurate.

Additional Information

Additional information regarding the Official Statement may be obtained by contacting the Trustee or:

Director of Finance
City of Pasadena
100 N. Garfield Avenue, Room 353
Pasadena, California 91101-7215
(626) 744-4350

PLAN OF FINANCING

The 2021A Bonds are being issued to provide moneys, together with certain other available funds, to (i) refund substantially all of the City's Water Revenue Refunding Bonds, 2011A Series, currently outstanding in the principal amount of \$13,855,000 (the "2011A Bonds"), (ii) finance the costs of acquisition and construction of certain capital improvements to the Water System, (iii) make an additional deposit to the Parity Reserve Fund, and (iv) pay costs of issuance of the 2021A Bonds.

A portion of the proceeds of the 2021A Bonds, together with certain other available funds, will be sufficient to redeem, on the day of closing and delivery of the 2021A Bonds, the 2011A Bonds maturing on or after June 1, 2023 at a redemption price equal to 100% of the principal amount thereof and accrued interest.

A description of capital improvements to the Water System expected to be financed with the proceeds of the 2021A Bonds are as follows:

Project Title	Description
Distribution Mains	Installation of new and replacement water mains at various locations, new gate valves, water service connections, fire hydrants and other improvements to water flows for fire protection.

Sunset Reservoir Improvements	Removal and replacement of existing reservoirs and installation of a new groundwater treatment facility, pipelines and a stationary emergency generator.
Well Improvements	Replacement/improvement of existing wells and design/construction of new wells to improve local water supply and sustainability.
Meters and Services	Replacement of meters and equipment, including vaults, boxes and steel plates to upgrade efficiency of the water delivery system.
Treatment Systems	Design and construction of new groundwater treatment facilities.

ESTIMATED SOURCES AND USES OF FUNDS

The estimated sources and uses of funds in connection with the 2021A Bonds are as follows:

Sources:

Principal Amount of 2021A Bonds.....	
Plus Original Issue Premium.....	
Total	<hr/>

Uses:

Redemption of the 2011A Bonds.....	
Deposit to Construction Account.....	
Deposit to Parity Reserve Fund	
Deposit to Cost of Issuance Fund ⁽¹⁾	
Initial Purchaser's Discount.....	<hr/>
Total	<hr/>

⁽¹⁾ Includes fees of Bond and Disclosure Counsel, the Trustee and the Municipal Advisor, rating agencies' fees, printing costs and other costs associated with the issuance of the 2021A Bonds.

DESCRIPTION OF THE 2021A BONDS

General

The 2021A Bonds will be dated their date of delivery and will bear interest from that date at the rates per annum and will mature on June 1 in the years set forth on the inside cover page of this Official Statement. Interest on the 2021A Bonds will be payable semiannually on June 1 and December 1, commencing June 1, 2022, and will be calculated on the basis of a 360-day year comprised of twelve 30-day months. The 2021A Bonds are being issued in fully registered form, and when issued, will be registered in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York ("DTC"). So long as Cede & Co. is the registered owner of the 2021A Bonds, references herein to the owners or registered owners shall mean Cede & Co., and not the beneficial owners of the 2021A Bonds. See APPENDIX C – "BOOK-ENTRY ONLY SYSTEM."

Redemption

Optional Redemption. The 2021A Bonds maturing on and before June 1, 2031 are not subject to redemption prior to their respective stated maturities. The 2021A Bonds maturing on and after June 1, 2032 are subject to redemption prior to their respective stated maturities, at the option of the City, from any

source of available funds, as a whole or in part on any date on or after June 1, 2031, at a Redemption Price equal to the principal amount of the 2021A Bonds called for redemption, together with accrued interest thereon to the date of redemption, without premium.

Mandatory Sinking Fund Redemption. The 2021A Bonds maturing on June 1, 20__ shall also be subject to redemption prior to their stated maturity, in part, from mandatory sinking fund payments as specified below, commencing on June 1, 20__, at a Redemption Price equal to the principal amount thereof plus accrued interest thereon to the date fixed for redemption without premium.

Mandatory Sinking Fund Payment Dates (June 1)	<u>Amount</u>
--	----------------------

* Maturity.

The 2021A Bonds maturing on June 1, 20__ shall also be subject to redemption prior to their stated maturity, in part, from mandatory sinking fund payments as specified below, commencing on June 1, 20__, at a Redemption Price equal to the principal amount thereof plus accrued interest thereon to the date fixed for redemption without premium.

Mandatory Sinking Fund Payment Dates (June 1)	<u>Amount</u>
--	----------------------

* Final maturity.

Selection of 2021A Bonds for Redemption. Whenever provision is made in the Seventh Supplement for the redemption of less than all of the 2021A Bonds, the maturities of the 2021A Bonds to be redeemed shall be specified by the City. In the case of partial redemption of less than all of the 2021A Bonds of any maturity, the Trustee shall select the particular 2021A Bonds to be redeemed, from all 2021A Bonds of the respective maturity not previously called for redemption, in authorized denominations, by lot in any manner which the Trustee in its sole discretion shall deem appropriate. The Trustee shall promptly notify the City in writing of the 2021A Bonds so selected for redemption.

Notice of Redemption

Notice of redemption shall be mailed by the Trustee, not less than thirty (30) nor more than sixty (60) days prior to the redemption date, to each Owner, the Securities Depositories and two or more Information Services. Notice of redemption to the Securities Depositories shall be given by telecopy, certified, registered or overnight mail or by such other method as may be requested by the Securities Depositories. Each notice of redemption shall state the date of such notice, the date of issue of the 2021A

Bonds to which such notice relates, the redemption date, the Redemption Price, the place or places of redemption (including the name and appropriate address or addresses of the Trustee), the CUSIP number (if any) of the maturity or maturities, and, if less than all of any such maturity, the distinctive certificate numbers of the 2021A Bonds of such maturity to be redeemed and, in the case of 2021A Bonds to be redeemed in part only, the respective portions of the principal amount thereof to be redeemed. Each such notice shall also state that on said date there will become due and payable on each of said 2021A Bonds the Redemption Price thereof or of said specified portion of the principal amount thereof in the case of a 2021A Bond to be redeemed in part only, together with interest accrued thereon to the date fixed for redemption, and that from and after such redemption date interest thereon shall cease to accrue, and shall require that such 2021A Bonds be then surrendered at the address or addresses of the Trustee specified in the redemption notice. Neither the City nor the Trustee shall have any responsibility for any defect in the CUSIP number that appears on any 2021A Bond or in any redemption notice with respect thereto, and any such redemption notice may contain a statement to the effect that CUSIP numbers have been assigned by an independent service for convenience of reference and that neither the City nor the Trustee shall be liable for any inaccuracy in such numbers.

In the event of an optional redemption of 2021A Bonds, if the City shall not have deposited or otherwise made available to the Trustee the money required for the payment of the redemption price of the 2021A Bonds to be redeemed at the time of the mailing of notice of redemption, such notice of redemption shall state that the redemption is expressly conditioned upon the timely deposit of sufficient funds therefor with the Trustee.

Failure by the Trustee to give notice to any one or more of the Information Services or Securities Depositories or failure of any Owner to receive notice or any defect in any such notice shall not affect the sufficiency of the proceedings for redemption.

Effect of Redemption

When notice of redemption has been given, and when the amount necessary for the redemption of the 2021A Bonds called for redemption (principal and premium, if applicable) is set aside for that purpose, the 2021A Bonds designated for redemption shall become due and payable on the redemption date, and upon presentation and surrender of said 2021A Bonds, at the place specified in the notice of redemption, such 2021A Bonds shall be redeemed and paid at said redemption price, and no interest shall accrue on such 2021A Bonds called for redemption after the redemption date.

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Debt Service Requirements

The following is the annual debt service schedule for the 2011A Bonds*, the 2017A Bonds and the 2020A Bonds (in the aggregate) and the 2021A Bonds assuming no redemption other than mandatory sinking account redemptions.

Bond Year Ending June 1	Outstanding Bonds*	2021A Bonds		Total
		Principal	Interest	
2022	\$3,790,450**			
2023	3,592,000			
2024	3,583,250			
2025	3,571,000			
2026	3,555,250			
2027	3,536,000			
2028	3,518,250			
2029	3,496,750			
2030	3,471,500			
2031	3,447,500			
2032	3,414,500			
2033	3,382,750			
2034	3,352,000			
2035	3,312,000			
2036	3,273,000			
2037	2,024,750			
2038	1,987,500			
2039	1,933,500			
2040	1,883,500			
2041	732,250			
2042	729,750			
2043	731,250			
2044	731,500			
2045	730,500			
2046	733,250			
2047	729,500			
2048	729,500			
2049	733,000			
2050	729,750			
2051	0			
Total	<u>\$67,435,700</u>	<u></u>	<u></u>	<u></u>

* Assumes the refunding of the 2011A Bonds maturing on or after June 1, 2023.

** Does not include the interest payment on December 1, 2021.

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SECURITY AND SOURCES OF PAYMENT FOR THE 2021A BONDS

General

The 2021A Bonds are an obligation payable exclusively from the Water Fund of the City and certain other funds and accounts pledged under the Indenture. The 2021A Bonds are secured by a pledge of and lien upon the Pledged Revenues of the Water System on a parity with other obligations of the Water System payable from the Water Fund and issued from time to time pursuant to the Indenture, including the 2011A Bonds, the 2017A Bonds, the 2020A Bonds and any additional Bonds or Parity Debt hereafter issued, and a pledge of amounts in the Parity Reserve Fund, except for amounts held in the Rebate Fund. See “Outstanding Bonds” and “Additional Bonds and Parity Debt” below.

“Pledged Revenues” means all Gross CIC Revenues and all Net Other Water Revenues. “Net Other Water Revenues” means all Other Water Revenues, all amounts deposited in the Water Fund and all interest earnings or income thereon or therefrom, less all Operation and Maintenance Expenses.

“Other Water Revenues” means shall mean all revenues from rates, fees and charges for providing water service to persons and real property and all other fees, rents and charges and other revenues derived by the City from the ownership, operation, use or service of the Water System, including contributions in aid of construction, but not including the CIC Revenues; provided, however, there shall be excluded therefrom any amounts reimbursed to the City by the United States of America pursuant to Section 54AA of the Code or any future similar program.

“Gross CIC Revenues” means all CIC Revenues, all amounts deposited in the CIC Account and all interest earnings or income thereon or therefrom. “CIC Revenues” means all capital improvement charges collected and received pursuant to Chapter 13.20.035 of Title XIII of the Pasadena Municipal Code and interest earned thereon.

“Rebate Fund” means those amounts on deposit and held by the Trustee to the extent required to satisfy the requirement to make rebate payment to the United States pursuant to the Code.

“Parity Debt” means any indebtedness, installment sale obligation, lease obligation or other obligation of the City for borrowed money or interest rate swap agreement having an equal lien and charge upon the Pledged Revenues, therefore payable on a parity with the Bonds (whether or not any Bonds are Outstanding).

The 2021A Bonds are special, limited obligations of the City. The 2021A Bonds shall not be deemed to constitute a debt or liability of the City, the State or of any political subdivision thereof within the meaning of any constitutional or statutory provision, or a pledge of the faith and credit of the City, the State or of any political subdivision thereof, but shall be payable, except to the extent of certain amounts held under the Indenture pledged therefor, solely from the Water Fund of the City. Neither the faith and credit nor the taxing power of the City, the State or of any political subdivision thereof is pledged to the payment of the principal of, premium, if any, or the interest on the 2021A Bonds. The issuance of the 2021A Bonds shall not directly or indirectly or contingently obligate the City, the State or any political subdivision thereof to levy or to pledge any form of taxation whatsoever therefor or to make any appropriation for their payment.

Rate Covenant

The City has covenanted in the Indenture to prescribe, revise and collect such charges for services, facilities and water furnished by the Water System which, after making allowances for contingencies and error in the estimates, will provide Gross Aggregate Revenues at least sufficient to pay: (a) as the same become due, the interest on and principal and Redemption Price of the 2011A Bonds, the 2017A Bonds, the 2020A Bonds, the 2021A Bonds and any additional Bonds or other Parity Debt; (b) all payments required for compliance with the Indenture, including payments required to be made into the Parity Reserve Fund; (c) all payments required to be made with respect to any Subordinate Debt; (d) all Operation and Maintenance Expenses; and (e) all payments required to meet any other obligations of the City which are charges, liens or encumbrances upon or payable from the Gross Aggregate Revenues or any portion thereof; and the charges shall be fixed so that in each Fiscal Year the Gross Aggregate Revenues less Operation and Maintenance Expenses will be at least equal to 1.10 times the amount of the Annual Debt Service. "Gross Aggregate Revenues" means all Gross CIC Revenues and Other Water Revenues, all amounts deposited in the Water Fund and all interest earnings or income thereon or therefrom.

The City's rate covenant is subject to compliance by the City with the provisions of Article XIID of the California State Constitution. See "CONSTITUTIONAL AND STATUTORY LIMITATIONS ON TAXES AND APPROPRIATIONS – Articles XIIC and XIID of the California Constitution."

The Water Fund

General. The Charter establishes the Water Fund and permits the establishment by ordinance of such funds as the City Council may deem necessary to facilitate the issuance and sale of Bonds or for the protection or security of the Owners of Bonds.

Under the provisions of the Charter, all moneys and property received by the City in payment for water and for any service rendered in connection therewith, or from the sale, lease and other disposition of any property acquired with funds or property of the Water System must be deposited in the Water Fund. The Charter further provides that disbursement may be made directly from the Water Fund for the following purposes:

- (1) the necessary or proper expenses of conducting the Water System, the operation and maintenance of its works, plants and distributing systems; the acquisition and improvement of facilities; and the publishing of reports;
- (2) the payment of interest and principal on bonds issued for the purposes of the Water System;
- (3) the formation of surplus or reserves for the future needs of the Water System and for unforeseen emergencies; and
- (4) the repayment of advances made from other funds of the City.

Reimbursements to General Fund. Municipal Code Section 1408 "Annual Contribution for any Municipal Purpose" for the City of Pasadena states that an amount equal to 6% of the gross income of the Water fund received during the previous fiscal year from the sale of water at rates and charges fixed by ordinance shall be transferred to the City's General Fund.

In compliance with California Proposition 218, the City eliminated the General Fund Transfer from the Water Fund in fiscal year 2014. To ensure that the Water Fund continues to pay a share of the citywide

services directly benefiting Water System customers, the City evaluated these costs in a cost of service study completed in 2014. Beginning fiscal year 2015 and based on the results of the cost of service study completed in 2014, the Water Fund pays the General Fund for the direct cost of services provided by City departments. The cost of service study resulted in an annual reimbursement of approximately \$1.5 million for support services provided primarily by Police, Fire, and Public Works.

The following table sets out the reimbursements from the Water Fund to the City's General Fund for the last four Fiscal Years and the budgeted transfer for the current Fiscal Year:

TABLE 1
REIMBURSEMENTS TO THE GENERAL FUND
(Dollar Amounts in Thousands)

Fiscal Year	Reimbursement Amount
2017	\$1,544
2018	1,574
2019	1,544
2020	1,544
2021 ⁽¹⁾	1,544

⁽¹⁾ Adopted Budget.

Section 1410 of the Charter provides that any surplus or reserves in the Water Fund may be temporarily used for other municipal purposes if there are insufficient funds in the City Treasury to pay the current expenses of the general government of the City before the collection of taxes levied in any Fiscal Year. Should moneys from the Water Fund be used pending the receipt of taxes, the amount so used shall be repaid not later than February 15 of the same Fiscal Year. To date, no temporary transfer of funds between the Water Fund and the City's General Fund has occurred.

The Indenture provides that all moneys at any time held in the Water Fund will be held in trust for the benefit of Owners of the 2011A Bonds, the 2017A Bonds, the 2020A Bonds, the 2021A Bonds and any other Bonds and Parity Debt and will be disbursed, allocated and applied solely for the uses and purposes set forth in the Indenture.

Capital Improvements Charge Account

Pursuant to Title XIII, Chapter 13.20.035 of the Pasadena Municipal Code, the City established a capital improvements charge ("CIC") to be added to water rates to recover the capital improvement costs of the Water System and to fund a capital improvements charge account (the "CIC Account") to be held in the Water Fund of the City and funded with all CIC Revenues received by the City. Funds on deposit in the CIC Account may only be used to pay capital improvement-related debt service, to fund capital improvements to the Water System and to fund reimbursements to the City's General Fund.

Parity Reserve Fund

The Indenture establishes the Parity Reserve Fund to be held by the Trustee. The Parity Reserve Fund is required to be maintained in an amount equal to the Reserve Fund Requirement. "Reserve Fund Requirement" is defined in the Indenture to mean, as of any date of determination and excluding therefrom any Parity Debt for which no reserve fund is to be maintained or for which a separate reserve fund is to be maintained, the least of (a) ten percent (10%) of the initial offering price to the public of each series of Bonds and Parity Debt to be secured by the Parity Reserve Fund as determined under the Code, or (b) the

Maximum Annual Debt Service on all Bonds and Parity Debt to be secured by the Parity Reserve Fund, or (c) one hundred twenty-five percent (125%) of the Average Annual Debt Service on all Bonds and Parity Debt to be secured by the Parity Reserve Fund, all as computed and determined by the City; provided that such requirement (or any portion thereof) may be provided by one or more policies of municipal bond insurance or surety bonds issued by a municipal bond insurer if the obligations insured by such insurer have ratings at the time of issuance of such policy in one of the two highest rating categories of Moody's Investors Service ("Moody's") and Standard & Poor's Ratings Services, a division of the McGraw-Hill Companies, Inc. ("S&P") or by a letter of credit issued by a bank or other institution if the obligations issued by such bank or other institution have ratings at the time of issuance of such letter of credit in one of the two highest rating categories of Moody's and Standard & Poor's.

Upon the issuance of the 2021A Bonds, there will be on deposit in the Parity Reserve Fund an amount equal to the Reserve Fund Requirement (\$_____). Money in the Parity Reserve Fund is pledged to, and shall be used solely for, the purpose of paying the principal of and interest on the 2011A Bonds, the 2017A Bonds, the 2020A Bonds, the 2021A Bonds and any additional Bonds and any Parity Debt to be secured by the Parity Reserve Fund in the event that money in the Debt Service Fund is insufficient therefor, and for that purpose money shall be transferred from the Parity Reserve Fund to the Debt Service Fund. Whenever money is transferred from the Parity Reserve Fund an equal amount of money is required to be transferred to the Parity Reserve Fund not later than twelve months thereafter.

On such date the 2011A Bonds and the 2017A Bonds are defeased, paid or discharged in accordance with their terms and are no longer Outstanding for purposes of the Indenture, the Parity Reserve Requirement shall be zero dollars and accordingly, all of the amounts held in the Parity Reserve Fund shall be released to the City to be used for lawful purposes.

Outstanding Bonds

Upon the issuance of the 2021A Bonds and the redemption of substantially all of the 2011A Bonds being refunded thereby, there will be Outstanding under the Indenture \$_____ aggregate principal amount of Bonds, consisting of \$1,210,000 principal amount of 2011A bonds, \$12,540,000 principal amount of 2017A Bonds, \$29,310,000 principal amount of 2020A Bonds and \$_____ principal amount of the 2021A Bonds.

Additional Bonds and Parity Debt

The Indenture provides that no additional indebtedness of the City payable out of the Water Fund on a parity with the 2011A Bonds, the 2017A Bonds, the 2020A Bonds, the 2021A Bonds, any additional Bonds and any other Parity Debt shall be created or incurred unless:

- (a) no Event of Default shall have occurred and then be occurring;
- (b) in the case of issuance of additional Bonds, the aggregate principal amount of Bonds issued under the Indenture shall not exceed any limitation imposed by law or otherwise;
- (c) in the case of issuance of additional Bonds, there shall be deposited in the Parity Reserve Fund an amount of money so as to increase the amount of deposit therein to the Reserve Fund Requirement; and
- (d) the City shall have placed on file with the Trustee a certificate of the City certifying that "A" less "B" shall be at least equal to 1.10 times the amount of Annual Debt Service during

the immediately succeeding Fiscal Year on all Bonds or Parity Debt then outstanding and the additional Bonds or Parity Debt then proposed to be issued.

“A” equals the sum of (i) Gross Aggregate Revenues for any period of twelve (12) consecutive months during the eighteen (18) months immediately preceding the date on which any additional Bonds or Parity Debt will become outstanding, plus (ii) the amount by which the City projects Gross Aggregate Revenues for any such period described in (i) would have increased had increases in rates, fees and charges during such period of twelve (12) months been in effect throughout such period of twelve (12) months; plus (iii) the amount by which the City projects Gross Aggregate Revenues will increase during a period of twelve (12) months commencing on the date of issuance of any such additional Bonds or Parity Debt as a result of increases in rates, fees and charges approved by the City Council prior to such date of issuance (other than those referenced in (ii) above) and which will be imposed during such twelve (12) month period).

“B” equal the amount projected for Operation and Maintenance Expenses in the twelve (12) month period following the date of issuance of any such additional Bonds or Parity Debt or in the twelve (12) month period following completion of improvements to the Water System to be financed with the proceeds of such additional Bonds or Parity Debt, whichever is greater,

However, the Indenture provides that there is no limitation on the City’s ability to issue Bonds at any time to refund Bonds or Parity Debt; provided, however, that the aggregate Annual Debt Service with respect to any such refunding Bonds through the date of maturities thereof shall not exceed the aggregate Annual Debt Service with respect to the Bonds or Parity Debt being refunded.

“Event of Default” means:

- (a) a default in the due and punctual payment of the principal or redemption price of any Bonds when and as the same shall become due and payable, whether at maturity as therein expressed, by proceedings for redemption, by declaration or otherwise in the amounts and at the times provided therefor;
- (b) a default in the due and punctual payment of any installment of interest on any Bond when and as such interest installment shall become due and payable;
- (c) the failure by the City to observe or perform any covenant, condition, agreement or provision in the Indenture on its part to be observed or performed, other than as referred to above in paragraph (a) and (b) for a period of thirty (30) days after written notice, specifying such failure and requesting that it be remedied, has been given to the City by the Trustee; except that, if such failure can be remedied but not within such thirty (30) day period and if the City has taken all action reasonably possible to remedy such failure within such thirty (30) day period, such failure shall not become an Event of Default for so long as the City shall diligently proceed to remedy same in accordance with and subject to any directions or limitations of time established by the Trustee;
- (d) a default by the City under any agreement governing any Parity Debt and the continuance of such default beyond the therein stated grace period, if any, with respect to such default;
- (e) the filing by the City of a petition in voluntary bankruptcy for the composition of its affairs or for its corporate reorganization under any state or federal bankruptcy or insolvency law, or an assignment by the City for the benefit of creditors, or the admission by the City in

writing to its insolvency or inability to pay debts as they mature, or the consent by the City in writing to the appointment of a trustee or receiver for itself;

- (f) the entering by a court of competent jurisdiction of an order, judgment or decree declaring the City insolvent, or adjudging it bankrupt, or appointing a trustee or receiver of the City, or approving a petition filed against the City seeking reorganization of the City under any applicable law or statute of the United States or any state thereof, and such order, judgment or decree shall not be vacated or set aside or stayed within sixty (60) days from the date of the entry thereof; or
- (g) the assumption, under the provisions of any other law for the relief or aid of debtors by any court of competent jurisdiction of custody or control of the City or of the Gross Aggregate Revenues and such custody or control shall not be terminated within sixty (60) days from the date of assumption of such custody or control.

Nothing in the Indenture limits the ability of the City to issue or incur obligations which are junior or subordinate to the payment of the principal, premium, interest and reserve fund requirements for the 2011A Bonds, the 2017A Bonds, the 2020A Bonds, the 2021A Bonds, any additional Bonds and all other Parity Debt and which subordinated obligations are payable as to principal, premium, interest and reserve fund requirements, if any, only out of Pledged Revenues after the prior payment of all amounts then due and required to be paid or set aside under the Indenture from Pledged Revenues for principal, premium, interest and reserve fund requirements for the 2011A Bonds, the 2017A Bonds, the 2020A Bonds, the 2021A Bonds, any additional Bonds and all other Parity Debt, as the same become due and payable and at the times and in the manner as required in the Indenture or any documents providing for the issuance or incurrence of Parity Debt.

Other Covenants of the City

In addition to the covenant described under the subsection “Rate Covenant” above, under the Indenture, the City makes certain other covenants, including covenants relating to the operation of the Water System, insurance covenants and covenants related to the tax-exempt status of the 2021A Bonds. See APPENDIX D – “SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE.”

Investment of Funds

All moneys held in the funds and accounts established pursuant to the Indenture will be invested solely in Investment Securities. See APPENDIX D – “SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE.”

Limitations on Remedies

In addition to the limitations on remedies contained in the Indenture, the rights of the Owners of the 2021A Bonds are subject to the limitations on legal remedies against cities and other public agencies in the State. Additionally, enforceability of the rights and remedies of the Owners of the 2021A Bonds, and the obligations incurred by the City, may become subject to the following: the federal Bankruptcy Code and applicable bankruptcy, insolvency, reorganization, moratorium, or similar laws relating to or affecting the enforcement of creditor’s rights generally, now or hereafter in effect; equity principles which may limit the specific enforcement under State law of certain remedies; the exercise by the United States of America of the powers delegated to it by the Constitution; and the reasonable and necessary exercise, in certain exceptional situations, of the police powers inherent in the sovereignty of the State and its governmental bodies in the interest of serving a significant and legitimate public purpose. The opinion to be delivered by

Nixon Peabody LLP, Bond Counsel, concurrently with the issuance of the 2021A Bonds, that the 2021A Bonds constitute valid and binding limited obligations of the City payable from and secured by a pledge of Pledged Revenues as and to the extent provided in the Indenture, will be subject to the limitations described above and the various other legal opinions to be delivered concurrently with the issuance of the 2021A Bonds will be similarly qualified. In the event the City fails to comply with its covenants under the Indenture or to pay principal of or interest on the 2021A Bonds, there can be no assurance that remedies will be available to fully protect the interests of the holders of the 2021A Bonds. Bankruptcy proceedings, or the exercise of powers by the federal or State government, if initiated, could subject the Owners of the 2021A Bonds to judicial discretion and interpretation of their rights in bankruptcy or otherwise, and consequently may entail risks of delay, limitation, or modification of their rights. See APPENDIX F – “PROPOSED FORM OF OPINION OF BOND COUNSEL.”

PASADENA WATER AND POWER

Organization and Management

The City is a charter city of the State. Under the provisions of the California Constitution and Article XIV of the Charter, the City owns and operates both water and electric public utilities for the benefit of its residential and business community. PWP is under the management and control of the City Manager, subject to the powers and duties vested in the City Council, and is supervised by the General Manager who is responsible for design, construction, maintenance and operation of the water and electric utilities. PWP is responsible for the Water System and the City’s electric system (the “Electric System”). The 2021A Bonds are not secured by or payable from revenues of the Electric System.

In addition to the Water System and the Electric System divisions, PWP is organized into five separate business units. This structure allows for a higher level of accountability as well as the creation of individual cost centers and profit centers. This information is used for tracking costs and supplying detailed information in rate design decisions. These business units are briefly described as follows:

General Manager’s Office-Customer Relations & Legislative Business Unit – This unit is part of the General Manager’s Office and is responsible for customer relations, regulatory affairs, and strategic planning and long-term resources. This unit is also responsible for environmental and legislative matters impacting the utility.

Finance, Administration and Customer Service Business Unit – This unit develops and executes PWP’s overall financial strategy and ensures its financial integrity. This unit is responsible for the financial resources of PWP and for providing relevant information to the operating units for decision making purposes. This unit plans and oversees the financial aspects, administrative support functions and all cross-functional operations and systems for PWP. The responsibilities of this unit include the operating budget, capital budget and financing, financial analysis and planning, financial management, administration, billing, call center, meter reading and customer care services, risk management, information systems and technology and materials management.

Water Delivery Business Unit – This unit is responsible for the procurement, production and delivery of water as well as the planning, design and construction of the local water distribution system. This unit also operates and maintains the local water supply resources and distribution system.

Power Supply Business Unit – This unit is responsible for effectively managing PWP’s energy portfolio, including strategic long-term resource power generation, long-term power contracts, short-term electric energy and ancillary services transactions and natural gas procurement to provide competitively-

priced energy to PWP's electric customers. This unit is also responsible for energy scheduling to ensure reliable delivery of electricity and the operation of generating units located within the City.

Power Delivery Business Unit – This unit is responsible for the design, construction, operation and maintenance of the local power distribution system to provide the safe and reliable delivery of electricity, load dispatch operations and is responsible for implementing the Power Distribution System Master Plan.

The following are biographical summaries of PWP's senior management:

GURCHARAN BAWA, General Manager. Prior to his appointment to the current position, Mr. Bawa was the Assistant General Manager for Power Supply. Mr. Bawa has been with PWP for 29 years working in the Power Production field managing regulatory and environmental issues. He was responsible for evaluating renewable energy resources and incorporating these assets into PWP's overall energy resource portfolio. He was also responsible for managing long term energy resources and contracts. He received his Mechanical Engineering degree from S.V.R. College of Engineering and Technology, Surat, India. He is a licensed Professional Engineer in Mechanical and Civil Engineering in the State of California.

ERIC KLINKNER, Assistant General Manager & Chief Deputy. Mr. Klinkner has been with PWP since 1995. He served as PWP's Manager of Power Resources and Business Unit Director for Power Supply and was appointed to his present position in August 2004. In his current position, he is responsible for regulatory affairs, strategic planning and long-term resource and environmental issues. Mr. Klinkner is also responsible for legislative issues impacting PWP and oversees the customer relations, marketing and customer communications functions. Mr. Klinkner previously worked at the Los Angeles Department of Water and Power ("LADWP") where he started in power resource planning. He has a master's degree in mechanical engineering from California State University-Northridge and is a state registered professional engineer.

SHARI M. THOMAS, Assistant General Manager for Finance, Administration and Customer Service. Ms. Thomas joined PWP in January 2006. She began her career with the City of Pasadena in 2002 as the Deputy Director of Finance. She previously worked for the City of Riverside for nearly 15 years in various financial positions. Ms. Thomas is currently responsible for financial planning and budgeting, cost of service analysis and rate setting, information technology for PWP and customer service. She is also responsible for risk management and settlements functions related to energy transactions and the materials handling and inventory management activities. She completed her Bachelor of Science degree with majors in Accounting and Finance in Minnesota and has also completed the University of Wisconsin's Advanced Governmental Finance Institute.

VACANT, Assistant General Manager for Water Delivery. Recruitment activities are underway to select a successor to the previous Assistant General Manager who recently retired.

KELLY NGUYEN, Assistant General Manager for Power Supply. Ms. Nguyen joined the PWP in April 2019. She has more than 20 years of industry experience, previously serving as the General Manager of Vernon Public Utilities. Before this, she worked at Southern California Public Power Authority (SCPPA), Anaheim Public Utilities, and the California Power Exchange. She has served in various capacities with a number of committees and associations including Vice President of SCPPA, member of Western Systems Power Pool Executive Committee, California Utilities Emergency Association Alternate Board, California Municipal Utilities Association, and American Public Power Association. She has a Bachelor of Science in Business Administration from California State University, Los Angeles and has specialized training in energy system procedures, protocols, and utility compliance policies through the Western Electric Coordinating Council, North America Energy Reliability Corporation, and training in market operations and Cap & Trade through California Independent System Operator.

MARVIN MOON, Assistant General Manager for Power Delivery. Mr. Moon joined the PWP team as the Assistant General Manager of Power Delivery in May 2018 after 35 years of service with the Los Angeles Department of Water and Power (“LADWP”). He has served in various engineering capacities including Manager of Distribution Engineering and Customer New Business. For the past ten years, he was the Director of the Power Engineering Division at LADWP. Mr. Moon has been the recipient of several City of Los Angeles Productivity Awards. He has received the City of Los Angeles Mayor’s Innovation Award twice, and has been recognized as an innovator by the Electric Power Research Institute. His division within PWP provides electric service through its Power Engineering, Transmission and Distribution, Substation and Power Dispatch sections. Mr. Moon is also a supporting management sponsor for PWP’s electric transportation program.

Municipal Services Committee

In 1997, the City Council approved an ordinance creating a standing committee of the City Council known as the Deregulation Committee. In 2001, the responsibilities of the Deregulation Committee were expanded to include other City enterprise services and the Deregulation Committee was re-named the Municipal Services Committee. The purpose of the Municipal Services Committee is to aid the City Council in addressing the multi-dimensional issues associated with utility operations, both electric and water. The Municipal Services Committee provides oversight and input to aid the City administration in focusing its efforts to present clear, cogent recommendations regarding all aspects of enterprise operations, drawing on the perspective of City management, labor, the community and other interested parties. In addition, it provides a forum to work directly with City staff to achieve City Council objectives, and serves as the workshop forum for enterprise issues. The Municipal Services Committee is currently composed of three members of the City Council and the Vice Mayor.

THE WATER SYSTEM

General

The Water System has been distributing water to the City’s customers since 1912. The area served by the Water System encompasses approximately 26.2 square miles, 3.2 square miles of which lie outside of the incorporated City boundary. Of the total 38,262 water meters, 31,763 meters, or 83%, are within the City limits and an additional 6,499 meters, or 17%, are outside the City limits. In Fiscal Year 2021, the Water System provided water service to a total population of approximately 171,000 people. During this period, water sales within the City limits were about 24,199 acre-feet, or 85% of the total water sales, while approximately 4,216 acre-feet, or 15% of the total water sold was to customers located outside the City limits. (An acre-foot is the amount of water that will cover one acre to a depth of one foot and equals 325,851 gallons.)

The major facilities of the Water System consist of: (i) 16 groundwater wells (of which seven are operable) (ii) five imported water connections on the Metropolitan Water District Upper Feeder, (iii) 95 million gallons of treated water storage capacity in 14 storage reservoirs (including the 50 million gallon Morris Jones Reservoir), (iv) 19 booster pumping stations supplying 23 different pressure zones, (v) 1 chlorination station, (vi) 30 pressure reducing stations, and (vii) approximately 520 miles of transmission and distribution pipelines.

The peak water sales month for Fiscal Year 2021 occurred in September 2020, when 3,174 acre-feet or 1,034 million gallons were sold, while March 2021 was the low sales month for the Fiscal Year, when only 1,738 acre-feet or 566 million gallons were sold. The following table sets forth statistical information relating to the Water System during the Fiscal Years shown.

TABLE 2
WATER STATISTICS

	Fiscal Year Ended June 30,				
	2017	2018	2019	2020	2021
Population Served Inside City Limits	143,333	144,388	144,686	144,842	145,306
Population Served Outside City Limits	25,294	25,480	25,533	25,560	25,642
Total Population Served	168,627	169,868	170,219	170,402	170,948
Rainfall in inches (October to September)	21.3	7.9	26.5	20.8	5.8
Peak Day Distribution (Million Gallons)	33.0	34.5	33.6	29.7	36.8
Average Daily Distribution (Million Gallons)	24.6	24.8	23.5	23.1	26.2

Source: Pasadena Water and Power Department.

Water Production

The area served by the Water System receives its water supply from three sources: (i) Raymond Basin surface water, (ii) Raymond Basin groundwater and (iii) imported water. PWP imports water from the Metropolitan Water District of Southern California (“MWD”) and neighboring water agencies. From 2000 to 2021, PWP’s average water supply included approximately 40% local groundwater and 60% imported water.

During Fiscal Year 2021, PWP purchased approximately 70% of its water from MWD. It pumped approximately 30% from its wells, and received less than 1% from interconnections with neighboring water agencies. The Water System has adequate production and firm purchase capacity to meet the City customers’ needs. Table 3 illustrates the total water pumped from Water System wells and the amount of water purchased during the five Fiscal Years shown.

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TABLE 3
ANNUAL WATER PRODUCTION
(acre-feet)

	Fiscal Year Ended June 30,				
	2017	2018	2019	2020	2021
Purchased from MWD and Neighboring Agencies	17,614	19,824	18,130	18,738	21,071
Percentage of Total Supply	63.9%	67.3%	64.5%	66.5%	70.4%
From Water System Wells	9,962	9,641	9,964	9,439	8,844
Percentage of Total Supply	36.1%	32.7%	35.5%	33.5%	29.6%
Total Production	27,576	29,465	28,094	28,177	29,915

Source: Pasadena Water and Power Department.

Current Water Supply

As noted above, Pasadena’s current water supply consists of three main sources: local groundwater from the Raymond Basin, local surface water from the Arroyo Seco and Eaton Wash infiltrated into Raymond Basin, and imported water purchased from MWD.

Raymond Basin

Located in the eastern portion of Los Angeles County, the Raymond Basin (“Raymond Basin”) is an alluvial valley approximately 40 square miles in area, supported by deposits of gravel, sands, silt and clay, with a capacity of more than 800,000 acre-feet of water. The Raymond Basin is bound by the San Gabriel Mountains to the north, the San Rafael Hills to the west, and the Raymond Fault to the south/southeast. The San Gabriel Mountains rise to over 10,000 feet in elevation north of the Raymond Basin. The Raymond Basin is divided into three subareas: the Monk Hill subarea in the northwest, the Pasadena subarea in the center, and the Santa Anita subarea on the east. PWP pumping and storage rights are in the Monk Hill and Pasadena subareas. The Raymond Basin Management Board acts as the Watermaster.

PWP currently utilizes two water supplies within the Raymond Basin. The first is Raymond Basin groundwater, which is pumped directly into the distribution system, and the second is local surface water, which is diverted and spread for groundwater pumping credits. The Raymond Basin also provides the City with vital emergency water supplies. Should the imported water supply from MWD be interrupted due to an emergency, such as drought, regulatory constraints, contamination or earthquake, groundwater would be available to meet the City’s water demands.

Raymond Basin Groundwater. Over the last 20 years, on average Raymond Basin groundwater has accounted for approximately 40% of PWP’s total water production. There are currently 16 groundwater production wells (of which seven are operable) that can pump water into the PWP distribution system up to the decreed right of 10,304 acre-feet/year.

Beginning on July 1, 2009, member agencies of the Raymond Basin (including PWP) that pump groundwater from the Pasadena Sub-basin of the Western Unit of the Raymond Basin voluntarily reduced their decreed right by 6% per year to a total reduction of 30% by June 30, 2014. The voluntary reduction was to address lowering of the groundwater table. Since July 1, 2014 the 30% reduction in decreed rights has reduced PWP’s groundwater right from 12,807 acre-feet/year (8,343 acre-feet/year in Pasadena sub-

basin and 4,464 in Monk Hill sub-basin) to the current level of 10,304 acre-feet/year (5,840 acre-feet/year in Pasadena sub-basin and 4,464 in Monk Hill sub-basin). In addition, the City gets spreading credits at the Arroyo Seco and Eaton Canyon spreading grounds. PWP has increased its annual groundwater extraction rights by an average of 1,700 acre-feet/year since 2000 providing the City with approximately 12,000 acre-feet of annual pumping rights.

The diversion rights and the recapture rights described above are set forth in the Raymond Basin Judgment (“Judgment”), which adjudicated the groundwater rights in the Raymond Basin as described below.

On September 23, 1937, in an effort to alleviate overdraft conditions in the Raymond Basin, the City initiated proceedings in Superior Court against Alhambra and 29 other major Raymond Basin water users. The result of this suit, the Raymond Basin Judgment, was signed on December 23, 1944. With this Judgment, the Raymond Basin became the first adjudicated groundwater basin in California. In the Judgment, each pumper is assigned a “present unadjusted right” corresponding to the average amount of water that they pumped in the five years prior to the City’s suit. The City’s “present unadjusted right” is 12,946 acre-feet/year. Each pumper’s “present unadjusted right” is scaled down to create the “decreed right” such that the sum of all pumpers’ decreed rights is equal to the estimated safe yield of the basin. In the original Judgment, the safe yield was determined to be 21,900 acre-feet for the entire Raymond Basin. However, according to the first modification of the Judgment on April 29, 1955, the safe yield was increased to 5,290 acre-feet/year in the Eastern Unit and 25,480 acre-feet/year in the Western Unit.

Based on the new safe yield, the City’s decreed right was calculated to be 12,807 acre-feet/year from the Western Unit. The amount represents the actual decreed right and does not account for the voluntary reduction of 30%. The City has no water rights in the Eastern Unit. According to the Judgment, each pumper may carry over up to 10% of its unused decreed right from one year to the next. Similarly, each pumper may over-extract up to 10% of its decreed right in any given year, provided that this over extraction is made up the following year. The Judgment also limits the capacity of water that may be diverted by Raymond Basin water users from any source contributing groundwater to the Raymond Basin. The City may divert a maximum instantaneous amount of 25.00 cubic feet per second (“cfs”) from the Arroyo Seco (including Millard Canyon) as well as a maximum of 8.90 cfs from Eaton Canyon. On January 17, 1974, the second modification to the Judgment was signed. This modification allowed for the spreading of canyon diversions for later recapture, subject to various conditions, including but not limited to the use of a metering device to measure the amount of water diverted and the continuing jurisdiction of the court. Additional costs incurred by the Watermaster in connection with monitoring spreading and recapture are divided proportionally among those diverting water for spreading and recapture. On March 26, 1984, the Judgment was modified and restated; however, the City’s entitlements were not adjusted.

The sources of groundwater in Raymond Basin include: (1) percolation of precipitation, (2) percolation of applied water from irrigation, other return flows, and cesspools, (3) subsurface inflow (underflow from adjacent groundwater basins and bedrock areas), (4) artificial recharge via surface water spreading and (5) percolation of water from septic tanks. Currently, the Raymond Basin contains about 800,000 acre-feet of groundwater in storage. The general direction of groundwater movement appears to have remained relatively constant since the early 1900s. In general, groundwater levels are relatively higher in the northern half of the Raymond Basin and lower in the southern half than they were historically.

The following factors contribute to PWP’s annual groundwater supply: (1) PWP’s decreed right of 10,304 acre-feet/year, (2) any carryovers from the previous year, (3) water rights leased from other Raymond Basin agencies, (4) spreading credits from the current year or prior year, (5) surplus water from MWD injected/added to long-term storage, and (6) water pumped from long-term storage. The following

factors reduce PWP's annual groundwater supply: (a) any over extractions from the previous year that must be made up, (b) water that will be carried over to the next year, (c) water rights that are leased to other Raymond Basin pumpers and (d) water that is deposited into PWP's storage account. PWP's total annual groundwater production is equal to the total contributions less the total reductions.

The Raymond Basin is an adjudicated basin, and for this reason, PWP's decreed water right is not affected by annual rainfall conditions. The sum of all water that is pumped from the Raymond Basin (excluding water pumped from individual storage accounts or as a result of spreading or injection credits), is regulated so as not to exceed the hydrologically determined safe yield of the basin of 30,622 acre-feet/year, which is stipulated in the Judgment. This results in a high degree of reliability for Raymond Basin groundwater. Groundwater supply reliability is further increased by the presence of PWP's long-term storage accounts within the Raymond Basin. On October 7, 1992 and March 10, 1993, long-term storage policies were adopted within the Raymond Basin, and the basin storage capacity was determined. A storage volume of 96,500 acre-feet was allocated to the Raymond Basin pumpers. PWP's share of the storage volume is 38,500 acre-feet. On an as needed basis, PWP leases storage volume from other Raymond Basin pumpers to meet its groundwater storage needs in the Raymond Basin. As of June 30, 2021, PWP has 19,471 acre-feet of water in storage in the Raymond Basin. Also, under a cooperative storage agreement with MWD, PWP has an additional 13,974 acre-feet of water in storage for MWD. This water is available to PWP during drought and emergencies at MWD's direction.

In September 2011, the City Council approved authority for the General Manager to contract with neighboring water agencies to pump a portion of PWP's excess stored water during periods when PWP is unable to pump all of the water stored under PWP's decreed rights within the Raymond Basin. This action will not impact PWP's long-term pumping or storage rights. The right to sell excess water is both economically and environmentally advantageous, as it would provide value for the water in storage, rather than potentially losing it. Revenues from such sales would help offset a portion of PWP's purchased water costs while enabling another Raymond Basin member to use the water beneficially.

Raymond Basin Surface Water. The principal streams in the service area include the Arroyo Seco, Eaton Wash and the Santa Anita Wash. According to the Judgment, PWP is entitled to divert an instantaneous capacity of up to 25.00 cfs of surface water in the Arroyo Seco (including Millard Canyon) and up to 8.90 cfs of surface water in Eaton Canyon. The Arroyo Seco source accounts for less than 5% of the City's total water supply, depending on rainfall in a particular year. Surface water diversions from the Arroyo Seco have historically been used in two ways: (1) water has been treated for direct supply into PWP's distribution system, and (2) water has been diverted by PWP to the spreading grounds owned by PWP and operated until 1998 by the Los Angeles County Department of Public Works ("LACDPW") in exchange for groundwater pumping credits. Since July 1993, all water that has been diverted by PWP in the Arroyo Seco has been sent to the spreading grounds. The Arroyo Seco spreading basins consist of 13 basins that have an approximate gross wetted area of 13 acres. The spreading basins were constructed in approximately 1948 on City-owned land that was leased to LACDPW. LACDPW operated and maintained the spreading basins on behalf of all Raymond Basin members. Beginning in 1998, PWP assumed the responsibility of operating and maintaining these spreading basins. Due to past precedence established by LACDPW, which spread surface water for the benefit of the Raymond Basin, the Raymond Basin Management Board mandated a spreading methodology in which the amount of water that is determined to be "spread" by PWP in the Arroyo Seco is approximately 60% of the water diverted.

In Eaton Canyon, PWP measures the water flowing down the canyon, which is spread naturally in the streambed and in the LACDPW Eaton Spreading Grounds. This water, up to 8.90 cfs, is reported to the Raymond Basin Management Board as water that is diverted by PWP. PWP gets 80% credit for the amount of water spread as per the Judgment. Under current operations, PWP spreads all of its surface water diversions to receive spreading credits. No surface water directly supplies the PWP distribution system.

Surface water supply is highly variable, as it is entirely dependent on the amount of rainfall during the year. Plans to improve the quantities of surface water used directly or infiltrated into the groundwater are included in the current Water System Resource Plan.

Raymond Basin Management Board. The City obtains its groundwater from the Raymond Basin. Under the Judgment, a court of law determined the parties who have the right to extract water and the timing and amount of such pumping based on a safe yield concept. There are fifteen entities that are allowed to pump from the Raymond Basin. PWP has the largest entitlement, with 42% of the total adjudicated rights. As a party holding a decreed right of 1,000 acre-feet/year or more, PWP appoints one member to the eleven-member Raymond Basin Management Board. All costs of enforcing the Judgment are assumed by all water users in the Raymond Basin in proportion to their respective decreed right.

PWP has taken an active role in securing greater local control of the management of the Raymond Basin. Prior to 1984, the administration of the Raymond Basin was under the authority of the State Department of Water Resources as Watermaster. During that time, the Raymond Basin Management Board (“Management Board”) acted in an advisory capacity to the Watermaster. In 1984, the Judgment was amended to appoint the Management Board as Watermaster. The Management Board is comprised of representatives appointed by the producers within the Raymond Basin. The Management Board is responsible for overseeing the implementation of the adjudicated provisions. One of the most significant powers conferred on the Management Board in the 1984 amendments was the authority to approve plans for storage of native and imported water in the Raymond Basin.

The Judgment has been amended several times over the years. Each amendment has given the producers more flexibility in the management of the Raymond Basin. The Raymond Basin is now well positioned to participate in expanded groundwater storage programs, which should enhance the value and security of the groundwater resource.

The Metropolitan Water District of Southern California

The following information has been obtained from MWD and sources that the City and PWP believe to be reliable, but the City and PWP take no responsibility for the accuracy or completeness hereof.

MWD is a public agency organized in 1928 by vote of the electorates of 13 Southern California cities, including the City, following adoption of the original Metropolitan Water District Act (the “MWD Act”) by the California Legislature. MWD is not subject to regulation by the California Public Utilities Commission, although its enabling statute is subject to amendment by the California Legislature. MWD currently has full authority to set rates and policies as necessary to provide a dependable water supply to Southern California. Historically, MWD provided between 40% and 60% of the water used annually within its service area, which consists of approximately 5,200 square miles in portions of Los Angeles, Orange, Riverside, San Bernardino, San Diego and Ventura Counties. MWD serves a population of approximately 19 million people.

MWD is governed by a 38-member Board of Directors (the “Board”) consisting of at least one representative from each of the 26 member public agencies, including the City, that comprise MWD. Each member public agency is entitled to have at least one representative on the Board, plus an additional representative for each full 5% of its assessed valuation of property in MWD’s service area. Accordingly, from time to time, the Board may have more than or less than 38 members. Representation and voting rights are based upon each agency’s assessed valuation.

MWD is the nation’s largest water wholesaler, annually providing an average over the five fiscal years between 2016 and 2020 of 1.52 million acre-feet of water to 19 million consumers. MWD owns and

operates the Colorado River Aqueduct (CRA), is one of twenty-seven contractors of the California Department of Water Resources' (DWR's) State Water Project (SWP) and manages/owns groundwater and surface water storage and treatment facilities. Although the Colorado River is over allocated, water supplies via the CRA have historically been stable while the SWP has been considerably variable. MWD water storage as of January 1, 2021 is estimated to be 3.91 million acre-feet.

The MWD Act provides each MWD member agency a preferential entitlement to purchase a portion of the water provided by MWD. This preferential right is based on the ratio of all payments on tax assessments and otherwise, except purchases of water, made to MWD by each member agency compared to total payments made by all member agencies on tax assessments and otherwise, except purchases of water. Historically, these rights have not been used by MWD in allocating MWD's water. In 2004, the California Court of Appeal upheld MWD's methodology for calculation of the respective members' preferential rights under the MWD Act. In litigation challenging MWD's water rates, San Diego County Water Authority ("SDCWA") also challenged MWD's exclusion of payments for exchange water deliveries to SDCWA from the calculation of SDCWA's preferential right. In June 2017, the California Court of Appeal held that SDCWA's payments for exchange water under its exchange agreement must be included in the preferential rights calculation. The Court of Appeal decision is final.

MWD Water Supply. MWD's two primary sources of water are the State Water Project and the Colorado River. In fiscal year 2021, the latest period for which such information is available, MWD supplied the City with approximately 21,230 acre-feet of water. MWD member agencies, which use MWD water to supplement their own local water supplies, can be expected to increase their purchases of MWD water if their local water supplies are reduced.

Reliability of MWD Water Supply to Meet with City Requirements. MWD faces a number of challenges in providing a reliable and high quality water supply for southern California. These include, among others: (1) increased competition for low-cost water supplies; (2) variable weather conditions; (3) allocations to meet environmental and water quality requirements; and (4) climate change.

MWD Scheduling and Operations. MWD member agencies request water from MWD at various delivery points within MWD's system and pay for such water at uniform rates established by the Board for each class of service. No member is required to purchase water from MWD, but all member agencies are required to pay readiness-to-serve charges (as described below) whether or not they purchase water from MWD. The current rate structure provides for a member agency's agreement to purchase water from MWD by means of a voluntary purchase order. In consideration of executing its purchase order, the member agency is entitled to purchase a greater amount of water at the lower Tier 1 Water Supply Rate ("Tier 1") as described under "*MWD Rates*" below.

Water is delivered to member agencies on demand and is metered at the point of delivery. Member agencies are billed monthly and a late charge of 1% of the delinquent payment is assessed for delinquent payments not exceeding five business days. A late charge of 2% 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. MWD has the authority to suspend service to any 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.

MWD Rates. MWD water rates are established by majority vote of the Board. Rates are not subject to regulation by any local, State or federal agency. Under the MWD Act, water rates must be uniform for like classes of service and MWD must, so far as practicable, fix such rates for water as will result in revenue which, together with revenue from any water standby or availability of service charge or assessment, will pay the operating expenses of MWD, provide for repairs and maintenance, provide for payment of the

purchase price or other charges for property or services or other rights acquired by MWD and provide for the payment of the interest and principal of the bonded debt of MWD.

The current MWD's purchase order contract with member agencies became effective on January 1, 2015 and expires on December 31, 2024. On December 23, 2014, PWP entered into a voluntary purchase order contract with MWD, whereby PWP is able to purchase up to 90% of its initial base demand at the Tier 1 rate. As the initial base demand for PWP is 25,517 acre-feet, PWP may currently purchase up to 22,965 acre-feet/year of water at the Tier 1 rate. Any water purchased from MWD in excess of 90% of the initial base demand must be purchased at the higher Tier 2 rate. The total demand within PWP service area is approximately 30,000 acre-feet/year, but is expected to decrease in response to California's current and future indoor and outdoor conservation measures that are in process of implementation.

The following table summarizes water rates under MWD's current rate structure.

TABLE 4
MWD WATER RATES
(Dollars per Acre-Foot)

	Calendar Year 2021 Rates⁽¹⁾	
	<u>Tier 1</u>	<u>Tier 2</u>
Supply Rate	\$243	\$285
System Access Rate	\$373	\$373
Water Stewardship Rate	0	0
System Power Rate	161	161
Treatment Surcharge	<u>327</u>	<u>327</u>
Treated Full Service	\$1,104	\$1,146

⁽¹⁾ Effective January 1, 2022, Tier 1 and Tier 2 full service treated volumetric cost for water is \$1,143/acre-feet and \$1,185/acre-feet, respectively.
Source: MWD.

The Tier 1 and Tier 2 Water Supply Rates are designed to recover MWD's water supply costs. The Tier 2 Supply Rate is designed to reflect MWD's costs of acquiring water transfers north of the Sacramento San Joaquin Delta (the "Delta"). MWD member agencies are charged the Tier 1 or Tier 2 Water Supply Rate for water purchases, as described above.

The System Access Rate is intended to recover a portion of the costs associated with the conveyance and distribution system, including capital, operating and maintenance costs.

The Water Stewardship Rate is charged on a dollar per acre-foot basis to collect revenues to support MWD's financial commitment to conservation, water recycling, groundwater recovery and other demand management programs approved by the Board. MWD is currently funding the demand management programs with the Water Stewardship Fund which is expected to be sufficient to fund the demand management cost for biennial budgets covering fiscal years ending June 30, 2021 and 2022.

The System Power Rate is charged on a dollar per acre-foot basis to recover the cost of power necessary to pump water from the SWP and Colorado River through the conveyance and distribution system for MWD's member agencies.

MWD charges a treatment surcharge on a dollar per acre-foot basis for treated deliveries. The treatment surcharge is set to recover the cost of providing water treatment capacity and operations.

Additional charges for the availability of MWD's water are: the Readiness-to-Serve Charge, the Water Standby Charge and the Capacity Charge.

The Readiness-to-Serve Charge ("RTS") is a variable annual charge that is divided proportionally among all agencies that receive water from MWD. This money is used by MWD to recover costs associated with system conveyance capacity for standby and peak use and emergency system storage. Currently, PWP's share of MWD's annual RTS is about 1.25%.

The Board is authorized to impose water standby or availability of service charges. In May 1993, the Board imposed a Water Standby Charge (the "Water Standby Charge") for fiscal year 1993-94 ranging from \$6.94 to \$15 for each acre or parcel less than an acre within MWD's service area, subject to specified exempt categories. Water Standby Charges have been imposed at the same rate in each year since fiscal year 1993-94. Water Standby Charges are assessments under the terms of Proposition 218, a State constitutional ballot initiative approved by the voters on November 5, 1996, but MWD's current Water Standby Charges are exempt from Proposition 218's procedural requirements.

Member agencies have the option to utilize MWD's existing Water Standby Charge authority as a means to collect all or a portion of their RTS. Water Standby Charge collections are credited against the member agencies' RTS.

The Capacity Charge (the "Capacity Charge") is a fixed annual charge, which is based on the maximum summer day demand placed on the system between May 1 and September 30.

Future Sources of Water Supply and/or Reliability

PWP is actively pursuing local water resource projects to improve reliability and maximize groundwater access. Projects currently in progress are outlined below and are included in the Fiscal Years 2022 through 2026 \$134.5 million five-year Capital Improvement Plan. See "THE WATER SYSTEM – Water System Master Plan."

Arroyo Seco Canyon Project. This project includes habitat restoration, recreational enhancement, and water supply and water quality improvements in the Arroyo Seco Canyon. The canyon is an important watershed that provides the City with surface water with rights up to 25 cfs. The Arroyo Seco Canyon Project consists of three areas in the canyon for improvements including new infrastructure to improve diversion of stream flows during large winter storms. The project, when completed, will increase groundwater recharge by approximately 1,000 acre-feet/year.

The total estimated cost for this project is \$12.5 million and is included in the Fiscal Years 2022 through 2026 Capital Improvement Plan.

An Environmental Impact Report ("EIR") for the project was approved by Pasadena City Council on July 19, 2021, and assesses the significant direct and indirect environmental effects of the proposed project and includes feasible mitigation measures. Project construction is expected to begin in Fiscal Year 2022 with completion in Fiscal Year 2024.

Pasadena Non-Potable Project. PWP has participated in an agreement with the City of Glendale since 1993 to take delivery of tertiary-treated recycled water from the Los Angeles-Glendale Water Reclamation Plant. In February 2016, the Pasadena City Council certified the EIR for the project. The EIR was prepared in accordance with California Environmental Quality Act ("CEQA") and National Environmental Policy Act ("NEPA") statutes and guidelines. The project scope was redefined in 2019 and

a new Feasibility Study has been initiated. Based upon the outcome of the new Feasibility Study and cost effectiveness assessment, PWP will re-evaluate its participation in the project.

Non-potable Water. PWP continues to explore options to increase access to and expand the use of non-potable water within the City. One of the non-potable projects being explored is the potential production of high nitrate groundwater to irrigate certain athletic playing fields, parks, golf courses, and landscapes that are deemed eligible for such use. The use of high nitrate groundwater for irrigation provides a low cost water source and relieves the potable system from producing and distributing drinking water quality for use on landscapes. Development of the non-potable water program includes the expansion of the number of wells and re-purposing several existing wells to support the program.

Water Conservation Programs

In Fiscal Year 2021, approximately 70% of the water that PWP delivers to customers was purchased from MWD. Future reliability of imported water will continue to face uncertainties from climate change, environmental and water quality regulations and droughts.

To address potential long-term water supply challenges, PWP developed a Comprehensive Water Conservation Plan. The plan provides a long term multi-dimensional approach for achieving water conservation targets through the year 2035. The plan was developed in compliance with the Urban Water Management Planning Act, which required water agencies to report an interim 2015 urban water use target and a 2020 urban water use target per Senate Bill (SB) X7-7. The City's 2015 Urban Water Management Plan (UWMP) reported an interim 2015 target of 190 gallons per capita per day ("gpcd") and a 2020 target of 169 gpcd. The actual usage for calendar year 2015 was 148 gpcd and the actual usage for calendar year 2020 was 153 gpcd, both of which years exceeded the established targets. PWP's 2020 UWMP was adopted by the City Council in Fiscal Year 2021.

More recent legislation, including Assembly Bill (AB) 1668 and Senate Bill (SB) 606, were enacted into law in 2019 and include new criteria to further reduce demands and water use. Indoor water standards are being established as well as criteria to manage outdoor water use, potentially to the individual parcel. These efforts are proceeding through the State regulatory agencies for final adoption and implementation timelines. Upon adoption and delivery of the implementation timelines, PWP will evaluate expanding or developing new conservation programs to ensure compliance with the state regulations.

In August 2021, the Pasadena City Council approved the implementation of a Level 2 Water Supply Shortage Plan ("Level 2") for customers of the PWP Water System. Level 2 establishes a voluntary 15 percent water usage reduction target in alignment with a similar program adopted by the State. The plan limits outdoor watering to two days per week during the summer months from April 1 – October 31, and one day per week from November 1 – March 31.

Water System Resource Plan

Initiated during Fiscal Year 2020, PWP is in the process of finalizing a comprehensive Water System Resource Plan ("WSRP") which defines conservation as an element of water supply. Within the WSRP, new tools and programs are proposed to address managing water demand as part of several long-term initiatives.

The WSRP is a 25-year strategy identifying the necessary investments for sustainable water resources and the infrastructure needed to ensure that high quality water service continues to be provided to PWP customers. The WSRP combines a long term resource plan and a high-level assessment of needed capital investments. This comprehensive document provides a programmatic view of the entire water

operations from the source through delivery to PWP's customers. The WSRP is proposed to be revisited every 5 years with an internal review every 2-3 years. This type of periodic review is intended to ensure that the WSRP addresses evolving issues and considerations whether local, regional, state or federal. The proposed WSRP will succeed the Water System Master Plan, which was originally approved by the City Council in 2002 and the Water Integrated Resource Plan, adopted in 2015.

The WSRP evaluates the current and projected needs of Water System customers for potable and non-potable water, providing risk-based screening of alternatives to meet those future demands with necessary infrastructure investment within reasonable operational and financial constraints. Major considerations include water quality, greater reliance on local water, groundwater basin stability, reliability of the distribution system, affordability, and the uncertainties of climate change, and legislative and regulatory requirements.

Key goals of the WSRP include:

- *Maximizing Local Supply.* Developing and expanding the use of local water is one of the main goals of the WSRP. The WSRP includes the projected impacts of reduced demand combined with leveraging groundwater rights to support the long-term goal of a sustainable blend of 50 percent local and 50 percent imported water. Innovative water sources will be evaluated to serve the community including small-scale and specialized projects that are consistent with Pasadena's community values.
- *Lower Costs of Water as a Commodity.* While access to the water basins and active sustainable practices requires investment in production facilities and water resources, increased use of local supply reduces imported water expenses and decreases water loss. Replacing aged water pipelines and better management practices also reduce water losses. In addition to reducing costs from lost water, the WSRP objectives reduce risks of service interruptions.
- *Protection from Emergencies.* Creating a sustainable groundwater supply will provide risk mitigation against imported water interruptions during emergencies and peak weather-based demand. Conservation programs in conjunction with planned groundwater use will provide flexibility for variations in demand.

PWP developed the WSRP with extensive input from a focused Stakeholder Advisory Committee ("SAC") comprised of 13 members representing a cross section of the community. During the WSRP development process, periodic updates were provided to the Municipal Services Committee ("MSC") and the City's Environmental Advisory Commission ("EAC").

It is possible that all objectives may not be met in the anticipated timeframe because of financial, operational or external constraints. However, PWP will achieve greater efficiencies, aggressively pursue grants and joint project opportunities with other agencies to reduce the overall cost impacts to its rate payers.

Risks to Water Supply

PWP's water supply is affected by many factors, including annual rainfall, production patterns, groundwater recharge, groundwater levels, and equipment and infrastructure maintenance schedules. Low groundwater levels could adversely affect PWP's water supply and could impact operational expenses of the Water System or demand for water services. There is no assurance that PWP's sources of water supply will remain constant throughout the period the 2021A Bonds are outstanding. However, regional and local water storage programs are designed to mitigate the potential effects of lower water levels in the Raymond Basin.

The City's water supply is highly dependent on the reliability of imported water from MWD. Imported water accounted for 70% of the City's water supply in Fiscal Year 2021. See "Water Production" above.

At the end of Fiscal Year 2021, PWP has 19,471 acre-feet of water stored in the Raymond Basin. This amount of stored water in addition to the City's annual pumping entitlement and water stored on behalf of MWD is equal to approximately one and a half years of imported water supply. The City is engaged in developing alternative local sources of supply. Efforts are underway to improve the spreading of water into the groundwater basin or engage in storage and exchange contracts which would improve the groundwater basin.

Water Quality

PWP has consistently complied with all federal and state regulations. PWP collects water samples on a regular basis from all sources of supply, reservoirs and locations throughout the distribution system. General mineral, physical, bacteriological, volatile organic chemicals ("VOCs"), total trihalomethanes ("THMs"), perchlorate, nitrate, ammonia, nitrite, fluoride and metals analyses are performed in PWP's own state certified Water Quality Laboratory. Pesticides, herbicides, radiochemicals, and some organic, inorganic and mineral compounds analyses are performed at contract laboratories. The Water Quality Laboratory and contract laboratories perform over 36,000 chemical and bacteriological analyses on PWP's water samples annually.

MWD water imported by PWP is treated at MWD's Weymouth Water Treatment Plant. The Weymouth Water Treatment Plant water quality data reported in MWD's annual Water Quality Report for 2021 meets or exceeds the state and federal water quality standard regulations. The Weymouth Water Treatment Plant receives most of its water supply from the Colorado River which has hard water. Hardness in water comes from calcium and magnesium minerals naturally occurring in the water.

MWD adds fluoride to its water supply and PWP's groundwater has naturally occurring fluoride. The average fluoride level in the drinking water is 0.7 parts per million ("ppm").

The quality of water in the Raymond Basin, the source of approximately 40% of the City's water supply, is generally good. In some portions of the Raymond Basin, the presence of nitrates requires blending to meet drinking water quality standards. There is some contamination from VOCs in scattered parts of the Raymond Basin, as well as contamination from perchlorate. Most occurrences are easily treated or can be blended to meet drinking-water standards. Two of Pasadena's wells are operable to meet drinking water standards without requiring treatment or blending to meet acceptable standards.

The most notable VOCs and perchlorate contamination is in the vicinity of the Jet Propulsion Laboratory ("JPL") located in the northwest part of the City's service area adjacent to the Arroyo Seco Stream, a major recharge area for the Raymond Basin. Contamination in this area had resulted in the inability to operate several wells. Four of the contaminated wells belong to the City and have historically supplied approximately 35% of the City's annual groundwater supply.

The City constructed a perchlorate and VOC treatment plant, known as the Monk Hill Groundwater Treatment Plant, which became operational in July 2011. The plant treats the four contaminated wells in the Arroyo Seco area near the JPL. The plant is designed to remove perchlorate from the extracted groundwater by passing the contaminated water through an ion exchange system which is made up of four pairs of steel tanks containing 12,000 to 16,000 pounds of plastic beads called resin, and then passing the water through a carbon filter system, which is made up of five pairs of steel tanks containing about 40,000 pounds per vessel of charcoal-like carbon particles to remove VOCs.

The California Institute of Technology (“Caltech”) has agreed to remediate the perchlorate contamination in the Arroyo Seco area. The National Aeronautics and Space Administration (“NASA”) acts as the Administrator of the agreement and also provides technical assistance, services and groundwater monitoring. NASA has provided funding for the construction and operation of the Monk Hill Groundwater Treatment Plant. The amount to be reimbursed by NASA for plant operations is approximately \$3.5 million per annum, with an agreement to allow for future escalation should the cost of operating and maintaining the treatment plant increase.

Environmental Regulation

The quality of PWP's water is regulated by federal Safe Drinking Water Act and the California Health and Safety Code. These two statutes set standards for a variety of elements that can be found in drinking water supplies. The Maximum Contaminant Level (“MCL”) is the legally enforceable standard for concentrations of these constituents which PWP must comply with. The Public Health Goal (“PHG”) is the lowest concentration of these constituents which pose less than a one in a million risk of adverse health impacts. The MCL is set as close to the PHG as is technically and economically feasible. The MCLs are set forth in series of rules. Compliance with these MCLs is determined by analytical procedures carried out by laboratories accredited by the State. The following are some of the rules and regulations applicable to PWP's Water System. PWP is in compliance with all such applicable regulations.

Groundwater Rule. The United States Environmental Protection Agency (“EPA”) published the Groundwater Rule on November 8, 2006. The Groundwater Rule is to provide increased protection against microbial pathogens in water systems that use groundwater.

Total Coliform Rule. EPA published the Revised Total Coliform Rule on February 13, 2013. Every week PWP collects over fifty samples from locations throughout its distribution system. These include wells, reservoirs, and dedicated sample taps on mains. These samples are tested for Total Coliform, *Escherichia coli*, Chlorine Residual, and Heterotrophic Plate Count bacteria. These are measures of the microbial health of the distribution system. There are MCLs for both Total Coliform and *Escherichia coli* and PWP has always complied with these standards. There are also standards requiring that a chlorine residual, which prevents the growth of bacteria throughout the water system.

Perchlorate Rule. The California Water Resources Control Board's Division of Drinking Water (“DDW”) established a perchlorate MCL of 6 parts per billion (“ppb”) effective October 2007.

Surface Water Treatment Rules. In 1989, the EPA published a surface water treatment rule which required all water systems to provide treatment to ensure at least 99.9% removal and/or inactivation of *giardia lamblia* cysts and at least 99.99% removal and/or inactivation of viruses (“Surface Water Treatment Rule”). In 1998, the EPA published the Interim Enhanced Surface Water Treatment Rule (“Interim Rule”), which added, among other things, the requirement of a 99% reduction in cryptosporidium for surface water systems that filter. The Interim Rule applies to water systems using surface water and/or groundwater under the direct influence of surface water, and which serve more than 10,000 people.

Lead and Copper Rule. In 1991, EPA published a regulation to control lead and copper in drinking water, known as the Lead and Copper Rule. The treatment technique for the rule requires systems to monitor drinking water at customer taps. If lead concentrations exceed an action level of 15 ppb or copper concentrations exceed an action level of 1.3 ppm in more than 10% of customer taps sampled, the system must undertake a number of additional actions to control corrosion.

Nitrate. Nitrates may be present in certain PWP wells because of the use of nitrate fertilizers and septic tanks up gradient of the Raymond Basin. The presence of nitrate in Pasadena’s water supply is treated by blending with low nitrate sources, including MWD water and low nitrate wells.

1,2,3-Trichloropropane (“123-TCP”). On December 14, 2017, the DDW adopted a regulation promulgating a Maximum Contaminant Level (MCL) for 1,2,3-trichloropropane (1,2,3-TCP) of 0.000005 milligrams per liter (mg/L, or 5 parts per trillion or 5 ppt). Four PWP wells are known to have 123-TCP in concentrations above the MCL. PWP currently uses blending with imported water to meet DDW.

The EPA regulates metals, other inorganic and organic compounds, trihalomethanes (disinfectant/disinfection by-products), and radionuclides. The regulations also require that a water utility use treatment to comply with the MCL by collecting samples of the treated water at a location prior to the distribution system. If any of the results in the treated water supply exceed the MCL, the water utility must resample the treated water to confirm the result(s) and report to the DDW.

Per and Polyfluoroalkyl Substances (“PFAS”). In July 2018, the DDW first established notification levels for PFAS in drinking water. Current notification levels are established at 5.1 parts per trillion for perfluorooctanoic acid (“PFOA”) and 6.5 parts per trillion for perfluorooctane sulfonic acid (“PFOS”). Two groundwater wells within PWP’s water system have a very low level detection of PFAS, which is being effectively treated at the Monk Hill Treatment Plant to meet DDW standards. PWP does not anticipate increased levels of PFAS in its water supply.

Future Regulation. Water utilities are subject to continuing quality and environmental regulation. Federal, state and local standards and procedures which regulate water utilities are subject to change. These changes may arise from continuing legislative, regulatory and judicial action regarding such standards and procedures. Consequently, there is no assurance that any City facility subject to regulations currently in effect will always be in compliance with future regulations. An inability to comply with environmental standards could result in additional capital expenditures to comply, reduced operating levels or the complete shutdown of individual water facilities that are not in compliance. If the federal government, acting through the EPA or additional legislation, or the State impose stricter treatment standards, PWP’s expenses could increase and PWP would evaluate appropriate methods to address the expenses. The WSRP anticipates advances in regulations and establishes options to comply with the flexibility to adapt as needed.

Cybersecurity

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Seismic Considerations

The areas in and surrounding the City-owned water facilities, like those in much of the State, may be subject to unpredictable seismic activity. The Water System’s facilities are located within known active fault lines. An occurrence of severe seismic activity in the area of the Water System’s facilities could result in substantial damage to and interference with the City’s water supply. The City does not currently carry earthquake insurance. In the event of significant earthquake damage to the Water System and/or the City’s service area, there can be no assurance that Pledged Revenues would be sufficient to pay the principal of and interest on any outstanding 2021A Bonds.

Water System Master Plan Capital Projects

The City's Water System Master Plan, adopted in 2002, provides the framework for capital investment in the water distribution system including a proposed budget and funding plan. The Water System Master Plan was updated within the WSRP. The WSRP is expected to be reviewed by the City Council in Fiscal Year 2022 and is described in the preceding Water Conservation Programs and Water System Resource Plan section.

Below is a review of the capital improvements completed since the implementation of the Water System Master Plan in Fiscal Year 2003.

Pipeline Replacement. PWP has 520 miles of water pipes within the City's service area. Since the adoption of the Water System Master Plan, approximately 90 miles of pipelines or 17 percent of the City's pipelines have been replaced. While PWP has concentrated the water main replacement program on the age of the pipes and fire flow requirements, PWP has also focused the pipeline replacements in major traffic corridors, and business districts where water main breaks could cause major disruptions.

Water Meter Replacement. The Water System Master Plan includes a goal to replace all small meters within fifteen years at a rate of about 2,400 meters per year. However, in Fiscal Year 2005 it was decided to accelerate the replacement of water meters with automatic meter read ("AMR") equipment. AMR technology greatly improved the efficient collection of water meter use data and is an interim measure to moving toward Advanced Metering Infrastructure ("AMI"). PWP is evaluating the risks and value of moving to an AMI program and is also considering alternatives to AMI, including ultra-sonic and narrow band communications to improve the reliability and longevity of the system.

Reservoir Seismic Retrofit. Currently, improvements have been completed for two of the twelve reservoirs identified in the Water System Master Plan as requiring seismic retrofitting. Some of the Water System reservoirs are over eighty years old and full analyses of the existing structural conditions must be completed before designing the retrofits for additional reservoirs. PWP is in the process of replacing the fifteen million gallon Sunset Reservoirs (two units) with construction expected to begin in Fiscal Year 2023. These reservoirs were built in 1888 and 1900.

Groundwater Wells Rehabilitated. PWP has exceeded the goals for rehabilitation of groundwater wells that were established in the WSRP. The rehabilitations have focused on addressing mechanical issues, especially for wells located in areas of low groundwater levels. During Fiscal Year 2021, PWP conducted analyses of the construction of new wells to replace certain older wells.

Booster Station Upgraded. PWP has upgraded eight of the booster stations identified in the Water System Master Plan. This includes three of the largest booster stations within the Water System distribution network that serve most of the northern half of the service area.

Capital Improvement Program

Consistent with the development of the Water System Master Plan and the related Capital Improvement Program, staff conducted an analysis to develop a financial structure to support the needed capital investments while minimizing the rate impact on water customers. Staff also examined the impact of various levels of debt financing for the CIP. Based on this analysis, staff proposed the Capital Improvement Charge ("CIC") based on the cost of revenue bond financing and projected capital expenditures. In 2003, the City Council approved the implementation of the CIC based on staff recommendation. Through the CIC, the City has imposed periodic increases over the years to support revised debt service and capital improvement requirements. Based on water consumption for Fiscal Year

2021 and the current rate, the CIC generated approximately \$12.4 million. See “SECURITY AND SOURCES OF PAYMENT FOR THE 2021A BONDS – Capital Improvements Charge Account.”

The 2021A Bonds will support the continuation of projects defined in the Water System Master Plan and the WSRP.

Each year the City Council approves a five-year CIP for the Water System. The most recent CIP for the Water System was approved in June 2021. The CIP for Fiscal Years 2022-2026 identified approximately \$134.5 million in projects for the Water System. The following table lists the expected capital requirements over the current and next four Fiscal Years.

TABLE 5
WATER SYSTEM CAPITAL REQUIREMENTS
(In Thousands)

<u>Fiscal Year</u>	<u>Capital Requirements</u>
2022	\$23,198
2023	26,817
2024	45,592
2025	23,666
2026	15,195

Source: Pasadena Water and Power Department.

The CIP for the Water System includes the design and construction of a non-potable water program, installation of replacement water mains, meters and services, replacement of chlorine stations with chloramines disinfection facilities for water quality and treatment and seismic retrofits for reservoirs and other key facilities. PWP expects to finance the CIP projects through a combination of funds on hand, proceeds of the 2020A Bonds, proceeds of the 2021A Bonds, current revenues and additional revenue bonds. In addition, PWP may enter into Federal or State loan programs to fund a portion of the CIP projects. Any such loans may be secured by a pledge of and lien on the Pledged Revenues of the Water System on a parity with other obligations of the Water System payable from the Water Fund, including the Bonds. See “SECURITY AND SOURCES OF PAYMENT FOR THE 2021A BONDS – Additional Bonds and Parity Debt.”

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Water Sales

The following table shows historical production and sales information for the Water System.

TABLE 6
HISTORICAL PRODUCTION AND SALES DATA
(In Thousands of Billing Units)

	Fiscal Year Ended June 30,				
	2017	2018	2019	2020	2021
Total Production	12,012	12,835	12,238	12,274	13,116
Water Sold	10,997	12,801	11,478	11,276	12,378
Water System Losses	1,015	754	760	998	738
Number of Services	38,067	38,046	38,114	38,193	38,262

Billing Unit = 100 Cubic Feet.

Source: Pasadena Water and Power Department.

As shown in the table below, customers inside the City's boundary (including municipal and other customers) consumed 85% of the volume of water sold by the Water System in Fiscal Year 2021. Receipts from customers within the City limits (including municipal and other customers) represent 89% of the revenues collected by the Water System. Each meter is considered a separate customer.

TABLE 7
WATER SALES VOLUME AND REVENUE

	Fiscal Year Ended June 30,				
	2017	2018	2019	2020	2021 ⁽¹⁾
Volume (000's Billing Units)					
Inside City Limits	9,208	10,089	9,496	9,156	9,883
Outside City Limits	1,464	1,664	1,568	1,572	1,836
Municipal and Other	325	329	414	547	659
Total	10,997	12,082	11,478	11,275	12,378
Revenue (000's Dollars)					
Inside City Limits	\$35,922	\$38,958	\$37,071	\$39,039	\$41,653
Outside City Limits	6,734	7,442	7,158	6,419	6,849
Municipal and Other	15,631	16,192	15,952	17,009	16,399
Total	\$58,287	\$62,592	\$60,181	\$62,467	\$64,901

⁽¹⁾ The information for the Fiscal Year ended June 30, 2021 is based on estimated information.

Billing Unit = 100 Cubic Feet.

Source: Pasadena Water and Power Department.

Largest Customers

The ten largest customers of the Water System for the Fiscal Year ended June 30, 2021 are listed in the table below.

TABLE 8
TEN LARGEST CUSTOMERS

<u>Customer</u>	<u>Percent of Total Operating Revenues</u>
California Institute of Technology	2.42%
Rose Bowl Operating Company	2.12
City of Pasadena Public Works Department	1.75
Annandale Golf Course	0.88
Rubio Canon Water Company	0.72
County of Los Angeles (Eaton Canyon/Altadena Golf Course)	0.71
Pasadena Unified School District	0.71
Pasadena Hospital Association	0.65
Pasadena Villages LP	0.38
ERP Operating LP	<u>0.34</u>
Total	10.68%

Source: Pasadena Water and Power Department.

Rate Structure

The Charter provides that the City Council shall set water rates by ordinance. Such rates are not subject to approval by any other body or agency, but under Article XIID of the California Constitution are subject to a majority protest procedure of property owners subject to the rates. The Rate Ordinance sets rates and charges for Water System customers. Water rates charged to customers are comprised of the commodity rates, a monthly distribution and customer charge, a capital improvement charge and may include a purchased water adjustment charge.

Under the City's Water Ordinance, Chapter 13.20 of the Pasadena Municipal Code, costs associated with PWP's water supply are passed through to customers via the First Block, Second Block, Third Block and Fourth Block commodity rates. The commodity rates are re-set from time to time to recover all costs associated with the purchase and distribution of PWP water supply. In order to accommodate changes in water supply costs, water delivered under commodity rates is subject to a pass-through adjustment, the purchased water adjustment charge, which tracks changes in water supply costs since the last change in rates. The purchased water adjustment charge is subject to the notification requirement of Proposition 218.

In addition to the commodity charge described above, PWP charges its customers a CIC and a Distribution and Customer Charge ("D&C"). The CIC is a mechanism by which PWP is able to recover a portion of its cost of capital expenditures and a portion of its debt service. The CIC is a volumetric charge on a per billing unit basis. The D&C is a monthly fixed charge designed to recover the PWP's distribution and customer service costs.

The following chart outlines the current water rate structure for the City. A customer is charged First Block rates for initial quantity consumed, Second Block rates over initial quantity, Third Block rates

for any quantities over the quantities consumed in the First and Second Block, and Fourth Block rates for quantities consumed over First Block, Second Block and Third Block quantities.

TABLE 9
RATE STRUCTURE

COMMODITY RATES FOR ALL WATER DELIVERED (PER 100 CUBIC FEET)

Effective July 1, 2020

First Block	\$1.44852
Second Block	3.07637
Third Block	3.60615
Fourth Block	4.37569

FIRST, SECOND, THIRD AND FOURTH BLOCK ALLOCATIONS ⁽¹⁾

<u>Size of Meter (Inches)</u>	<u>Volume of First Block Allocation</u>	<u>Volume of Second Block Allocation</u>	<u>Volume of Third Block Allocation</u>	<u>Volume of Fourth Block Allocation</u>
5/8", 3/4"	0-8	9-24	25-34	35 and over
1"	0-12	13-40	41-60	61 and over
1-1/2"	0-22	23-86	87-132	133 and over
2"	0-48	49-188	189-290	291 and over
3"	0-116	117-500	501-860	861 and over
4"	0-225	226-1,000	1,001-1,800	1,801 and over
6"	0-500	501-5,600	5,601-8,800	8,801 and over
8"	0-500	501-5,600	5,601-10,000	10,001 and over
10", 12"	0-500	501-24,000	24,001-32,000	32,001 and over

MONTHLY DISTRIBUTION AND CUSTOMER CHARGE FOR SERVICE ⁽²⁾

<u>Meter Size (Inches)</u>	
5/8" and 3/4"	\$ 24.66
1"	46.83
1 1/2"	97.37
2"	221.99
3"	542.31
4"	830.22
6"	1,289.37
8"	2,090.93
10"	2,721.21

⁽¹⁾ In Units of 100 cubic feet.

⁽²⁾ Includes fire protection service.

Sources: Pasadena Water and Power Department.

The current effective CIC rates (approved in January 2016) are shown in the table below.

TABLE 10
CAPITAL IMPROVEMENTS CHARGE
(per 100 Cubic Feet)

Effective July 1, 2020

\$1.00501

Source: Pasadena Water and Power Department.

The following table shows average residential monthly billing information for the last five Fiscal Years.

TABLE 11
AVERAGE RESIDENTIAL BILLING INFORMATION

	Fiscal Year Ended June 30,				
	2017	2018	2019	2020	2021⁽¹⁾
Residential Billing Units Sold (100 Cubic Feet)	7,347,821	8,183,925	7,654,004	7,709,030	8,684,634
Total Billing Units Sold (Water System)	10,996,569	12,082,337	11,478,167	11,275,654	12,377,645
Residential as a Percent of Total Water System	66.8%	67.7%	66.7%	68.4%	70.2%
Revenues From Residential Sales	\$36,887,043	\$40,158,532	\$38,350,207	\$40,140,340	\$41,704,542
Total (Water System)	\$58,286,718	\$62,591,958	\$60,180,664	\$62,466,496	\$64,900,712
Residential as a Percent of Total Water System	63.3%	64.2%	63.7%	64.3%	67.2%
Number of Residential Customers	32,943	33,006	32,920	32,994	33,065
Total (Water System)	38,067	38,046	38,114	38,193	38,262
Residential as a Percent of Total Water System	86.5%	86.8%	86.4%	86.4%	86.4%
Average Residential Monthly Billing Unit	18.6	20.7	19.4	19.5	21.89
Average Residential Bill	\$93.31	\$101.39	\$97.08	\$101.38	\$105.11

⁽¹⁾ The information for Fiscal Year ended June 30, 2021 is based on estimated information.

Source: Pasadena Water and Power Department.

Billing and Collection Procedures

Billing and collection services for all water services are provided by PWP and the City's Finance Department. Most residential and certain commercial water customers are billed bimonthly for electric and/or water service; most large commercial users are billed monthly for electric and water service. The City prepares a single bill for electric, water, refuse and sewer collection services. Payments received for the billed period are credited first to the oldest charges, then to current charges for each service in the order stated.

- Deposits
- Refuse
- Sewer
- Electric
- Water

All charges for water and water service are due and payment rendered, and become delinquent 30 days after the bill date. To manage late/non-payments a 48-hour notice of termination is generated approximately 75 days after the actual billing date. If payment is not received the water service is interrupted. Should the bill not be paid within 15 days of a final notice, the electric service is then also interrupted. The total bill plus all reconnection charges must be paid to resume service. After 60 days, the account is written off by the PWP Collection Department and sent to the City Finance Department for further collection efforts.

In September 2018, the Water Shutoff Protection Act (SB 998) (the "Act") was signed into law. The legislation imposes specific requirements and procedures for the discontinuation of water service to residential customers. The Act requires all California water systems to have written policies on the discontinuation of residential water service for non-payment. Specifically, the policy must include 1) a plan for deferred or reduced payments; 2) alternative payment schedules; 3) a formal mechanism for a customer to contest or appeal a bill; and 4) a telephone number for a customer to discuss options to avoid discontinuation of service for non-payment. PWP's credit shut-off policies have been updated in compliance with the requirements of the Act, and the City Council approved amendments to PWP's water service connection fees in December 2019 to be compliant with the Act.

In March 2020 to assist PWP customers experiencing financial difficulties as a result of COVID-19, PWP temporarily suspended the collection and assignment of late fees and delinquent charges on all accounts. The temporary change in procedure led to an increase in the bad debt projected for Fiscal Year 2021, as shown in the table below. It should be noted that PWP anticipates to collect a majority of the accounts receivable over several months in Fiscal Year 2022. In April 2021, the City Council approved the resumption of late fees for past due accounts effective July 1, 2021.

Along with many other utilities in the State, PWP is actively participating in a number of programs to assist customers with past due utility bills. Specifically, the City is seeking funds for residential and commercial water system customers through the California Water and Wastewater Arrearage Payment Program ("CWWAPP") and the Low Income Household Water Assistance Program ("LIHWAP"). PWP intends to complete the eligibility requirements for each program to ensure that Water System customers receive the maximum funding assistance through these programs, thereby also reducing the outstanding accounts receivable for unpaid bills.

TABLE 12
HISTORICAL WATER CUSTOMER BAD DEBT
(\$ in Thousands)

	Fiscal Year Ended June 30,				
	2017	2018	2019	2020	2021 ⁽¹⁾
Bad Debt Written Off	\$327	\$123	\$103	\$492	\$905
Total Operating Revenue	\$58,287	\$62,592	\$61,181	\$62,466	\$64,901
Bad Debt as a Percent of Operating Revenue	0.56%	0.20%	0.17%	0.79%	1.4%

⁽¹⁾ The information for Fiscal Year ended June 30, 2021 is based on estimated information.
Source: Pasadena Water and Power Department.

COVID-19 Pandemic

The COVID-19 pandemic that affected the United States and the world during 2020 had many impacts, including the quarantine of individuals in order to reduce the spread of the virus, closure or reduced operating hours for many businesses and schools, and significant challenges in supply chains. As such, the United States, the State, the County, and the City each declared a “state of emergency” or equivalent in March 2020. Additionally, the State issued a “stay at home” order that severely restricted the movement of residents and generally mandated residents to remain in their home and, in effect, prohibited non-essential workers from working outside their home. This caused the disruption of daily life in all jurisdictions, including the closure of certain government buildings and general prohibitions on gatherings.

As a result of the emergency declaration, the City changed its priorities to focus on staffing for essential services. City buildings housing essential services remained open throughout the pandemic, although some services had limited availability. The City asked members of the public who have business to conduct with the City do so over the phone, via email or online if possible.

This declaration has not impacted essential services such as water services. Public health is of paramount concern for the City and the City immediately implemented significant measures to limit the spread of COVID-19. The City has an independent Department of Public Health, and has the authority to implement measures separate from those imposed by the Los Angeles County Public Health Department. The City’s current measures are compliant with those executed by Los Angeles County. City staff continues working closely with the Los Angeles County, the Centers for Disease Control, and the Office of Governor Newsom.

Beginning in June 2021, the City followed the majority of guidelines for reopening as set forth by Los Angeles County, which guidelines adhere to the guidance for reopening issued by State Public Health Officer and California Department of Public Health. Under the revised State guidelines, the specific “tiered” structure to define rates of COVID infection is no longer in use. The City re-opened most of its businesses, including indoor dining, gyms, museums, office-based businesses, manufacturing and logistics. Most schools re-opened for in-classroom learning at the beginning of the school year. All re-openings remain subject to following certain safety guidelines.

Beginning in June 2021, City employees who had been primarily performing their duties while working remotely began to transition back to the workplace. While most employees have returned to the in-person work environment, the City has also implemented a Hybrid Work Program that allows employees to continue working remotely under specified terms and schedules. Employees are subject to following all established safety guidelines while working onsite.

Despite the COVID-19 pandemic, the billing units sales for the Fiscal Year ended June 30, 2021 were 9.9% higher when compared to the Fiscal Year ended June 30, 2020. Additionally, revenues for the Fiscal Year ended June 30, 2021 were 3.9% higher when compared the Fiscal Year ended June 30, 2020. The revenue increase was supported by a rate increase in the monthly D&C charge that became effective on July 1, 2020.

The Fiscal Year 2022 water operating and capital improvement budgets were approved by the City Council in June, 2021. The approved Water System Fiscal Year 2022 operating budget is approximately \$69.1 million. The adopted Fiscal Year 2022 budgets may be amended as the continued impacts of COVID-19 become more well-defined.

Although many commercial customers have returned to business, it is expected that the impacts of COVID-19 will continue into Fiscal Year 2022. As such, PWP is forecasting a modest increase of half of one percent in water demand compared to PWP's adopted Fiscal Year 2021 budget. The updated forecasts are reflected in the projections provided in this Preliminary Official Statement. PWP's long-term projections are based on a full economic recovery by Fiscal Year 2023. Actual impact will depend on the duration of the pandemic.

The City cannot predict (i) the duration or extent of the COVID-19 outbreak; (ii) to what extent the COVID-19 outbreak may continue to affect the operations and revenues of the Water System; (iii) to what extent COVID-19 may continue to disrupt the local, State, national or global economy, manufacturing or supply chain, or whether any such disruption may adversely impact system-related construction, the cost, sources of funds, schedule or implementation of the capital improvement program, or other system operations; (iv) to what extent the City may provide additional deferrals, forbearances, adjustments or other changes to its customers or its billing and collection procedures; or (v) whether any of the foregoing may have a material adverse effect on the finances and operations of the Water System. Prospective investors should assume that the restrictions and limitations instituted related to COVID-19 will continue in the foreseeable future, and the current upheaval to the national and global economies will continue and/or be exacerbated, at least over the near term, and the recovery may be prolonged, and therefore, COVID-19 may adversely impact Water System revenues.

Basis of Financial Reporting

The City's financial statements are prepared in accordance with generally accepted accounting principles for municipal governments. Financial statements of the Water System are prepared on the accrual basis of accounting. Financial statements for the Water System for the Fiscal Year ended June 30, 2020 are included as APPENDIX B – "AUDITED FINANCIAL STATEMENTS OF PASADENA WATER AND POWER ENTERPRISE FUNDS FOR THE FISCAL YEAR ENDED JUNE 30, 2020." See also "AUDITED FINANCIAL STATEMENTS."

All revenues of the Water System are generated by charges and other activities of the Water System. The Water System does not receive funds from the City or any tax revenues. All revenues generated by the Water System are deposited into the Water Fund as required by the Charter. See "SECURITY AND SOURCES OF PAYMENT FOR THE 2021A BONDS – The Water Fund." Labor costs for personnel working in both the Water System and the Electric System are allocated on the basis of time worked for each division.

Employees

For Fiscal Year 2022, the City has budgeted approximately 139 full time employees (FTE) for the Water System. Most Water System employees are represented either by the American Federation of State,

County and Municipal Employees, the Laborers' International Union of North America or the Pasadena Management Association in all matters pertaining to wages, benefits and working conditions. The labor agreement with the Pasadena Management Association expires in September 2021. Other labor agreements will expire in June 2022. The City has no history of work interruption by employees maintaining the Water System. See APPENDIX A – "THE CITY OF PASADENA – Employee Relations."

The Water System's permanent employees are all covered by the California Public Employees Retirement System ("CalPERS") with respect to pension benefits. CalPERS is an agent multiple-employer plan public employee retirement system which acts as a common investment and administrative agent for participating public employers within the State of California. The plan provides retirement and disability benefits, annual cost-of-living adjustments and death benefits to plan members and their beneficiaries. CalPERS issues a separate publicly available financial report that includes financial statements and required supplemental information of participating public entities within the State of California. Copies of the CalPERS annual financial report may be obtained from the CalPERS Executive Office, Lincoln Plaza Complex, 400 Q Street, Sacramento, California 95811 or at www.calpers.ca.gov.

The law relating to CalPERS requires that the employer contribution rates for all public employers be determined on an annual basis by the actuary and shall be effective on the July 1 following notice of a change in the rate. Funding contribution for the City's Miscellaneous Plan ("Plan") (which include all Water System employees) is determined annually on an actuarial basis as of June 30 by CalPERS. The actuarially determined rate is the estimated amount necessary to finance the costs of benefits earned by employees during the year, with an additional amount to finance any unfunded accrued liability. The City is required to contribute the difference between the actuarially determined rate and the contribution rate of employees.

The City's required contributions to CalPERS 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 CalPERS Board of Administration has adjusted and may in the future further adjust certain assumptions used in the CalPERS actuarial valuations, which adjustments may increase the City's required contributions to CalPERS in future years. Actuarial assumptions used by PARs in calculating actuarially determined contributions and other actuarially determined amounts are consistent with those used by CalPERS. Accordingly, the City cannot provide any assurances that the City's required contributions to CalPERS and PARS in future years will not significantly increase (or otherwise vary) from any past or current projected levels of contributions.

The Water System's contributions represent a pro rata share of the City's contribution, including the employees' contribution that is paid by the Water Fund, which is based on CalPERS' actuarial determination as of July 1 of the current Fiscal Year. CalPERS does not provide data to participating organizations in such a manner so as to facilitate separate disclosure for the Water Fund's share of the actuarial computed pension benefit obligation, the plan's net assets available for benefit obligation and the plan's net assets available for benefits. The Water System employees represent approximately 6.5% of the full-time City employees.

Other than the pension benefits from the applicable retirement system, the City does not provide medical or other post-retirement benefits to its employees beyond the option to continue receiving health insurance benefits at the City's monthly rates, paid by the retired employees.

The City provides a subsidy to retirees of the City who are members of CalPERS or the Pasadena Fire and Police Pension System. Benefit provisions are established and amended through negotiations between the City and the respective unions. Two different levels of subsidy toward the purchase of medical insurance from CalPERS under the Public Employees' Medical and Hospital Care Act are offered.

The City's current contribution requirements have been established at the individual retiree levels of \$139.00 or \$97.30 per month depending on bargaining unit membership and policy enacted by CalPERS pursuant to State Law. These minimum requirements are established by CalPERS and adjusted annually. The City has historically funded these post-retirement health care benefits on a "pay-as-you-go" basis. For the Fiscal Year ended June 30, 2020, the City recognized OPEB expense of \$6,250,566. At the end of the Fiscal Year, the City had net OPEB liability of \$77,001,040 and reported OPEB related deferred inflows of resources of \$620,832 and outflows of resources of \$2,931,670. The Water System is allocated its portion of the required contributions. As of June 30, 2019, Water Fund's net OPEB liability was \$4,273,874.

See "APPENDIX A – THE CITY OF PASADENA – Employee Relations" and – Post-Retirement Medical Benefits." Further information regarding the City's participation in CalPERS and OPEB may also be found in the City's Comprehensive Annual Financial Report.

Insurance

The City funds a self-insured and self-administered program for workers' compensation claims exposures and general liability claims. Liability claims, losses and expenses paid averaged about \$2,996,820 per year for the past 10 years and, when existing "reserves" are added, averaged around \$12,096,142 in liability exposure per year over the past 10 years. The City anticipates these expenses annually and includes funding for them in its operating budget. The City carries excess liability coverage, with limits of \$25 million, with a self-insured retention of \$5 million dollars. The amount of self-insured liability claim expenditures and remaining reserves with respect to claims made in each of fiscal years 2011-12 through 2020-21 are reflected in the following table:

TABLE 13
CITY OF PASADENA
LIABILITY CLAIM EXPENDITURES AND REMAINING RESERVES
Fiscal Years 2011-12 through 2020-21

Fiscal Year⁽¹⁾ Ended June 30,	Loss Paid	Expense Paid	Total Paid	Remaining Reserves for Unpaid Claims⁽¹⁾
2012	\$2,366,049	\$641,532	\$3,007,581	\$2,515,000
2013	208,246	477,418	685,664	1,500
2014	859,398	621,294	1,480,691	3,300,000
2015	6,498,114	2,076,452	8,574,567	62,382,926
2016	5,680,888	1,271,356	6,952,244	6,500,000
2017	2,929,735	1,752,793	4,682,529	3,724,596
2018	3,030,661	876,722	3,907,384	8,176,400
2019	114,507	221,716	336,224	19,665,000
2020	291,075	19,950	311,025	5,605,700
2021	30,298	0	30,298	9,090,300

⁽¹⁾ Reserves reflect fiscal year in which claim occurred. Payments reflect money spent on all claims during a fiscal year.
Source: City of Pasadena, Department of Finance.

The City maintains commercial property insurance on all City-owned buildings of an insurable nature (unless lease agreements require the occupant to carry such insurance) with current basic limits of \$250,000,000, subject to various application sub-limits and deductible. Policy coverage excludes earth movement, including earthquake, nuclear hazard and military action. The City does not currently maintain separate earthquake coverage under another insurance policy. The City maintains boiler & machinery, and

equipment breakdown insurance, on specified types of equipment/property, with limits of \$100,000,000 for each policy, subject to variety of applicable sub-limits and deductibles. In addition, the City purchases Property Terrorism/NCBR, Chemical, Biological and Radiological Terrorism & Sabotage coverage, along with pollution, storage tank, and cyber liability coverage, with limits of \$1,000,000 for the pollution, storage tank and cyber liability policies, subject to variety of applicable sub-limits and deductibles.

No assurances can be given that the City's security and operational control measures will ensure against any and all cybersecurity threats and attacks. A cybersecurity incident or breach could damage the City's Information Technology systems and cause disruption to City services and operations. The cost of any such disruption or remedying damage caused by future attacks could be substantial. The City will continue to assess cyber threats and protect its data and systems.

Historical Operating Results and Cash Flows

The following table presents the historical operating results and cash flows for the Water System for the last five Fiscal Years.

TABLE 14
HISTORICAL OPERATING RESULTS AND CASH FLOWS
(\$ in Thousands)

	Fiscal Year Ended June 30,				
	2017	2018	2019	2020	2021⁽⁴⁾
Revenue					
Sales Within City Limits	\$35,922	\$38,958	\$37,071	\$39,039	\$41,653
Sales Outside City Limits	6,734	7,442	7,158	6,419	6,849
Municipal Sales & Misc. Others ⁽¹⁾	15,631	16,192	15,952	17,009	16,399
Total Operating Revenues	<u>58,287</u>	<u>62,592</u>	<u>60,181</u>	<u>62,467</u>	<u>64,901</u>
Operating Expenses					
Purchased Water	18,701	21,446	20,846	21,155	22,603
Fuel and Purchased Power	2,410	2,640	2,422	2,611	3,151
Direct Operating Expenses	11,767	9,694	10,542	12,318	11,284
Administrative and General Expenses	9,235	10,021	11,511	11,354	12,320
Total Expenses ⁽²⁾	<u>42,113</u>	<u>43,801</u>	<u>45,321</u>	<u>47,438</u>	<u>49,358</u>
Earnings from Operations	16,174	18,791	14,860	15,029	15,543
Non-Operating Income ⁽³⁾	<u>4,945</u>	<u>4,867</u>	<u>6,720</u>	<u>5,552</u>	<u>3,379</u>
Cash Flow Available for Debt Service	21,119	23,658	21,580	20,581	18,922
Debt Service	8,055	6,981	6,982	5,589	5,538
Debt Service Coverage	2.62x	3.39x	3.09x	3.68x	3.42
Amount Available after Debt Service	<u>\$13,064</u>	<u>\$16,677</u>	<u>\$14,598</u>	<u>\$14,992</u>	<u>\$13,384</u>

⁽¹⁾ Includes CIC revenue.

⁽²⁾ Excludes depreciation and interest cost.

⁽³⁾ Includes interest income and capital contributions.

⁽⁴⁾ The information for the Fiscal Year ended June 30, 2021 is based on estimated information.

Sources: Pasadena Water and Power Department.

Projected Coverage and Five-Year Forecast

Table 15 shows a summary of the projected operating results of the Water System for the five Fiscal Years listed, assuming CIC and distribution and customer charge increases, as described below. In the preparation of the projections in this section, the City has made certain assumptions with respect to conditions that may occur in the future. While the City believes these assumptions are reasonable for the purpose of the projections, they are dependent on future events, and actual conditions may differ from those assumed. **To the extent actual future factors differ from those assumed by the City or provided to the City by others, the actual results will vary from those forecast and such variations may be material.** The City does not plan to issue any updates or revisions to the forecast if or when its assumptions, expectations, or events, conditions or circumstances on which such forecast is based, occur or do not occur.

Table 15 revenue projection assumptions include (a) an annual sales growth rate of approximately 0.5%; (b) increases in the CIC revenue of approximately \$0.4 million in Fiscal Year 2023, \$0.7 million in Fiscal Year 2024, \$0.7 million in Fiscal Year 2025, and \$0.7 million in Fiscal Year 2026; and (c) purchased water adjustment charge revenue increases of \$1.0 million in Fiscal Year 2022, \$1.5 million in Fiscal Year 2023, \$1.5 million in Fiscal Year 2024, \$1.5 million in Fiscal Year 2025, and \$1.5 million in Fiscal Year 2026. Projected increases to the Distribution and Customer charge is expected to increase revenues by \$2.0 million in Fiscal Year 2023, \$2.0 million in Fiscal Year 2024, \$2.0 million in Fiscal Year 2026, and \$2.0 million in Fiscal Year 2026.

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Table 15 expense projections assume 5.0% annual escalation in general and administrative expenses, an average annual increase in purchased water costs of 3.5%, and a 1.2% average annual increase in the cost of purchased power.

TABLE 15
OPERATING STATEMENT
FIVE YEAR FORECAST
(\$ in Thousands)

	Fiscal Year Ended June 30,				
	2022	2023	2024	2025	2026
Revenue					
Sales Within City Limits	\$44,777	\$48,507	\$51,400	\$54,299	\$57,206
Sales Outside City Limits	7,368	7,982	8,458	8,935	9,413
Municipal Sales & Misc. Others ⁽¹⁾	<u>18,928</u>	<u>19,811</u>	<u>20,876</u>	<u>21,949</u>	<u>23,030</u>
Total Revenues	<u>71,074</u>	<u>76,300</u>	<u>80,734</u>	<u>85,184</u>	<u>89,650</u>
Operating Expenses					
Purchased Water	23,477	24,651	25,883	26,918	27,726
Fuel and Purchased Power	3,026	3,042	3,102	3,117	3,149
Direct Operating Expenses	12,706	13,087	13,480	13,884	14,301
Administrative and General Expenses	<u>16,175</u>	<u>16,661</u>	<u>17,160</u>	<u>17,675</u>	<u>18,205</u>
Total Expenses ⁽²⁾	<u>55,385</u>	<u>57,441</u>	<u>59,626</u>	<u>61,596</u>	<u>63,382</u>
Earnings from Operations	15,689	18,859	21,108	23,588	26,268
Non-Operating Income ⁽³⁾	<u>4,330</u>	<u>6,014</u>	<u>3,526</u>	<u>3,529</u>	<u>3,529</u>
Cash Flow Available for Debt Service	20,020	24,874	24,634	27,118	29,798
Total Debt Service ⁽⁴⁾	5,777	7,478	7,408	7,334	7,257
Debt Service Coverage	<u>3.47x</u>	<u>3.33x</u>	<u>3.33x</u>	<u>3.69x</u>	<u>4.11x</u>
Amount Available after Debt Service	\$14,242	\$17,396	\$17,226	\$19,783	\$22,541

⁽¹⁾ Includes CIC, D&C and Purchased Water Adjustment Cost Revenues.

⁽²⁾ Assumes increase in purchased water expense consistent with MWD approved budget and excludes Depreciation and Interest Expense.

⁽³⁾ Includes Interest Income and Capital Contributions.

⁽⁴⁾ Includes debt service for the 2011A Bonds, the 2017A Bonds, the 2020A Bonds and the 2021A Bonds.

Sources: Pasadena Water and Power Department.

CONSTITUTIONAL AND STATUTORY LIMITATIONS ON TAXES AND APPROPRIATIONS

Article XIII A of the California Constitution

If a portion of PWP's rates or charges were determined by a court to exceed the reasonable costs of providing service, any fee which PWP charges may be considered to be a "special tax" which under Article XIII A of the State Constitution must be authorized by a two-thirds vote of the affected electorate. This requirement is applicable to PWP's rates for water service and charges for capital improvements to the Water System. The reasonable cost of providing water service has been determined by the State Controller to include depreciation and allowance for the cost of capital improvements. In addition, State courts have held that fees such as connection fees (capacity charges) will not be special taxes if they approximate the reasonable cost of constructing improvements to the Water System contemplated by the local agency imposing the fee. Such court determinations have been codified in the Government Code of the State of California (Section 6000 *et seq.*).

Article XIII B of the California Constitution

Article XIII B of the State Constitution limits the annual appropriations of State and local governmental entities to the amount of appropriations of the entity for the prior Fiscal Year, as adjusted for changes in the cost of living, changes in population and changes in services rendered by the entity.

Pending clarification of certain of its provisions by the courts, or by the State Legislature, the full impact of Article XIII B on the amounts and uses of moneys to be deposited in the Water Fund is not clear. However, to the extent moneys in the Water Fund are used to pay costs of maintaining and operating the Water System and debt service on the Bonds and Parity Debt, such moneys should not, under the terms of Article XIII B, as supplemented by legislation, and based upon the official ballot argument supporting the measure, be held to be subject to the appropriation limit.

Article XIII C and XIII D of the California Constitution

Proposition 218, a state ballot initiative known as the “Right to Vote on Taxes Act” was approved by California voters on November 5, 1996 and, except for certain provisions which became effective on July 1, 1997, became effective on November 6, 1996. Proposition 218 added Article XIII C, entitled “Voter Approval of Local Tax Levies” (“Article XIII C”), and Article XIII D, entitled “Assessment and Property Related Fee Reform” (“Article XIII D”), to the California Constitution. Article XIII C and Article XIII D limit the imposition by a local government of “general taxes,” “special taxes,” “assessments” and “fees” or “charges.” The City is a local government within the meaning of Article XIII C and Article XIII D.

Article XIII C, provides, among other things, that the initiative power shall not be prohibited or otherwise limited in matters of reducing or repealing any local fee or charge. This extension of the initiative power is not limited by the terms of Article XIII C to fees and charges imposed after November 6, 1996 and, absent other authority, could result in retroactive reduction in existing fees and charges. Although the terms “fees” and “charges” are not defined in Article XIII C, the California Supreme Court, in *Bighorn-Desert View Water Agency v. Kari Verjil; E.W. Kelley* (July 2006), has stated that there is no basis for excluding from Article XIII C’s authorization any of the fees subject to Article XIII D. If fees or charges charged or collected by the City for its Water System are subjected to the initiative process and the outcome of any initiative proceedings results in a reduction or repeal of such fees or charges, the ability of the City to generate Gross Aggregate Revenues sufficient to comply with its covenants under the Indenture may be adversely affected. Furthermore, if voters were to approve an initiative lowering the City’s water rates or other charges, the City would need voter approval before it could change the rate or charge that had been set by initiative. The City could, however, increase a charge that was not affected by initiative or to impose an entirely new charge without voter approval.

The California Supreme Court further stated in *Bighorn* that it was not holding that the initiative power is free of all limitations and was not determining whether the initiative power is subject to the statutory provision requiring that water service charges be set at a level that will pay debt service on bonded debt and operating expenses. Such initiative power could be subject to the limitations imposed on the impairment of contracts under the contract clause of the United States Constitution. Additionally, SB 919 provides that the initiative power provided for in Proposition 218 “shall not be construed to mean that any owner or beneficial owner of a municipal security, purchased before or after (the effective date of Proposition 218) assumes the risk of, or in any way consents to, any action by initiative measure that constitutes an impairment of contractual rights” protected by the United States Constitution. However, no assurance can be given that the voters of the City will not, in the future, approve an initiative which reduces or repeals local taxes, assessments, fees or charges.

On November 15, 2018, the California Court of Appeal, Third District (the “Third District”), issued an opinion in *Wilde v. City of Dunsmuir* (2018) holding that taxpayers have the right under Proposition 218 to place a referendum on the ballot and vote on whether to repeal a city’s water rates. The *Wilde Case* concerned increases in water rates to fund an extensive water upgrade project consisting of the replacement of a 105-year old water storage tank and water main replacement projects of the City of Dunsmuir (rather than to fund general operations of a water enterprise) which the court concluded were legislative in nature and therefore subject to referendum. The City has reviewed the *Wilde* decision and does not believe that it will impact the City’s water rate structure because the Third District also in 2019 issued an opinion in *Howard Jarvis Taxpayers Association v. Amador Water Agency* (2019) holding that ratepayers cannot place a referendum on the ballot to vote on repeal of the agency’s water rates. This split in opinion has been appealed to the State Supreme Court, where it is awaiting review. Although the City does not believe the *Wilde* decision will impact the City’s current water rate structure, the City cannot guarantee this.

In any event, the City does not believe that Article XIIC grants to the voters within the City the power (whether by initiative under Article XIIC or otherwise, or by referendum, which is not authorized under Article XIIC) to repeal or reduce rates and charges for water service in a manner that would interfere with the contractual obligations of the City or the obligation of the City to maintain and operate the Water System. However, there can be no assurance as to the availability of particular remedies adequate to protect the owners of the Bonds. Remedies that are available to owners of the Bonds in the event of a default by the City are dependent upon judicial actions which are often subject to discretion and delay and could prove both expensive and time consuming to obtain.

Article XIID prohibits the assessment upon any parcel of property or upon any person “as an incident of property ownership” (defined to exclude fees for the provision of electrical or gas service) by a local government of any tax, assessment, fee or charge except voter-approved ad valorem property taxes and special taxes, fees or charges as a condition of property development, and assessments and “fees or charges for property related services” levied or imposed in accordance with the provisions of Article XIID.

Under Article XIID, revenues derived from a “fee” or “charge” (defined as “any levy other than an ad valorem tax, a special tax or an assessment, imposed by a local government upon a parcel or upon a person as an incident of property ownership, including user fees or charges for a property related service”) may not exceed the funds required to provide the “property-related service” and may not be used for any purpose other than that for which the fee or charge was imposed. Further, the amount of a “fee” or “charge” may not exceed the proportional cost of the service attributable to the parcel, no “fee” or “charge” may be imposed for a service unless that service is actually used by, or is immediately available to, the owner of the property in question, and no “fee” or “charge” may be imposed for general governmental service where the service is “available to the public at large in substantially the same manner as it is to the property owners.”

In addition, in order for a “fee” or “charge” to be imposed or increased, Article XIID provides that, among other things, the parcel upon which a fee or charge is proposed for imposition must be identified, the amount of the fee or charge proposed to be imposed on each such parcel must be calculated, written notice by mail of the proposed fee or charge must be provided to the “record owner” of each identified parcel, and a public hearing must be conducted upon the proposed fee or charge. If written protests against the proposed “fee” or “charge” are presented by a majority of owners of the identified parcels, the fee or charge may not be imposed. The California Supreme Court in *Bighorn* indicated that once a property owner or resident has paid the connection charges and has become a customer of a public water agency, all charges for water delivery incurred thereafter are charges for a property-related service, whether the charge is calculated on the basis of consumption or is imposed as a fixed monthly fee. Accordingly, the imposition or increase of any fee or charge by the City for its water service will be the

subject of such a majority protest. If such a majority protest occurs, the ability of the City to generate Gross Aggregate Revenues sufficient to comply with its covenants under the Indenture may be adversely affected.

Article XIID states that, beginning July 1, 1997, all “fees” or “charges” must comply with its provisions. It is unclear how the provisions of Article XIID will be applied to fees or charges established prior to such date. It is also unclear how the provisions of Article XIID will be applied to fees or charges established after such date but prior to the *Bighorn* decision.

As a result of the *Bighorn* decision, there can be no assurance that Proposition 218 will not limit the ability of the City to impose, levy, charge and collect increased fees and charges for water services.

On April 20, 2015, the California Court of Appeal, Fourth District, issued an opinion in *Capistrano Taxpayers Association, Inc. v. City of San Juan Capistrano* (2015) upholding tiered water rates under Proposition 218 so long as the tiered rates are based on the cost of providing service at a given level of usage. The opinion included a finding that the City of San Juan Capistrano did not attempt to calculate the actual costs of providing water at various tier levels. The City’s water rates, which are described under the captions “THE WATER SYSTEM—Rate Structure,” include tiered rates based on usage. The City has reviewed the holding in *San Juan Capistrano* and believes that the City’s water rates comply with Article XIID.

Prior to 2008, the City did not comply with the applicable notice and protest procedures of Article XIID for its water rate increases. Since 2008, the City has followed the notice, hearing and protest procedures in Article XIID in connection with its water rate increased and plans to follow such notice, hearing and protest procedure in connection with future rate increases.

The City is unable to predict how Article XIIC and Article XIID will be interpreted by the courts in the future. Bond Counsel has advised that there can be no assurance that Article XIIC and Article XIID will not limit the ability of the City to charge and collect fees and charges for its water service sufficient to enable the City to comply with its covenants under the Indenture or that the ability of the City to generate Gross Aggregate Revenues sufficient to pay principal and interest on the 2021A Bonds will not be adversely affected. See “SECURITY AND SOURCES OF PAYMENT FOR THE 2021A BONDS – Rate Covenant” and “LITIGATION.” Further, in such event, there can be no assurance that remedies will be available to fully protect the interests of the holders of the 2021A Bonds. See “SECURITY AND SOURCES OF PAYMENT FOR THE 2021A BONDS – Limitations on Remedies.”

Proposition 26

Proposition 26 was approved by the electorate at the November 2, 2010 election and amended California Constitution Articles XIII A and XIIC. The proposition imposes a two-thirds voter approval requirement for the imposition of fees and charges by the State. It also imposes a majority voter approval requirement on local governments with respect to fees and charges for general purposes, and a two-thirds voter approval requirement with respect to fees and charges for special purposes. Proposition 26, according to its supporters, was intended to prevent the circumvention of tax limitations imposed by the voters pursuant to Proposition 13, approved in 1978, Proposition 218, and other measures through the use of non-tax fees and charges. Proposition 26 expressly excludes from its scope “a charge imposed for a specific government service or product provided directly to the payor that is not provided to those not charged, and which does not exceed the reasonable cost to the State or local government of providing the service or product to the payor” and “assessments and property-related fees imposed in accordance with the provisions of Article XIID.” The California Supreme Court has stated that a fee for ongoing water service through an existing connection is imposed “as an incident of property ownership” within the meaning of Article XIID. See “– Article XIIC and Article XIID of the California Constitution” above. The City believes

its water rates and charges meet the criteria for exclusion described above. The City is unable to predict, however, how Proposition 26 will be interpreted by the courts or what its ultimate impact, if any, will be.

Future Initiatives

Articles XIII A, XIII B, XIII C and XIII D were adopted as measures that qualified for the ballot pursuant to California's initiative process. From time to time other initiatives have been and could be proposed and adopted affecting PWP's revenues or ability to increase revenues. Neither the nature and impact of these measures nor the likelihood of qualification for ballot or passage can be anticipated by the City.

RATINGS

Fitch Ratings, Inc. ("Fitch") and S&P Global Ratings have assigned their municipal bond ratings of "_____" and "_____" respectively, to the 2021A Bonds. Such ratings reflect only the views of such organizations and any desired explanation of the significance of such ratings may be obtained from the rating agency furnishing the same, at the following addresses: Fitch Ratings, Inc., One State Street Plaza, New York, New York 10004; and S&P Global Ratings, 55 Water Street, New York, New York 10041. Generally, a rating agency bases its rating on the information and materials furnished to it and on investigations, studies and assumptions of its own. There is no assurance that any of such ratings will continue for any given period of time or that such ratings will not be revised downward or withdrawn entirely by the applicable rating agency, if in the judgment of such rating agency circumstances so warrant. Any such downward revision or withdrawal of such ratings may have an adverse effect on the 2021A Bonds.

TAX MATTERS

Federal Income Taxes

The Internal Revenue Code of 1986, as amended (the "Code"), imposes certain requirements that must be met subsequent to the issuance and delivery of the 2021A Bonds for interest thereon to be and remain excluded from gross income for federal income tax purposes. Noncompliance with such requirements could cause the interest on the 2021A Bonds to be included in gross income for federal income tax purposes retroactive to the date of issue of the 2021A Bonds. Pursuant to the Fiscal Agent Agreement and the Tax Certificate the City has covenanted to comply with the applicable requirements of the Code in order to maintain the exclusion of the interest on the 2021A Bonds from gross income for federal income tax purposes pursuant to Section 103 of the Code. In addition, the City has made certain representations and certifications in the Fiscal Agent Agreement and the Tax Certificate. Bond Counsel will not independently verify the accuracy of those representations and certifications.

In the opinion of Nixon Peabody LLP, Bond Counsel, under existing law and assuming compliance with the aforementioned covenant, and the accuracy of certain representations and certifications made by the City described above, interest on the 2021A Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Code. Bond Counsel is also of the opinion that such interest is not treated as a preference item in calculating the alternative minimum tax imposed under the Code.

In rendering these opinions, Bond Counsel has relied upon representations and covenants of the City concerning the property financed with 2021A Bond proceeds, the investment and use of 2021A Bond proceeds and the rebate to the federal government of certain earnings thereon. In addition, Bond Counsel has assumed that all such representations are true and correct and that the City will comply with such covenants. Bond Counsel has expressed no opinion with respect to the exclusion of the interest on the 2021A Bonds from gross income under Section 103(a) of the Code in the event that any of such

representations by the City are untrue or the City fails to comply with such covenants, unless such failure to comply is based on the advice or the opinion of Bond Counsel.

State Taxes

Bond Counsel is also of the opinion that interest on the 2021A Bonds is exempt from personal income taxes of the State of California under present State law. Bond Counsel expresses no opinion as to other state or local tax consequences arising with respect to the 2021A Bonds nor as to the taxability of the 2021A Bonds or the income therefrom under the laws of any state other than California.

Original Issue Discount

Bond Counsel is further of the opinion that the excess of the principal amount of a maturity of the 2021A Bonds over its issue price (i.e., the first price at which price a substantial amount of such maturity of the 2021A Bonds was sold to the public, excluding bond houses, brokers or similar persons or organizations acting in the capacity of underwriters or wholesalers) (each, a “Discount Bond” and collectively the “Discount Bonds”) constitutes original issue discount which is excluded from gross income for federal income tax purposes to the same extent as interest on the 2021A Bonds. Further, such original issue discount accrues actuarially on a constant interest rate basis over the term of each Discount Bond and the basis of each Discount Bond acquired at such issue price by an initial purchaser thereof will be increased by the amount of such accrued original issue discount. The accrual of original issue discount may be taken into account as an increase in the amount of tax-exempt income for purposes of determining various other tax consequences of owning the Discount Bonds, even though there will not be a corresponding cash payment. Owners of the Discount Bonds are advised that they should consult with their own advisors with respect to the state and local tax consequences of owning such Discount Bonds.

Original Issue Premium

2021A Bonds sold at prices in excess of their principal amounts are “Premium Bonds”. An initial purchaser with an initial adjusted basis in a Premium Bond in excess of its principal amount will have amortizable bond premium which is not deductible from gross income for federal income tax purposes. The amount of amortizable bond premium for a taxable year is determined actuarially on a constant interest rate basis over the term of each Premium Bond based on the purchaser’s yield to maturity (or, in the case of Premium Bonds callable prior to their maturity, over the period to the call date, based on the purchaser’s yield to the call date and giving effect to any call premium). For purposes of determining gain or loss on the sale or other disposition of a Premium Bond, an initial purchaser who acquires such obligation with an amortizable bond premium is required to decrease such purchaser’s adjusted basis in such Premium Bond annually by the amount of amortizable bond premium for the taxable year. The amortization of bond premium may be taken into account as a reduction in the amount of tax-exempt income for purposes of determining various other tax consequences of owning such 2021A Bonds. Owners of the Premium Bonds are advised that they should consult with their own advisors with respect to the state and local tax consequences of owning such Premium Bonds.

Ancillary Tax Matters

Ownership of the 2021A Bonds may result in other federal tax consequences to certain taxpayers, including, without limitation, certain S corporations, foreign corporations with branches in the United States, property and casualty insurance companies, individuals receiving Social Security or Railroad Retirement benefits, individuals seeking to claim the earned income credit, and taxpayers (including banks, thrift institutions and other financial institutions) who may be deemed to have incurred or continued

indebtedness to purchase or to carry the 2021A Bonds. Prospective investors are advised to consult their own tax advisors regarding these rules.

Interest paid on tax-exempt obligations such as the 2021A Bonds is subject to information reporting to the Internal Revenue Service (the “IRS”) in a manner similar to interest paid on taxable obligations. In addition, interest on the 2021A Bonds may be subject to backup withholding if such interest is paid to a registered owner that (a) fails to provide certain identifying information (such as the registered owner’s taxpayer identification number) in the manner required by the IRS, or (b) has been identified by the IRS as being subject to backup withholding.

Bond Counsel is not rendering any opinion as to any federal tax matters other than those described in the opinions attached as Appendix F. Prospective investors, particularly those who may be subject to special rules described above, are advised to consult their own tax advisors regarding the federal tax consequences of owning and disposing of the 2021A Bonds, as well as any tax consequences arising under the laws of any state or other taxing jurisdiction.

Changes in Law and Post Issuance Events

Legislative or administrative actions and court decisions, at either the federal or state level, could have an adverse impact on the potential benefits of the exclusion from gross income of the interest on the 2021A Bonds for federal or state income tax purposes, and thus on the value or marketability of the 2021A Bonds. This could result from changes to federal or state income tax rates, changes in the structure of federal or state income taxes (including replacement with another type of tax), repeal of the exclusion of the interest on the 2021A Bonds from gross income for federal or state income tax purposes, or otherwise. It is not possible to predict whether any legislative or administrative actions or court decisions having an adverse impact on the federal or state income tax treatment of holders of the 2021A Bonds may occur. Prospective purchasers of the 2021A Bonds should consult their own tax advisors regarding the impact of any change in law on the 2021A Bonds.

Bond Counsel has not undertaken to advise in the future whether any events after the date of issuance and delivery of the 2021A Bonds may affect the tax status of interest on the 2021A Bonds. Bond Counsel expresses no opinion as to any federal, state or local tax law consequences with respect to the 2021A Bonds, or the interest thereon, if any action is taken with respect to the 2021A Bonds or the proceeds thereof upon the advice or approval of other counsel.

LITIGATION

There is no litigation or action of any nature now pending against the City or, to the knowledge of its respective officers, threatened, seeking to restrain or enjoin the issuance, sale, execution or delivery of the 2021A Bonds or in any way contesting or affecting the validity of the 2021A Bonds or any proceedings of the City taken with respect to the issuance or sale thereof, or the pledge or application of any moneys or security provided for the payment of the 2021A Bonds or the use of proceeds thereof. There is no litigation pending, or to the knowledge of the City, threatened, questioning the existence of the City or the title of the officers of the City to their respective offices. Except as described below, there is no litigation pending, or to the knowledge of the City, threatened, which materially questions or affects the financial condition of the Water System.

Kessner Litigation

In February 2020, the City was named (along with over 80 other California public agency defendants) in a Complaint for Damages and Equitable Relief and Petition for Writ of Mandate in Kessner

v. City of Santa Clara, Santa Clara County Superior Court case no. 20CV364054. The Plaintiffs allege that the Defendants' water rates include the cost of maintaining sufficient infrastructure and capacity in the water system to fight fires and the cost of providing the water that is used in firefighting, and that this practice violates Proposition 218 because firefighting is a general government service available to the public at large in substantially the same manner as it is available to property owners.

The lawsuit is pled as a class action, with subclasses against each of the Defendants, including the City. The complaint seeks from the City a class refund of the alleged overcharges collected since January 1, 2019 as well as declaratory, injunctive, and mandamus relief to stop the City from collecting the alleged overcharges in its water rates.

At present, discovery is stayed. The court is processing challenges to the pleadings, including challenges to venue, jurisdiction, joinder, and other alleged defects in the complaint. The pleadings are unlikely to be settled until the Spring of 2022.

The City intends to aggressively defend its position in Kessner and believes that it has good defenses. In addition, in 2020, Governor Newsom signed into law Senate Bill 1386, which states that it is appropriate for water service fees to pay for to fire hydrants and other infrastructure used to distribute water that aids in the protection of property from fire. Senate Bill 1386 may provide additional support to the City and the other defendants in this litigation.

Given the unsettled pleadings, the outcome or impact of the Kessner Petition on the Water System or its rates cannot be predicted at this time.

AUDITED FINANCIAL STATEMENTS

The audited financial statements of the City's Water and Power Enterprise Funds, as of June 30, 2020 and for the year then ended, are included in Appendix B to this Official Statement. A complete copy of the City's Comprehensive Annual Financial Report may be obtained from the City. There has been no material adverse change in the finances of the Water System since June 30, 2020. The 2021A Bonds are revenue obligations of the City payable only from the Pledged Revenues of the Water System and certain other funds as provided in the Fiscal Agent Agreement. The financial statements of the City's Water and Power Enterprise Funds for the Fiscal Year ended June 30, 2020 have been audited by CliftonLarsonAllen LLP, independent accountants (the "Auditor") as stated in their report appearing in Appendix B. The Auditor has not updated its report or taken any action intended or likely to elicit information concerning the accuracy, completeness or fairness of the statements made in this Official Statement, and no opinion is expressed by CliftonLarsonAllenLLP with respect to any event or transaction subsequent to their report dated March 5, 2021. The City has not requested, nor has the Auditor given, the Auditor's consent to the inclusion in Appendix B of its report on such financial statements.

FORWARD-LOOKING STATEMENTS

The statements contained in this Official Statement and in the Appendices hereto, and in any other information provided by PWP or the City, that are not purely historical, are forward-looking statements, including statements regarding PWP or the City's expectations, hopes, intentions or strategies regarding the future. Prospective investors should not place undue reliance on forward-looking statements. All forward-looking statements included in this Official Statement are based on information available to PWP and the City on the date hereof, and PWP and the City assume no obligation to update any such forward-looking statements. It is important to note that PWP's actual results could differ materially from those in such forward-looking statements.

The forward-looking statements herein are necessarily based on various assumptions and estimates and are inherently subject to various risks and uncertainties, including risks and uncertainties relating to the possible invalidity of the underlying assumptions and estimates and possible changes or developments in social, economic, business, industry, market, legal and regulatory circumstances and conditions and actions taken or omitted to be taken by third parties, including customers, suppliers and competitors, and legislative, judicial and other governmental authorities and officials. Assumptions related to the foregoing involve judgments with respect to, among other things, future economic, competitive and market conditions and future business decisions, all of which are difficult or impossible to predict accurately and many of which are beyond the control of PWP and the City. Any of such assumptions could be inaccurate and, therefore, there can be no assurance that the forward-looking statements included in this Official Statement would prove to be accurate

MUNICIPAL ADVISOR

The City has retained Public Resources Advisory Group, Los Angeles, California, as municipal advisor (the “Municipal Advisor”) in connection with the issuance of the 2021A Bonds. The Municipal Advisor has not been engaged, nor has it undertaken, to audit, authenticate or otherwise verify the information set forth in this Official Statement, or any other related information available to the City, with respect to accuracy and completeness of disclosure of such information. The Municipal Advisor has reviewed this Official Statement, but makes no guaranty, warranty or other representation respecting accuracy and completeness of the information contained in this Official Statement. Certain fees of the Municipal Advisor are contingent on the issuance and delivery of the 2021A Bonds.

PURCHASE AND REOFFERING

_____ (the “Initial Purchaser”) purchased the 2021A Bonds from the City at a competitive sale at an aggregate purchase price of \$_____ (representing the aggregate principal amount of the 2021A Bonds, plus original issue premium of \$_____, and less an Initial Purchaser’s discount of \$_____). The public offering prices may be changed from time to time by the Initial Purchaser. The Initial Purchaser may offer and sell 2021A Bonds to certain dealers and others at prices lower than the offering prices shown on the inside cover page hereof.

CERTAIN LEGAL MATTERS

The issuance of the 2021A Bonds is subject to the approving opinion of Nixon Peabody LLP, Los Angeles, California, Bond Counsel. A complete copy of the proposed form of Bond Counsel opinion is contained in Appendix F. Bond Counsel will receive compensation from the City contingent upon the sale and delivery of the 2021A Bonds. Certain legal matters will be passed upon for the City by Michele Beal Bagneris, City Attorney of the City, and by Nixon Peabody LLP, Los Angeles, California, Disclosure Counsel.

CONTINUING DISCLOSURE

Pursuant to a Continuing Disclosure Agreement to be entered into with Digital Assurance Certification, L.L.C. (“DAC”) simultaneously with the issuance of the 2021A Bonds (the “Continuing Disclosure Agreement”), under which the City has designated DAC as Disclosure Dissemination Agent (the “Disclosure Dissemination Agent”), the City has covenanted for the benefit of the holders and beneficial owners of the 2021A Bonds to provide certain financial information and operating data relating to the City and the Water System by not later than 210 days following the end of the City’s Fiscal Year (which Fiscal Year presently ends on June 30) (the “Annual Report”), commencing with the report for Fiscal Year 2019-20, and to provide notices of the occurrence of certain enumerated events. The Annual

Report and the notices of specified events will be filed by the City with the Municipal Securities Rulemaking Board (“MSRB”) through the MSRB’s Electronic Municipal Market Access (EMMA) System. The specific nature of the information to be contained in the Annual Report and the notice of specified events is set forth in APPENDIX E – “FORM OF CONTINUING DISCLOSURE AGREEMENT” herein. These covenants have been made in order to assist the Initial Purchaser in complying with S.E.C. Rule 15c2-12(b)(5) (the “Rule”).

In the last five years, the City has failed to comply with certain of its prior continuing disclosure agreements as follows: (1) for fiscal year ended June 30, 2017, the City filed certain annual reports that were missing certain information required under some of its prior continuing disclosure obligations; and (2) the City did not timely file a notice of a rating upgrade in connection with one of its electric revenue fund obligations.

The City will reserve the right to amend the Continuing Disclosure Agreement, and to obtain the waiver of non-compliance with any provision of the Continuing Disclosure Agreement, if such amendment or waiver is supported by a written opinion of counsel expert in federal securities laws selected by the City to the effect that such amendment or waiver would not materially impair the interest of the holders of the 2021A Bond and would not, in and of itself, cause the Continuing Disclosure Agreement to violate the Rule if such amendment or waiver had been effective at the time of the primary offering of the 2021A Bonds, after taking into account any applicable amendments to or official interpretations of the Rule.

The Disclosure Dissemination Agent has only the duties specified in the Continuing Disclosure Agreement. The Disclosure Dissemination Agent’s obligation to deliver the information at the times and with the contents described in the Continuing Disclosure Agreement is limited to the extent the City has provided that information to the Disclosure Dissemination Agent as required by the Continuing Disclosure Agreement. The Disclosure Dissemination Agent has no duty with respect to the content of any disclosures or notice made pursuant to the terms of the Continuing Disclosure Agreement or duty or obligation to review or verify any information in the Annual Report, Audited Financial Statements, notice of Notice Event or Voluntary Report (all as defined in the Continuing Disclosure Agreement), or any other information, disclosure or notices provided to it by the City, and the Disclosure Dissemination Agent shall not be deemed to be acting in any fiduciary capacity for the City, the holders of the 2021A Bonds or any other party. The Disclosure Dissemination Agent has no responsibility for any failure to report to the Disclosure Dissemination Agent a Notice Event or a duty to determine the materiality thereof, as to determine or liability for failing to determine whether the City has complied with the Continuing Disclosure Agreement, and the Disclosure Dissemination Agent may conclusively rely upon certification of the City at all times.

The City has adopted policies and procedures to assist the City in complying with disclosure undertakings.

EXECUTION AND DELIVERY

The execution and delivery of this Official Statement have been duly authorized by the City.

CITY OF PASADENA, CALIFORNIA

By: _____
Director of Finance

APPENDIX A

THE CITY OF PASADENA

General

The City of Pasadena, California (the “City”) was incorporated in 1886 and became a freeholder charter city in 1901. The City adopted its city manager form of government by amendments to the City Charter in 1921. The City Council is responsible for the administration of the City.

The City covers nearly 23 square miles and is located in Los Angeles County in the northwestern portion of the San Gabriel Valley. The City is bounded on the west by the cities of Los Angeles, La Cañada and Glendale, on the south by South Pasadena and San Marino, on the east by Arcadia and Sierra Madre, and on the north by the unincorporated community of Altadena and the San Gabriel Mountains.

In addition to general governmental services such as fire and safety, the City provides its approximately 140,000 residents with power, water and refuse services. The Southern California Gas Company supplies natural gas, and the County of Los Angeles provides sewage services.

The City consistently receives international recognition for the Rose Parade and Rose Bowl events and has achieved significant success in blending urban amenities with suburban neighborhoods. Engineering, finance and health care comprise the primary industry sectors. In addition, the academic and research pursuits of the California Institute of Technology, the Jet Propulsion Laboratory and the Art Center College of Design bring a unique combination of resources to the City. The City’s downtown continues to serve as the corporate and entertainment center for the San Gabriel Valley’s 1.8 million residents.

City Council

All powers of the City are vested in the City Council which is empowered to carry out the provisions of the City Charter and perform all duties and obligations of the City as imposed by State law. The City has an eight-member City Council comprised of members elected in seven City Council districts and a citywide elected mayor. Each Council Member and the Mayor are elected for four-year staggered terms. The Council Members elect the Vice-Mayor from their membership, who traditionally serves two consecutive one-year terms. The names, occupations and term expirations of the current members of the City Council are as follows:

Name	Occupation	Term Expiration
Victor M. Gordo, Mayor	Attorney	November 2024
Tyrone A.L. Hampton (District 1)	Business Owner	November 2024
Felicia Williams (District 2)	Government Finance Consultant	November 2024
John J. Kennedy (District 3)	Executive Consultant	November 2022
Gene Masuda (District 4)	Business Owner	November 2024
Jessica Rivas (District 5)	Deputy County Counsel	November 2022
Steve Madison (District 6)	Attorney	November 2024
Andy Wilson, Vice Mayor (District 7)	Business Owner	November 2022

City Staff

Steve Mermell, City Manager, was appointed Pasadena City Manager in July 2016, after having served as the City’s Interim City Manager for the previous five months, and as Assistant City Manager

since 2009. Mr. Mermell has spent his entire professional government service career at Pasadena and is well-acquainted with all aspects and operations of the City, www.cityofpasadena.net, by working in a variety of positions since joining the organization in 1989 as an analyst for the Water and Power Department. In addition to the top management positions, he has held numerous key positions, including, among others, Acting Finance Director, 2008-2009; Deputy Finance Director, 2006-2007; Budget Administrator, 2001-2006, and Purchasing Administrator, 1995-2001. Mr. Mermell also fulfilled temporary assignments as the director for both the Planning and Public Health departments.

As Pasadena's City Manager, Mr. Mermell is responsible for implementing the policies and ordinances enacted by the Pasadena City Council; and ensuring that the City's Charter and Municipal Code are properly utilized by the City's 17 departments and 2,000-plus employees. He is responsible for development of the City's annual operating and capital improvement program budgets, which is approximately \$889 million for Fiscal Year 2021-2022 that began July 1, 2021, and also includes funding for the City's three Operating Companies—the Rose Bowl (Stadium) Operating Company; the Pasadena (Convention) Center Operating Company and the Pasadena Community Access Corporation, which oversees the public, education and government (PEG) cable channels for Pasadena.

During his time at Pasadena, Mr. Mermell has helped ensure stability for several city departments and has guided the City's economic development strategies during the recent Great Recession, including moving forward with a successor plan for redevelopment agency issues. He had a lead role in transforming the City Public Health Department's clinical programs from City to non-profit health providers; lead a task force to successfully address funding issues associated with the City's closed Fire and Police Retirement System and its \$150 million unfunded liability; developed working agreements to strengthen ties between the City and the Pasadena Unified School District to better use City and PUSD resources to benefit Pasadena children; and negotiated a new long-term lease for the historic Pasadena Playhouse, California's official State Theater, in wake of the theater organization's bankruptcy.

As City Manager, Mr. Mermell also now leads the City's Executive Leadership Team, comprised of 13 Department Directors, the City Attorney, City Clerk, Assistant City Managers and Public Information Officer; and is the City's chief executive liaison for the Tournament of Roses Association; the Chamber of Commerce and the numerous business improvement and management districts throughout town. Mr. Mermell has a master's degree in Public Administration and a bachelor's degree in Political Science, both from the California State University, Northridge.

Matthew E. Hawkesworth, Director of Finance, joined the City in October 2015. His responsibilities include management of the financial affairs of the City and the Successor Agency to the Pasadena Community Development Commission, which include: preparation of the annual operating budget; preparation of the Comprehensive Annual Financial Report (CAFR); purchasing; collections; payroll; investments; debt management and financing of major City capital improvements. Prior to his current position, he served as Assistant City Manager for the City of Rosemead for eight years overseeing Finance, Human Resources, Public Works, Technology and Risk Management; Finance Director/Treasurer for the City of Claremont for three years; and a variety of positions in the Finance Department for the City of El Monte over nine years. Mr. Hawkesworth received his Bachelor of Arts degree in Social Science (economics and political science) from the University of La Verne (California) in 1995. He has completed numerous advanced courses in finance and accounting through the Government Finance Officers Association and is a graduate of the Claremont Leadership Academy, sponsored by the Claremont McKenna College Kravis Leadership Institute. During his career, Mr. Hawkesworth has been an active participant of the Government Finance Officers Association and California Society of Municipal Finance Officers, serving as a budget and CAFR reviewer for the annual awards program; served on the League of California Cities Revenue and Taxation Committee and Other Post-Employment Benefits (OPEB) Taskforce. Mr. Hawkesworth also has a humanistic side, demonstrated by his founding of a non-profit

organization in 2011 dedicated to providing refurbished bicycles and new helmets to low-income and at-risk youth.

Michele Beal Bagneris, *City Attorney*, was named the Pasadena City Attorney in May 1997. At that time, she was a shareholder in the law firm of Richards, Watson & Gershon, where she specialized in public law since joining the firm in 1983. Initially, while serving as City Attorney, she continued to practice law as a member of the law firm, advising public clients in a wide range of areas, including land use, general advisory matters, litigation, labor and employment, code enforcement and nuisance abatement matters. She also served as the City Attorney for the City of Monrovia from 1992 through September 1999, when she became the in-house City Attorney for the City of Pasadena. She currently serves in that position and is also the City Prosecutor. As the City Attorney/City Prosecutor, she is responsible for managing all legal matters for the City, including supervision of in-house lawyers and any outside counsel engaged to advise the City. Ms. Bagneris received her bachelor's degree in International Relations from Stanford University in 1980 and her Juris Doctorate Degree in 1983 from Boalt Hall School of Law, University of California, Berkeley. She is active in professional and community organizations including serving as President of the Los Angeles County Prosecutor's Association; past President of the League of California Cities City Attorney's Department; past President of the City Attorney's Association of Los Angeles County; and member of other legal and community organizations. She is admitted to practice law in the State of California, United States District Court and the U.S. Court of Appeals, Ninth Circuit.

Population

The following table presents a ten-year history of the population of the City since 2012.

TABLE A-1
POPULATION
For Years 2009 through 2021

Year (as of January 1)	Population
2012	139,222
2013	140,102
2014	140,879
2015	141,510
2016	141,023
2017	143,333
2018	144,388
2019	146,312
2020	144,842
2021	145,306

Source: State of California, Department of Finance.

Employment

Although no annual calendar year information is regularly compiled on employment and unemployment in the City alone, fiscal year unemployment rates can be found in the statistical section of the City's financial statements.

The following table shows employment, unemployment and labor force information for Los Angeles County for calendar years 2017 through 2021 (as of June 2021).

TABLE A-2
LOS ANGELES COUNTY
EMPLOYMENT, UNEMPLOYMENT AND LABOR FORCE
AVERAGES FOR CALENDAR YEARS 2013 THROUGH 2019⁽¹⁾
(in thousands)

	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021⁽¹⁾</u>
County Employment	4,884	4,930	4,894	4,271	4,569
County Unemployment	240	236	227	597	542
County Civilian Labor Force	5,124	5,166	5,122	4,868	5,111
County Unemployment Rate	4.7%	4.6%	4.4%	12.3%	10.6%
State Unemployment Rate	4.8%	4.1%	4.0%	9.3%	7.7%

⁽¹⁾ As of June 2021.

Source: State of California Employment Development Department. Current Labor Force and Industry Employment. Los Angeles-Long Beach Metropolitan Statistical Area.

Major Employers

Industry in the City is diversified. Some of the leading industries include higher education, research and development, health care, financial services and communications. The major employers within the City as of June 2021 are listed below.

**TABLE A-3
MAJOR EMPLOYERS
2021**

Company	Approximate Number of Employees	Business Line
California Institute of Technology-Jet Propulsion Laboratory	6,200	Aerospace Research
California Institute of Technology-Campus	3,900	Education
Huntington Memorial Hospital	3,800	Hospital
Kaiser Permanente	3,300	Health Care
Pasadena City College	2,400	Education
Pasadena Unified School District	2,100	Education
The City of Pasadena	2,100	Government
Art Center College of Design	900	Education
Hathaway-Sycamores	600	Social Services
Western Asset	550	Financial
Cit/One West Bank	550	Financial
East West Bank	550	Financial
Parsons Corporation	450	Engineering/Construction
Green Dot	350	Financial
Pacific Clinics Administration	300	Healthcare
ACCO Engineer	300	Engineering
Rusnak Pasadena	300	Automotive Retail
Bluebeam	300	Software
Tetra Tech	250	Engineering
Bank of America	200	Financial
Alexandria RE	200	Financial
Open X	200	Software
Carnegie Institute of Science/GMTO	200	Research
ADP	200	Financial
The Langham Huntington Hotel (Ritz-Carlton)	200	Hotel
WESCOM	200	Financial

Source: City of Pasadena, Economic Development Division

Housing

The following table presents a ten-year history of total housing units within the City, for fiscal years ended January 1, 2012 through 2021.

TABLE A-4
HOUSING UNITS⁽¹⁾
For Fiscal Years Ended January 1, 2012 through 2021

Fiscal Year Ended January 1	Housing Units
2012	60,263
2013	60,314
2014	60,369
2015	60,361
2016	60,703
2017	61,766
2018	62,170
2019	62,653
2020	62,753
2021	63,161

⁽¹⁾ As of fiscal year end. Includes single family dwellings and multifamily units, including rental units and condominiums. Source: State of California, Department of Finance; Years 2009-2010- E-8 Historical Population and Housing Estimates for Cities, Counties, and the State; Years 2011-2015- E-5 Population and Housing Estimates for Cities, Counties and the State, Year 2016-2021.

Building Permit Activity

The City's General Plan targets development in the City, providing for growth in employment and housing. Since 1992 (the year the General Plan was approved), there have been seven specific plan areas established and approved by the City Council for the following areas: North Lake, West Gateway, South Fair Oaks, East Pasadena, East Colorado, Fair Oaks/Orange Grove and the Central District. The Land Use and Mobility Elements of the General Plan were updated in 2004 at the same time the City's Zoning Code was updated.

The following table shows the value of building permits issued in the City for fiscal years 2011-12 through 2019-20

TABLE A-5
CITY OF PASADENA
BUILDING PERMIT VALUATION AND PERMIT ACTIVITY
for Fiscal Years 2016-17 through 2020-21
(Valuation in Millions)

	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>
Building Permit Valuations					
Nonresidential	\$61.3	\$18.8	\$59.8	\$63.4	\$57.0
Residential	22.22	64.7	39.1	39.2	62.9
Residential New Construction	<u>112.4</u>	<u>101.4</u>	<u>174.2</u>	<u>230.5</u>	<u>13.9</u>
Total	\$195.9	184.9	273.1	333.1	133.8
Number of Permits Issued					
Non Residential	580	585	542	528	486
Residential	2,377	2,517	2,452	2,455	2,625
Residential New Construction	<u>52</u>	<u>39</u>	<u>45</u>	<u>57</u>	<u>3</u>
Total	3,009	3,141	3,039	3,040	3,114

Source: City of Pasadena, Planning and Permitting Department.

Community Facilities

The City has a central library and eight branch libraries, four community centers, 24 parks and 33 playgrounds. Other entertainment and cultural facilities include the Rose Bowl, the Norton Simon Museum, the Pacific Asia Museum, the Gamble House, the Wrigley Estate, California Institute of Technology, Beckman Auditorium, the Pasadena Civic Auditorium and the Pasadena Playhouse. The City has long enjoyed a reputation as a community rich in culture, traditions and quality of life. The City is also home to the Tournament of Roses, sponsors of the well-known New Year's Day Parade and Rose Bowl football game held in the City each January.

Transportation

The City is served by an extensive surface and air transportation network. Several major freeways make the City accessible to the entire Los Angeles Basin. The City is served by three commercial airports: Bob Hope Airport, located in nearby Burbank, is within 15 miles, Los Angeles International Airport is within 27 miles and Ontario International Airport is within 45 miles. Continental Trailways and Greyhound bus lines have local depots in the City. The City supplements the local Metropolitan Transit Authority and the Foothill Transit Authority bus routes with the Pasadena Area Rapid Transit Services ("ARTS") bus services to expand the covered area. The ARTS buses provide convenient and nominal-fare transportation between many of the City's residential neighborhoods, retail, business and entertainment centers within the City. There are currently two ARTS routes that offer service seven days per week. In addition, the City provides Dial-A-Ride bus services for the elderly and disabled which is available for a nominal usage fee.

The nearest port facilities are located in the Los Angeles and Long Beach harbors which are approximately 30 and 35 miles away, respectively. The \$1 billion Alameda Corridor East project, being undertaken by the Alameda Corridor East Construction Authority, consists of safety upgrades, traffic signal control measures, road widening and grade separation projects to improve traffic conditions along the railroad facilities connecting the Ports of Los Angeles and Long Beach with the transcontinental rail network through the San Gabriel Valley, creating a faster more efficient method of distributing trade.

In addition, the Gold Line of the Metro Line light rail system runs from Union Station in the City of Los Angeles, through the City and terminates in the City of Sierra Madre. The Gold Line began operations in 2003.

Employee Relations

City employees are represented by various unions and labor relations have been generally amicable. The City has experienced no major strikes, work stoppages or other incidents. Currently, most City employees are represented by unions. Set forth below is a table indicating the various unions representing employees within the City. The number of employees represented by these unions as of August 12, 2021, and the dates on which the current labor agreements expire (there are no provisions for the reopening of wage or benefit levels prior to expiration) are set forth in the following table.

**TABLE A-6
CITY OF PASADENA
EMPLOYEE UNION REPRESENTATION**

Name of Union	Number of Employees Represented as of August 12, 2021	Expiration of Contract
American Federation of State, County and Municipal Employees	275	June 30, 2022
International Brotherhood of Electrical Workers	106	June 30, 2022
International Union of Operating Engineers	19	September 30, 2021
Service Employee International Union	27	June 30, 2021
Laborers International Union of North America	313	June 30, 2022
Pasadena Fire Fighters Association	130	September 30, 2021
Pasadena Police Officers Association	198	March 31, 2022
Pasadena Fire Fighters Management Association	6	September 30, 2021
Pasadena Management Association	450	September 30, 2021

*The City continues to engage in labor negotiations with the Service Employee International Union which have expired contracts.
Source: City of Pasadena, Human Resources Department.

In contract negotiations between 2014-16, employees represented by the various unions and employee organizations agreed that employees will assume full or partial responsibility for their respective obligation owed by the employees to the California Public Employees' Retirement System ("CalPERS"). Prior to these negotiations, the City had agreed with the Police Officers Association ("POA"), Fire Fighters Association ("FFA"), American Federation of State, County and Municipal Employees ("AFSCME"), and Pasadena Management Association ("PMA") to pay (or "pick-up") all or a portion of the employees' required contribution to CalPERS. These employee contributions range from 7% to 12.50% in total compensation.

As of January 1, 2019, PMA members began paying their full 8% obligation and as of July 1, 2019, began paying an additional 1.25% as a cost-share of the employer rate for a total of 9.25%. The City continues to pick up the full 8% for AFSCME membership contribution. AFSCME members offset this amount by paying 8% of the City's employer rate back to the City to have a net effect of zero. This payment arrangement with AFSCME results in an increase in the income used to calculate pension benefits to employees under the CalPERS formula. The cost-share arrangements in place with the other employee organizations result in offsets to the City's CalPERS pension liabilities.

Retirement System

General.

Almost all permanent City employees, except police and fire CalPERS personnel employed prior to July 1, 1977, are members of CalPERS for purposes of pension benefits. CalPERS is an agent multiple employer public employee retirement system which acts as a common investment and administrative agent for participating public employers within the State of California. The plan provides retirement and disability benefits, annual cost-of-living adjustments and death benefits to plan members and their beneficiaries. CalPERS issues a separate publicly available financial report that includes financial statements and required supplemental information of participating public entities within the State of California. The most recent annual report issued by CalPERS to the City was in July 2020 (the "July 2020 CalPERS Report"). The July 2020 CalPERS Report includes information based on the June 30, 2019 actuarial valuation of assets

included therein (the “2019 Actuarial Valuation”). Copies of the CalPERS’ annual financial report may be obtained from the CalPERS Executive Office, Lincoln Plaza Complex, 400 Q Street, Sacramento, CA 95811 or at www.calPERS.ca.gov. The July 2020 CalPERS Report to the City can also be found on the City’s website at <http://cityofpasadena.net/Finance/PERS-Actuarial-Reports>. Additional information about the CalPERS Plans can also be found in Note 18 to the City’s Audited Financial Statements attached as Appendix B to this Official Statement.

CalPERS is a contributory plan deriving funds from employer and employee contributions as well as earnings from investments. Participants are required to contribute a percentage of their annual covered salary. As of June 30, 2016, the contribution rates were 8% for miscellaneous employees. In some cases, the City makes the contributions required of City employees on their behalf and for their account, but is wholly or partially reimbursed by employees. Different employee bargaining groups have different reimbursement rates ranging from the 8% to 12%. The City is also required to contribute at an actuarially determined rate. Benefit provisions and all other requirements are established by state statute or collective bargaining agreements with employee bargaining groups. See “Employee Relations” above.

Recent Actuarial Changes and Related Developments.

In recent years, the CalPERS Board of Administration (the “CalPERS Board”) has taken several steps, as described below, intended to reduce the amount of the unfunded accrued actuarial liability of its managed plans. Many of the assumptions and policies implemented by the CalPERS Board have increased and are likely to continue to increase both the required contributions and the unfunded liabilities of its member employers, including the City.

On March 14, 2012, the CalPERS Board voted to lower the CalPERS’ rate of expected price inflation and its investment rate of return (net of administrative expenses) (the “CalPERS Discount Rate”) from 7.75% to 7.5%. On February 18, 2014, the CalPERS Board voted to keep the CalPERS Discount Rate unchanged at 7.5%. On November 17, 2015, the CalPERS Board approved a new funding risk mitigation policy to incrementally lower the CalPERS Discount Rate by establishing a mechanism whereby such rate is reduced by a minimum of 0.05% to a maximum of 0.25% in years when investment returns outperform the existing CalPERS Discount Rate by at least four percentage points. On December 21, 2016, the CalPERS Board voted to lower the CalPERS Discount Rate to 7.0% over a three year phase-in period in accordance with the following schedule: 7.375% in fiscal year 2017-18, 7.25% in fiscal year 2018-19 and 7.00% in fiscal year 2019-20. The new discount rate went into effect July 1, 2018 for the City and other member employers. Lowering the CalPERS Discount Rate means member employers like the City will see increases in their normal costs and unfunded actuarial liabilities. Active members hired after January 1, 2013, under the PEPRA (defined below) will also see their contribution rates rise.

On January 1, 2013, the Public Employees’ Pension Reform Act of 2013 (“PEPRA”) took effect. The impact of the PEPRA is described below.

In April 2013, CalPERS Board approved revised actuarial policies that are aimed at returning the CalPERS system to fully-funded status within 30 years. These new policies include a rate-smoothing method with a 30-year fixed amortization period for gains and losses (rather than the current 30-year rolling amortization method). CalPERS delayed the implementation of the new policy until fiscal year 2015-16, and as described below further revised these policies in subsequent year.

Also, on February 20, 2014, the CalPERS Board approved new demographic assumptions reflecting (i) expected longer life spans of public agency employees and related increases in costs for the CalPERS system and (ii) trends of higher rates of retirement for certain public agency employee classes, including police officers and firefighters. The increase in liability due to the new assumptions will be

amortized over 20 years with increases phased in over five years, beginning with the contribution requirement for fiscal year 2016-17.

The CalPERS Board is required to undertake an experience study every four years under its Actuarial Assumptions Policy and State law. As a result of the most recent experience study, on December 20, 2017, the CalPERS Board approved new actuarial assumptions, including (i) lowering the inflation rate to 2.625% for the June 30, 2017 actuarial valuation and to 2.50% for the June 30, 2018 actuarial valuation, (ii) lowering the payroll growth rate to 2.875% for the June 30, 2017 actuarial valuation and 2.75% for the June 30, 2018 actuarial valuation, and (iii) certain changes to demographic assumptions relating to the salary scale for most constituent groups, and modifications to the morality, retirement, and disability retirement rates.

On February 14, 2018, the CalPERS Board approved a new actuarial amortization policy with an effective date for actuarial valuations beginning on or after June 30, 2019, which includes (i) shortening the period over which actuarial gains and losses are amortized from 30 years to 20 years, (ii) requiring that amortization payments for all unfunded accrued liability bases established after the effective date be computed to remain a level dollar amount throughout the amortization period, (iii) removing the 5-year ramp-up and ramp-down on unfunded accrued liability bases attributable to assumptions changes and noninvestment gains/losses established on or after the effective date and (iv) removing the 5-year ramp-down on investment gains/losses established after the effective date. While CalPERS expects that reducing the amortization period for certain sources of unfunded liability will increase future average funding ratios, provide faster recovery of funded status following market downturns, decrease expected cumulative contributions, and mitigate concerns over intergenerational equity, such changes may result in increases in future employer contribution rates.

There can be no assurances that CalPERS will not make additional changes to its actuarial assumptions and policies in the future impacting upon the City's required funding contributions and its unfunded accrued liability.

California Public Employees' Pension Reform Act (PEPRA).

On September 12, 2012, the Governor signed Assembly Bills 340 and 197, which enacted the California Public Employees' Pension Reform Act or PEPRA. Among other things, PEPRA created a new benefit tier for public employees hired on or after January 1, 2013, who are defined as "new members." PEPRA plans adopted by the City were 2% at 62 for the general member benefit formula. PEPRA requires all new members to have an initial contribution rate of at least 50% of the normal cost rate or the current contribution rate of similarly situated employees, whichever is greater. The normal contribution rate, as calculated by the CalPERS' actuary covers the cost of a current year of service. PEPRA prohibits employers from paying any of PEPRA members' contribution on the employees' behalf, with certain exceptions. PEPRA also limits the types of compensation that can be used and caps the total amount of compensation that can be used to calculate a pension. The City believes that the provisions of PEPRA will help control its pension benefit liabilities in the future.

GASB Statement Nos. 67 and 68.

On June 25, 2012, GASB approved Statements Nos. 67 and 68 ("Statements") with respect to pension accounting and financial reporting standards for state and local governments and pension plans. The new Statements, No. 67 and No. 68, replace GASB Statement No. 27 and most of Statements No. 25 and No. 50. The changes impact the accounting treatment of pension plans in which state and local governments participate. Major changes include: (1) the inclusion of unfunded pension liabilities on the government's balance sheet (previously, such unfunded liabilities were typically included as notes to the

government's financial statements); (2) more components of full pension costs being shown as expenses regardless of actual contribution levels; (3) lower actuarial discount rates being required to be used for underfunded plans in certain cases for purposes of the financial statements; (4) closed amortization periods for unfunded liabilities being required to be used for certain purposes of the financial statements; and (5) the difference between expected and actual investment returns being recognized over a closed five-year smoothing period. The reporting requirements for government employers, including the City, took effect for the fiscal year beginning July 1, 2014, and affect reporting by the City for the CalPERS plans.

Annual Payments and Contribution Rates

Under GASB 27, an employer reports an annual pension cost ("APC") equal to the annual required contribution ("ARC") plus an adjustment for the cumulative difference between the APC and the employer's actual plan contributions for the year. The cumulative difference is called the net pension obligation. In order to calculate the dollar value of the ARC for inclusion in the financial statements, the applicable contribution rate is multiplied by the payroll of the covered employees that were paid during the relevant period.

Effective for financial statements beginning after July 1, 2014, GASB 68 replaces GASB 27. Hence, the annual report issued by CalPERS in 2015 will reflect GASB 68. GASB 68 will require additional reporting that CalPERS is intending to provide upon request by its members.

Set forth below is a history of the City's contributions to the CalPERS, including projected payments from fiscal year 2020-21 through fiscal year 2027-28. The City contributed 100% of its APC in each completed year shown. The City estimates that approximately 65% of the payments to these plans is made from the City's General Fund. The City's contributions shown below do not include the employee pick up in prior years. See "Employee Relations."

Also set forth below are the historic and projected contribution rates to the CalPERS plans. The projected contribution rates for fiscal year 2020-21 through 2027-28 are provided by CalPERS in its July 2020 report. The CalPERS projections assumed that all actuarial assumptions (including among other assumptions, a 7.00% return in fiscal year 2020-21 and a 7% return for the remaining year projection period) will be realized and that no future changes to assumptions, contributions, benefits or funding will occur during the projection period. The July 2020 CalPERS Report states that due to the adopted changes in the CalPERS Discount Rate effective for the next valuation in combination with the five year phase-in ramp (as discussed above), the increase in the required contributions are expected to continue for six years from fiscal year 2020-21 through fiscal year 2025-26. A complete explanation of the CalPERS assumptions can be found in the 2018 Actuarial Valuation.

In July 2019, CalPERS reported a preliminary 7.00% net return on investments for the fiscal year ended June 30, 2019. In the two prior fiscal years ended June 30, 2018 and 2017, the reported return was 8.6% and 11.2%, respectively. CalPERS weighted average investment returns for the past five, ten and twenty years ending June 30, 2018 are 7.9%, 5.7% and 6.0%, respectively. As discussed above, the CalPERS Board voted in December 2016 to phase in an assumed 7% rate of return by fiscal year 2019-20. CalPERS has publicly indicated that it expects actual investment returns in the next ten years to be less than the 7% assumed rate of return. Actual investment returns lower than the actuarially assumed level (in and of itself) will result in decreased funding status and increased required contribution by the City.

TABLE A-7
ANNUAL PAYMENTS TO RETIREMENT PLAN BY CITY
(\$ in Thousands)

Fiscal Year Ended June 30	CalPERS— Misc Employees Total Contribution	CalPERS- General Fund Contribution Misc Employees⁽²⁾
2006	\$7,402	\$2,887
2007	10,056	3,295
2008	12,228	3,435
2009	12,580	3,768
2010	12,566	3,765
2011	12,518	4,381
2012	16,744	5,860
2013	17,439	5,929
2014	17,909	6,089
2015	18,552	6,308
2016	20,751	7,055
2017	25,894	8,804
2018	27,112	13,556
2019	29,841	14,921
2020	36,132	18,066
2021 ⁽¹⁾	39,175	19,587
2022 ⁽¹⁾	41,587	20,794
2023 ⁽¹⁾	44,517	22,258
2024 ⁽¹⁾	46,685	23,342
2025 ⁽¹⁾	49,069	24,535
2026 ⁽¹⁾	47,208	23,604
2027 ⁽¹⁾	48,438	24,219
2028 ⁽¹⁾	46,851	23,426

⁽¹⁾ Projected annual payment to retirement plan based on projected contribution rates on CalPERS plus unfunded Accrual Liability in July 2020 CalPERS Report.

⁽²⁾ Historic Payment are net of City “pick-up”. See “Employee Relations” herein.

Source: City of Pasadena, Department of Finance.

TABLE A-8
ANNUAL CONTRIBUTION RATES
TO CALPERS RETIREMENT PLAN BY CITY

Fiscal Year Ended June 30	CalPERS Misc. Employees	CalPERS Misc. UAL\$
2011	11.4%	-
2012	15.5	-
2013	16.2	-
2014	17.4	-
2015	19.2	-
2016	21.1	-
2017	22.8	-
2018	7.986	\$18,895,540
2019	8.384	21,920,840
2020	9.246	25,084,564
2021 ⁽¹⁾	10.017 ⁽²⁾	27,226,688 ⁽³⁾
2022 ⁽¹⁾	9.77 ⁽²⁾	29,667,129 ⁽³⁾
2023 ⁽¹⁾	9.59 ⁽²⁾	32,474,454 ⁽³⁾
2024 ⁽¹⁾	9.4 ⁽²⁾	34,556,000 ⁽³⁾
2025 ⁽¹⁾	9.2 ⁽²⁾	36,872,000 ⁽³⁾
2026 ⁽¹⁾	9.0 ⁽²⁾	34,948,000 ⁽³⁾
2027 ⁽¹⁾	8.8 ⁽²⁾	36,121,000 ⁽³⁾
2028 ⁽¹⁾	8.7 ⁽²⁾	34,339,000 ⁽³⁾

⁽¹⁾ Projected annual payment to retirement plan based on projected contribution rates on CalPERS plus Unfunded Accrued Liability (UAL) actuarial report dated July 2020 Report.

⁽²⁾ Projected Normal Contribution Rate for Miscellaneous.

⁽³⁾ Amount of the Amortized Unfunded Actuarial Liability for Miscellaneous.

Source: City of Pasadena, Department of Finance.

Funding Status of Plans. Based on the 2020 Actuarial Valuation (which is the most recent actuarial valuation available), CalPERS reported an unfunded liability, as of June 30, 2020, of \$343.0 million for the City's miscellaneous employees as compared to an underfunding of \$326.3 million the previous year. Based upon this report, the City reported that its CalPERS obligation had a funded ratio of 72.0% based upon the market value of plan assets with respect to the City's miscellaneous employees. As noted above, CalPERS has changed its discount rate assumptions. The funding status as of June 30, 2020 was calculated using a CalPERS Discount Rate of 7.00%. Also, as noted above CalPERS has changed its amortization and smoothing policies in 2013. Beginning with the June 30, 2015 Actuarial Valuations (that set fiscal year 2015-16 CalPERS contribution rates), CalPERS no longer uses an actuarial value of assets and instead employs an amortization and rate smoothing policy that will account for all gains and losses over a fixed 30-year period with the increases and decreases in the rate phased over a 5-year period. Also as noted above, CalPERS has changed smoothing policies (shortening the period from 30 to 20-years) for valuations on and after June 30, 2020.

The City provides pension benefits for employees not covered by CalPERS or FPRS through the Public Agency Retirement System ("PARS"), a defined contribution plan. In a defined contribution plan, benefits depend solely on amounts contributed to the plan plus investment earnings. Employees are eligible to participate from the date of employment. As of December 31, 2012, the covered employees are required to contribute the full 7.5% of their earnings. Prior to such date, the City contributed an amount equal to

4.0% of the employee's earnings and the covered employee contributed 3.5%. The City's payroll for employees covered by PARS for fiscal year 2017-18 was \$4,413,374. The covered employees made the total required 7.5% contributions of \$331,003.

The tables below summarize the funded status of the City's retirement plans as of the most recent actuarial valuation dates. Additional information regarding the City's employee retirement plans, annual pension costs, the funding status thereof and significant accounting policies related thereto is set forth in Note 18 to the City's Comprehensive Annual Financial Report for the year ended June 30, 2020, and in the CalPERS reports to the City, which can be accessed at <https://www.cityofpasadena.net/finance/financial-statements/#comprehensive-annual-financial-report>.

TABLE A-9
CITY OF PASADENA
RETIREMENT PLAN TREND INFORMATION
(\$ in thousands)

CALPERS - MISCELLANEOUS EMPLOYEES

Valuation Date (June 30)	Actuarial Accrued Liability (AAL) – Entry Age	Actuarial Asset Value*	(Overfunded) Unfunded AAL	Funded Ratio*		Annual Covered Payroll	(Overfunded) Unfunded AAL as a % of Covered Payroll
				AVA	Market Value		
2007	\$585,908	\$539,717	\$46,191	92.1%	106.8%	\$102,135	45.2%
2008	638,095	579,068	59,027	90.7	92.6	111,186	53.1
2009	732,713	607,710	125,003	82.9	60.6	116,952	106.9
2010	773,303	635,455	137,847	82.2	64.4	115,289	119.6
2011	819,327	666,290	153,037	81.3	72.3	110,571	138.4
2012	852,217	695,108	157,109	81.6	68.0	105,201	149.3
2013	882,572	641,333	241,239	72.7*	72.7*	104,378	231.1
2014	956,142	737,836	218,306	77.2	77.2	103,617	210.7
2015	982,774	734,946	247,827	74.8	74.8	104,325	237.5
2016	1,026,336	719,443	306,892	70.1	70.1	107,587	285.2
2017	1,074,696	780,285	294,410	72.6	72.6	108,837	270.5
2018	1,149,746	825,785	323,960	71.8	71.8	110,137	294.1
2019	1,185,916	859,555	326,362	72.5	72.5	112,474	290.1
2020	1,381,253	881,003	343,003	72.0	72.0	115,761	296.3

* Beginning with the June 30, 2013 actuarial valuation, the actuarial value of assets equals the market value of assets pursuant to CalPERS' Direct Rate Smoothing Policy.

Source: CalPERS actuarial valuations on the reporting date for each fiscal period.

Post-Retirement Medical Benefits (OPEB)

The City of Pasadena provides a subsidy to retirees of the City who are members of CalPERS or FPRS. Two different levels of subsidy toward the purchase of medical insurance from CalPERS under the Public Employees' Medical and Hospital Care Act (PEMHCA) are offered. Benefit provisions are established and amended through negotiations between the City and the respective unions.

The City's current contribution requirements have been established at the individual retiree levels of \$139.00 or \$97.30 per month depending on bargaining unit membership and policy enacted by CalPERS pursuant to State law. These minimum requirements are established by CalPERS and adjusted annually. The City has historically funded these post-retirement health care benefits on a "pay-as-you-go" basis. For

the Fiscal Year ended June 30, 2020, the City recognized OPEB expense of \$6,250,566. At the end of the Fiscal Year, the City had net OPEB liability of \$77,001,040 and reported OPEB related deferred inflows of resources of \$620,832 and outflows of resources of \$2,931,670. The Water System is allocated its portion of the required contributions. As of June 30, 2019, Water Fund's net OPEB liability was \$4,273,874.

In fiscal year 2019-20, the City's OPEB liability is calculated based on an amount actuarially determined in accordance with the parameters of GASB Statement 75. Based upon the actuarial valuation report as of June 30, 2020, the actuary has projected a required "Actuarially Determined Contribution" for fiscal year 2020-21 of \$7,804,378 and for fiscal year 2021-2022 of \$7,882,673. These amounts represent a level of funding that, if paid on an ongoing basis, is projected to cover normal cost each year and to amortize any unfunded actuarial liabilities (or funding excess) over a period not to exceed twenty years. Under GASB 75, unfunded or partially funded OPEB plans must use a discount rate assumption tied to the index for 20-year, tax-exempt general obligation bonds.

The actuarial valuation uses, among other assumptions, a 2.66% discount rate and an inflation rate of 2.50%. The City's liability will also be affected by health care costs. The actuarial valuation assumes that medical costs will rise in 2021 by 6.25% (for the PPO plan) and 6.0% (for the HMO plan), declining to 5.0% for both plans after 2022. For fiscal year 2020-21, the actuary has projected that the City will make a benefit payments of \$2,930,407 representing 40.0% of the Actuarially Determined Contribution for fiscal year 2020-21. From July 1, 2019 through June 30, 2020, the City's total OPEB liability grew from \$79,126,733 to \$89,691,967.

Other than, the pension benefits from the applicable retirement system and as described in this section, the City does not provide medical or other post-retirement benefits to its employees.

Stormwater Improvements

The Clean Water Act ("CWA") regulates the discharges of pollutants into the waters of the United States by establishing quality standards. The CWA requires states to identify "impaired" water bodies and to develop a Total Maximum Daily Load ("TMDL") for each pollutant contributing to impairment. The CWA makes it unlawful to discharge any pollutant into waters protected by the CWA, unless a permit is first obtained. The U.S. Environmental Protection Agency's ("EPA's") National Pollutant Discharge Elimination System ("NPDES") permit program controls these discharges. With respect to the City, the EPA has delegated permitting and direct enforcement under its NPDES program to the Los Angeles Regional Water Quality Control Board ("LARWQCB").

On November 8, 2012, the LARWQCB adopted the National Pollutant Discharge Elimination System Municipal Separate Storm Sewer System Permit ("MS4 permit") Order No. R4-2012-0175, which became effective on December 28, 2012. The MS4 permit establishes the TMDL of pollutants that can be discharged into water while still meeting water quality standards and objectives. The MS4 covers 84 of the 88 public agencies in the Los Angeles County area, including the City, the Los Angeles County Flood Control District and the County, that are responsible for compliance with the MS4 permit. The City is currently subject to four TMDLs in the Los Angeles River and Los Angeles/Long Beach Harbors. The City is likely to receive more TMDLs in the coming years. The TMDL compliance deadlines spread out through 2037.

The MS4 permit allows for the option to work together to develop and implement an Enhanced Watershed Management Program ("EWMP") to address permit and TMDL requirements. The MS4 permit has safe harbor provisions, whereby the City was deemed in compliance with the TMDLs during the development of the EWMP, provided that all requirements and deadlines related to the EWMP development were met. As the EWMP crosses multiple local jurisdictions, the City collaborated with other participating

agencies on the development of the EWMP. In June 2015, the EWMP was submitted in accordance with the required schedule, and it was approved by the LARWQCB on April 20, 2016.

Non-compliance with the MS4 permit and applicable TMDLs could result in enforcement action by the LARWQCB, civil penalties and fines, and potentially third-party lawsuits. For example, the LARWQCB may levy administrative fines of up to \$10,000 per pollutant per day of violation. In addition, the State can impose mandatory minimum penalties of \$3,000 per pollutant per day of violation and seek civil liabilities of up to \$25,000 per pollutant per day. Additionally, private citizens or EPA can pursue penalties if the LARWQCB does not enforce on a violation. The City is responsible for its own fines, penalties and costs incurred as a result of non-compliance.

The City is currently in substantial compliance with the MS4 permit, but requires significant funding for capital, and operation and maintenance costs to implement the EWMPs to meet the TMDL compliance deadlines contained in the MS4 permit. The City has partially funded the monitoring and reporting programs required by the MS4 permit. The City's share of the costs of the approved EWMP projects required to meet the TMDLs over the next 20 years is preliminarily estimated by the LARWQCB to be approximately \$220 million. Estimating project costs over such a long time period is inherently difficult, and no assurance can be provided by the City that LARWQCB's approved projections are accurate. Without other revenue sources, these costs would be obligations of the City's General Fund and could have a material adverse impact on the General Fund.

The Fiscal Year 2018-19 Adopted Budget contains \$750,000 for stormwater expenditures. However, at the time of budget preparation some implementation costs were unavailable. Therefore, if a mid-year adjustment to funding were needed, it would be addressed through the City's clean-up report process.

APPENDIX B

**AUDITED FINANCIAL STATEMENTS OF PASADENA WATER AND POWER
ENTERPRISE FUNDS FOR THE FISCAL YEAR ENDED JUNE 30, 2020**

APPENDIX C

BOOK-ENTRY ONLY SYSTEM

The description that follows of the procedures and recordkeeping with respect to beneficial ownership interests in the 2021A Bonds, payment of principal of and interest on the 2021A Bonds to Participants or beneficial owners, confirmation and transfer of beneficial ownership interests in the 2021A Bonds, and other 2021A Bonds-related transactions by and between DTC, Participants and beneficial owners, is based on information furnished by DTC which the City believes to be reliable, but the City takes no responsibility for the completeness or accuracy thereof.

The Depository Trust Company (“DTC”), New York, NY, will act as securities depository for the 2021A Bonds (the “2021A Bonds”). The 2021A Bonds will be issued as fully-registered securities registered in the name of Cede & Co. (DTC’s partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully-registered security certificate will be issued for each maturity of the 2021A Bonds, each in the aggregate principal amount of such maturity, and will be deposited with DTC.

DTC, the world’s largest securities depository, is a limited-purpose trust company organized under the New York Banking Law, a “banking organization” within the meaning of the New York Banking Law, a member of the Federal Reserve System, a “clearing corporation” within the meaning of the New York Uniform Commercial Code, and a “clearing agency” registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity issues, corporate and municipal debt issues, and money market instruments (from over 100 countries) that DTC’s participants (“Direct Participants”) deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities, through electronic computerized book-entry transfers and pledges between Direct Participants’ accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation (“DTCC”). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly (“Indirect Participants”). DTC has a Standard & Poor’s rating of AA+. The DTC Rules applicable to DTC’s Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at www.dtcc.com. The information on such website is not incorporated herein by reference.

Purchases of the 2021A Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the 2021A Bonds on DTC’s records. The ownership interest of each actual purchaser of each 2021A Bond (hereinafter “Beneficial Owner”) is in turn to be recorded on the Direct and Indirect Participants’ records. Beneficial Owners will not receive written confirmation from DTC of their purchase. Beneficial Owners are, however, expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the 2021A Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in the 2021A Bonds, except in the event that use of the book-entry system for the 2021A Bonds is discontinued.

To facilitate subsequent transfers, all 2021A Bonds deposited by Direct Participants with DTC are registered in the name of DTC's partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of 2021A Bonds with DTC and their registration in the name of Cede & Co. or such other DTC nominee do not effect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the 2021A Bonds. DTC's records reflect only the identity of the Direct Participants to whose accounts such 2021A Bonds are credited, which may or may not be the Beneficial Owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. Beneficial Owners of the 2021A Bonds may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the 2021A Bonds, such as redemptions, defaults and proposed amendments to the Indenture. For example, Beneficial Owners of 2021A Bonds may wish to ascertain that the nominee holding the 2021A Bonds for their benefit has agreed to obtain and transmit notices to Beneficial Owners. In the alternative, Beneficial Owners may wish to provide their names and addresses to the Bond Registrar and request that copies of notices be provided directly to them.

Redemption notices shall be sent to DTC. If less than all of the 2021A Bonds are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such maturity to be redeemed.

Neither DTC nor Cede & Co. (nor such other DTC nominee) will consent or vote with respect to 2021A Bonds unless authorized by a Direct Participant in accordance with DTC's MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the City as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts 2021A Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Principal, redemption price and interest payments on the 2021A Bonds will be made to Cede & Co. or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts upon DTC's receipt of funds and corresponding detail information from the City or the Trustee, on each payment date in accordance with their respective holdings shown on DTC's records. Payments by Direct and Indirect Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC, the Trustee or the City, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of principal, redemption price and interest to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the City or the Trustee, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to Beneficial Owners is the responsibility of Direct and Indirect Participants.

DTC may discontinue providing its services as depository with respect to the 2021A Bonds at any time by giving reasonable notice to the City or the Trustee. Under such circumstances, in the event that a successor depository is not obtained, the 2021A Bond certificates are required to be printed and delivered.

The City may decide to discontinue use of the system of book-entry transfers through DTC (or a successor securities depository). In that event, the 2021A Bond certificates will be printed and delivered.

APPENDIX D

SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE

APPENDIX E

FORM OF CONTINUING DISCLOSURE AGREEMENT

APPENDIX F

PROPOSED FORM OF OPINION OF BOND COUNSEL

[Closing Date]

City of Pasadena
Pasadena, California

\$ _____
City of Pasadena, California
Water Revenue/Refunding Bonds, 2021A Series

Ladies and Gentlemen:

We have acted as bond counsel to the City of Pasadena, California (the “City”) in connection with the issuance of the City’s Water Revenue/Refunding Bonds, 2021A Series in the aggregate principal amount of \$30,130,000 (the “2021A Bonds”). The 2021A Bonds are being issued pursuant to the Charter of the City, as amended (the “Charter”), including Article XIV thereof, Ordinance No. 7367 (the “Ordinance”), adopted by the City Council of the City (the “Council”) on September 21, 2020, and a Water Revenue Bond Indenture, dated as of August 1, 2003, by and between the City and The Bank of New York Mellon Trust Company, N.A. (successor to BNY Western Trust Company), as trustee (the “Trustee”), as amended and supplemented, including as amended and supplemented by a Seventh Supplement to Water Revenue Bond Indenture, dated as of December 1, 2021, each by and between the City and the Trustee (collectively, the “Indenture”).

In our capacity as bond counsel, we have reviewed the Charter, the Ordinance, resolutions adopted by the City Council, the Indenture, certifications of the City, the Trustee and others, opinions of counsel to the City and the Trustee, and such other documents, opinions and instruments as we deemed necessary to render the opinions set forth herein. Capitalized terms not otherwise defined herein shall have the meanings ascribed thereto in the Indenture.

We have assumed the genuineness of all documents and signatures presented to us. We have not undertaken to verify independently, and have assumed, the accuracy of the factual matters represented, warranted or certified in such documents. Furthermore, we have assumed compliance with all covenants and agreements contained in the Indenture, including (without limitation) covenants and agreements compliance with which is necessary to assure that future actions, omissions or events will not cause interest on the 2021A Bonds to be included in gross income for federal income tax purposes.

Based on and subject to the foregoing, and in reliance thereon, as of the date hereof, we are of the following opinions:

1. The City is authorized and empowered by law, including the Charter, to adopt the Ordinance, to execute and deliver the Indenture, to issue the 2021A Bonds, to use the proceeds from the sale thereof for the purposes stated in the Ordinance and the Indenture and to pledge the Pledged Revenues of the Water System to the payment of the 2021A Bonds.
2. The Indenture has been, pursuant to law, including the Charter and the Ordinance, duly authorized, executed and delivered by, and constitutes the valid and binding obligation of, the

City. The Indenture creates a valid pledge, to secure the payment of the principal of and interest on the 2021A Bonds, of the Pledged Revenues as and to the extent set forth in the Indenture and subject to the provisions of the Indenture permitting the application thereof for the purposes and on the terms and conditions set forth therein.

3. The 2021A Bonds are valid and binding special obligations of the City and are payable exclusively from the Water Fund of the City's Water and Power Department and certain other funds as provided in the Indenture, and are secured by a pledge of and lien upon Pledged Revenues of the Water System on a parity with other obligations of the Water System payable from Pledged Revenues of the Water System and issued from time to time pursuant to the Indenture. The general fund of the City is not liable for the payment of any 2021A Bonds, any premium thereon upon redemption prior to maturity or their interest, nor is the credit or taxing power of the City pledged for the payment of any 2021A Bonds, any premium thereon upon redemption prior to maturity or their interest. The Owner of any 2021A Bond may not compel the exercise of the taxing power by the City or the forfeiture of any of its property. The principal of and interest on any 2021A Bonds and any premiums upon the redemption of any thereof prior to maturity are not a debt of the City nor a legal or equitable pledge, charge, lien or encumbrance upon any of its property or upon any of its income, receipts or revenues, except the Pledged Revenues and other funds, security or assets which are pledged to the payment of the 2021A Bonds, interest thereon and any premiums upon redemption.

4. The Internal Revenue Code of 1986 (the "Code") sets forth certain requirements which must be met subsequent to the issuance and delivery of the 2021A Bonds for interest thereon to be and remain excluded from gross income for federal income tax purposes. Noncompliance with such requirements could cause the interest on the 2021A Bonds to be included in gross income for federal income tax purposes retroactive to the date of issue of the 2021A Bonds. Pursuant to the Indenture and the Tax Certificate, the City has covenanted to comply with the applicable requirements of the Code in order to maintain the exclusion of the interest on the 2021A Bonds from gross income for federal income tax purposes pursuant to Section 103 of the Code. In addition, the City has made certain representations and certifications in the Indenture and the Tax Certificate. We have not independently verified the accuracy of those certifications and representations.

Under existing law, assuming compliance with the tax covenants described herein and the accuracy of the aforementioned representations and certifications, interest on the Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Code. We are also of the opinion that such interest is not treated as a preference item in calculating the alternative minimum tax imposed under the Code.

Interest on the Bonds is exempt from personal income taxes of the State of California under present state law.

The opinions expressed in paragraphs 2 and 3 above are qualified to the extent that the enforceability of the 2021A Bonds and the Indenture may be limited by applicable bankruptcy, insolvency, debt adjustment, reorganization, moratorium or similar laws or equitable principles relating to or limiting creditors' rights generally or as to the availability of any particular remedy. The enforceability of the 2021A Bonds and the Indenture is subject to the effect of general principles of equity, including, without limitation, concepts of materiality, reasonableness, good faith and fair dealing, to the possible unavailability of specific performance or injunctive relief, regardless of whether considered in a proceeding in equity or at law, and to the limitations on legal remedies against governmental entities in California (including, but not limited to, rights of indemnification).

In rendering the opinions set forth in paragraph 4 above, we are relying upon representations and covenants of the City in the Tax Certificate concerning the investment and use of 2021A Bond proceeds, the rebate to the federal government of certain earnings thereon, and the use of the property and facilities financed with the proceeds of the 2021A Bonds. In addition, we have assumed that all such representations are true and correct and that the City will comply with such covenants. We express no opinion with respect to the exclusion of the interest on the 2021A Bonds from gross income under Section 103(a) of the Code in the event that any of such representations are untrue or the City fails to comply with such covenants, unless such failure to comply is based on our advice or opinion.

Except as stated in paragraph 4 above, we express no opinion as to any other federal, state or local tax consequences of the ownership or disposition of the 2021A Bonds. Furthermore, we express no opinion as to any federal, state or local tax law consequences with respect to the 2021A Bonds, or the interest thereon, if any action is taken with respect to the 2021A Bonds or the proceeds thereof upon the advice or approval of other counsel.

Our opinions are based on existing law, which is subject to change. Such opinions are further based on our knowledge of facts as of the date hereof. We assume no duty to update or supplement our opinions to reflect any facts or circumstances that may hereafter come to our attention or to reflect any changes in any law that may hereafter occur or become effective. Moreover, our opinions are not a guarantee of result and are not binding on the Internal Revenue Service; rather, such opinions represent our legal judgment based upon our review of existing law that we deem relevant to such opinions and in reliance upon the representations and covenants referenced above.

No opinion is expressed herein on the accuracy, completeness or sufficiency of the Official Statement or other offering material relating to the 2021A Bonds.

Very truly yours,