APPENDIX A

THE CITY OF PASADENA

The economic and demographic information provided below is presented as general background data and has been collected from sources which the City deems to be reliable The General Fund of the City is not liable for the payment of the 2017A 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 the 2017A Bonds, any premium thereon upon redemption prior to maturity or their interest No Owner of any 2017A Bond shall 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 2017A Bonds and any premiums upon redemption 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 of the Water System in the Water Fund and other funds which are pledged to the payment of the 2017A Bonds, interest thereon and any premiums upon redemption pursuant to the Indenture

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 it's 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 approximately 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
Terry Tornek, Mayor	Real Estate Investor	May 2019
Tyron A L Hampton (District 1)	Business Owner	May 2019
Margaret McAustin (District 2)	Asset Manager - Real Estate	May 2019
John J Kennedy (District 3)	Executive Consultant	May 2017
Gene Masuda, Vice Mayor (District 4)	Business Owner	May 2019
Victor Gordo (District 5)	Attorney	May 2017
Steve Madison (District 6)	Attorney	May 2019
Andy Wilson (District 7)	Business Owner	May 2017

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 Since joining the organization in 1989 as an analyst for the Water and Power Department, Mr Mermell has spent his entire professional government service career at Pasadena, in a variety of positions, and is well-acquainted with all aspects and operations of the City 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 16 departments and 2,000-plus employees He is responsible for development of the annual operating and capital improvement budgets of the City, which is $835 9 million for Fiscal Year 2016-2017, beginning July 1, 2016, 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 founded 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 a member of the Board of Directors of the League of California Cities, Vice-President of the Board of Directors of the Institute for Local Government, past 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 2007

TABLE A-1
POPULATION
For Years 2007 through 2016

Year (as of January 1)	Population
2007	146,051
2008	147,293
2009	150,185
2010	136,769
2011	138,768
2012	139,222
2013	140,102
2014	140,879
2015	139,781
2016	141,023

Source State of Calıfornıa, Department of Fınance Revısed based upon revısıon to the US Census ınformatıon wıth 2010 benchmark Updates to estımates for years 2007 through 2009 ıncorporatıng the 2010 census counts are not avaılable

Education

Total enrollment wıthın the Pasadena Unıfied School Dıstrıct ıs shown below for the last ten fiscal years

TABLE A-2
PASADENA UNIFIED SCHOOL DISTRICT
TOTAL ENROLLMENT
Fiscal Years 2006-07 through 2015-16

Fiscal Year Ended June 30	Total Enrollment
2007	20,826
2008	20,905
2009	20,526
2010	20,084
2011	19,803
2012	19,805
2013	19,540
2014	19,102
2015	18,586
2016	18,492

Source Calıfornıa Department of Educatıon

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 Table 18 of the City's financial statements

The following table shows employment, unemployment and labor force information for Los Angeles County for calendar years 2010 through 2015 and as of May 2016

TABLE A-3
LOS ANGELES COUNTY
EMPLOYMENT, UNEMPLOYMENT AND LABOR FORCE
AVERAGES FOR CALENDAR YEARS 2010 THROUGH 2016[1]
(in thousands)

	2010	2011	2012	2013	2014	2015	2016 [1]
County Employment	4,335	4,355	4,397	4,471	4,659	4,707	4,777
County Unemployment	612	569	500	490	376	284	213
County Civilian Labor Force	4,947	4,924	4,897	4,960	5,035	4,992	4,990
County Unemployment Rate	12 4%	11 6%	10 2%	9 9%	7 5%	5 7%	4 3%
State Unemployment Rate	12 1%	11 0%	9 8%	8 9%	7 0%	6 2%	5 7%

(1) As of May, 2016
Source State of California Employment Development Department Current Labor Force and Industry Employment Los Angeles-Long Beach Metropolitan Statistical Area

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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 2015 are listed below

TABLE A-4
MAJOR EMPLOYERS
2015

Company	Approximate Number of Employees	Business Line
California Institute of Technology-Jet Propulsion Laboratory	5,000	Aerospace Research
Kaiser Permanente	4,813	Health Care
California Institute of Technology-Campus	3,900	Education
Huntington Memorial Hospital	3,328	Hospital
The City of Pasadena	2,106	Government
Pasadena Unified School District	2,037	Education
Bank of America	1,883	Financial
Pasadena City College	2,037	Education
Art Center College of Design	701	Education
Hathaway-Sycamores	681	Social Services
ATT	634	Communications
The Langham Huntington Hotel (Ritz-Carlton)	559	Hotel
One West Bank (IndyMac in 2006)	555	Financial
Western Asset	552	Financial
Parsons Corporation	547	Engineering/Construction
East West Bank	467	Financial
Rusnak Pasadena	346	Automotive Retail
Pacific Clinics Administration	280	Healthcare
Avon Products	170	Consumer Products

Source City of Pasadena, Comprehensive Annual Financial Report for Fiscal Year ended June 30, 2015

Housing

The followıng table presents a ten-year hıstory of total housıng unıts wıthın the Cıty, for years 2007 through 2016

TABLE A-5
HOUSING UNITS[1]
For Years 2007 through 2016

January 1,	Housing Units
2007	57,266
2008	57,863
2009	58,800
2010	59,331
2011	60,178
2012	60,263
2013	60,314
2014	60,369
2015	60,361
2016	60,703

(1) As of January 1 for the years shown Includes sıngle famıly dwellıngs and multıfamıly unıts, ıncludıng rental unıts and condomınıums Incorporates 2000 and 2010 census counts

Source State of Calıfornıa, Department of Fınance, Years 2007-2010- E-8 Hıstorıcal Populatıon and Housıng Estımates for Cıtıes, Countıes, and the State, Years 2011-2016- *E-5 Populatıon and Housıng Estımates for Cıtıes, Countıes and the State*

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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 2010-11 through 2015-16

TABLE A-6
CITY OF PASADENA
BUILDING PERMIT VALUATION AND PERMIT ACTIVITY
for Fiscal Years 2010-11 through 2015-16
(Valuation in Millions)

	Fiscal Year Ended June 30,					
	2011	**2012**	**2013**	**2014**	**2015**	**2016**
Building Permit Valuations						
Nonresidential	$ 56 3	$ 92 5	$ 62 8	$ 97 5	$103 3	$ 72 8
Residential	24 4	24 3	34 5	37 4	48 6	47 4
Residential New Construction	9 8	61 2	23 3	81 1	124 7	118 8
Total	$ 90 5	$178 1	$120 6	$216 1	$276 6	$239 1
Number of Permits Issued						
Non Residential	619	717	663	606	663	570
Residential	2,077	3,022	2,106	2,234	2,188	2,867
Residential New Construction	39	25	20	27	40	38
Total	2,735	3,764	2,789	2,867	2,891	3,475

Source City of Pasadena, Planning and Permitting Department

Taxable Sales

The following table indicates taxable transactions in the City by type of business for the twelve-month periods ending September 30, 2011 through September 30, 2015

TABLE A-7
CITY OF PASADENA
TAXABLE TRANSACTIONS BY TYPE OF BUSINESS
($ in Millions)

Type of Business	Twelve Month Periods Ended September 30, 2011	2012	2013	2014	2015
Apparel Stores	$ 195 0	$ 203 8	$ 216 7	$ 217 8	$ 222 7
General Merchandise Stores	213 7	216 3	207 8	196 0	190 6
Food Stores	116 3	137 2	139 8	137 9	142 8
Eating & Drinking Places	397 1	427 3	450 5	482 3	527 2
Home Furnishings & Appliances	176 8	189 8	185 7	181 0	202 5
Bldg Material & Farm Implements	80 7	93 0	111 0	122 7	130 9
Auto Dealers & Auto Supplies	327 9	353 5	374 8	399 4	463 5
Service Stations	167 2	167 8	159 0	153 4	134 2
Other Retail Stores	358 3	361 2	373 0	372 1	426 2
Retail Stores Total	2,033 0	2,150 0	2,218 4	2,262 6	2,440 6
All Other Outlets	660 9	658 8	627 5	592 0	545 7
Total All Outlets	$2,693 9	$2,808 8	$2,845 9	$2,854 9	$2,986 3

Source State Board of Equalization, City of Pasadena MBIA MuniServices Company

Community Facilities

The City has a central library and eight branch libraries, four community centers, 24 parks and 30 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 January 31, 2016, 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-8
CITY OF PASADENA
EMPLOYEE UNION REPRESENTATION

Name of Union	Number of Employees Represented As of June 30, 2016	Expiration of Contract
American Federation of State, County and Municipal Employees	278	June 30, 2018
International Brotherhood of Electrical Workers	102	June 30, 2016[(1)]
International Union of Operating Engineers	17	June 30, 2017
Service Employee International Union	25	June 30, 2018
Laborers International Union of North America	320	June 30, 2019
Pasadena Fire Fighters Association	141	June 30, 2017
Pasadena Police Officers Association	200	June 30, 2018
Pasadena Fire Fighters Management Association	5	June 30, 2016[(1)]
Pasadena Management Association	457	June 30, 2018

(1) Currently being renegotiated
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 8% to 9% in total compensation As of July 1, 2015 the POA and FFA members began paying their full 9% obligation As of January 1, 2016, the City picks-up 6% for PMA members (PMA members offset this amount by paying 6 % of the City's employer rate), but the rate reduces by 2% each January 1 The City continues to pick-up the full 8% for AFSCME members (AFSCME members offset this amount by paying the City's 8% employer rate) These payment arrangements, for their duration, results in an increase in the income used to calculate pension benefits to employees under the CalPERS formula

Retirement Systems

Pasadena Fire and Police Retirement System

General

Police and Fire personnel hired prior to July 1, 1977 were covered by the City's Fire & Police Retirement System ("FPRS") FPRS was originally established by the City Charter in 1919 FPRS was closed on June 30, 1977 but continues to pay out benefits to retirees and their beneficiaries FPRS covers all sworn fire and police personnel who were employed by the City prior to July 1, 1977, except those who elected to transfer to CalPERS either when FPRS closed to new members or in June 2004 FPRS is managed by a five-member retirement board As of June 30, 2015, FPRS had an unfunded actuarial accrued liability of $32 17 million and had a funded ratio of 80 2% For fiscal year 2014-15, the City's annual pension cost was $0 for FPRS The actuarial value of FPRS' assets was determined using techniques that smooth the effects of short-term volatility in the market value of investments over a five-year period (smoothed market value) Copies of FPRS' annual financial report may be obtained from the City's Department of Finance, 100 North Garfield Avenue, 3rd Floor, Pasadena, California 91109 This annual financial report includes the required three-year trend information

Funding History

In 1960, the City Charter was amended to provide an unlimited cost of living adjustment ("COLA") for the FPRS members that was fully adjustable based on changes in the consumer price index With inflation in the broader economy during the subsequent years, the FPRS saw dramatic increases in the COLA and, therefore, in its expenses In 1977, the FPRS was modified to increase contribution rates for the City and for active FPRS members Additionally, active FPRS members were given the option of transferring to the CalPERS plan However, few existing participants elected to join CalPERS and the modifications proved inadequate to address the continuing rise in the COLA benefit

The City attempted to roll back the COLA benefit and successfully obtained voter approval in 1981 for a City Charter amendment that limited the COLA to 2% However, the Pasadena Police Officers Association sued successfully, claiming that the amendments impaired the vested rights of its members An appellate court upheld the ruling and the uncapped COLA was reinstated

In 1987, the City sponsored and secured the passage of Senate Bill No 481 ("SB 481"), which established a funding mechanism for the FPRS SB 481 authorized the City to utilize payments made by the Pasadena Community Development Commission (the "Commission") under a reimbursement agreement entered into in 1987 (the "Reimbursement Agreement"), after required deductions, for the purpose of funding the City's liabilities to FPRS The Commission's payments consist of property tax increments from the City's Downtown Project Area (hereinafter defined as the "SB 481 Receipts") The Reimbursement Agreement was validated by SB 481, which became law in 1987 Under SB 481, the right to receive SB 481 Receipts terminated on December 31, 2014 As described below, the enforceability of the Reimbursement Agreement is being challenged by the State

In 1999, after the FPRS-funded status dropped to approximately 30%, the City and the FPRS negotiated a Contribution Agreement (the "Prior Contribution Agreement") whereby the City agreed to issue approximately $100 million of pension obligation bonds (*i e*, the Series 1999 Bonds) and transfer the proceeds to the FPRS in order to increase the actuarial funding level to 70% Further, the City agreed to make supplemental contributions to the FPRS to ensure that the funding level increased by ½% each year for 20 years, in order to reach a funding level of 80% by 2020 FPRS, in turn, assigned to the City its rights to receive the SB 481 Receipts under a prior agreement, but required such revenues to be applied to the payment of the City's funding obligations to FPRS, including payments on the City's pension obligation bonds

In 2004 the City issued approximately $40 million of additional pension obligation bonds (*i e*, the Series 2004 Bonds) in order to maintain the contribution levels agreed upon in the Prior Contribution Agreement This occurred after a dispute between the City and the FPRS regarding the accounting methodology for treating the investment losses of the early 2000s The FPRS agreed to allow the actuarial valuation to be conducted without the requirement that the actuarial value of assets remain within a 20% "corridor" around the actual market value of assets, in exchange for the City providing additional funds through the issuance of the 2004 Bonds

In November 2011, the City and FPRS agreed to amend the Prior Contribution Agreement (such amendment herein referred to as the "Amended Contribution Agreement") for the purpose of revising the methodology used to calculate the unfunded liability of the City and the City's required payments to the FPRS To fulfill its commitment under the Amended Contribution Agreement, the City issued a third series of pension bonds (*i e*, the Series 2012 Bonds) in the principal amount of $47,440,000 and deposited the proceeds with FPRS Prior to the Amended Contribution Agreement, FPRS was required to use, in its actuarial calculations, the average assumed investment return and cost of living adjustment used by counties with pension systems established under 1937 Act ("1937 Act Counties")

Under the Amended Contribution Agreement, the City must pay to FPRS, in addition to the net proceeds of the Series 2012 Bonds, supplemental payments ("Supplemental Payments") if FPRS falls below the required minimum funding percentage in any fiscal year, to fund the unfunded accrued actuarial liability (the "UAAL") of FPRS The Amended Contribution Agreement requires FPRS to be at least 75 5% funded for the fiscal year in which the City paid the net proceeds of such bonds to FPRS (the "Minimum Funding Percentage") For each succeeding year, the Minimum Funding Percentage increases by 0 5% per year over a nine-year period (through 2021), up to 80% To protect the City against large swings in asset values from one year to the next, the annual amount of any Supplemental Payments is subject to a cap, which is the lesser of certain benefit payments paid by FPRS in the prior fiscal year, or $3 million, plus a varying percentage of any funding deficit in the Minimum Funding Percentage over $3 million, beginning with 20% of the remaining deficit in the base year up to 100% of any deficit remaining for the fifth and any subsequent consecutive fiscal year following the base year

The principal change implemented by the Amended Contribution Agreement was to alter the assumed rate of investment and cost of living adjustments used to calculate the Minimum Funding Percentage and UAAL The Amended Contribution Agreement allows FPRS to use rates of investment and cost of living increases recommended by FPRS's actuary and approved by FPRS after consultation with the City and the City's consultants When the Amended Contribution Agreement was executed in November 2012, the average investment rate used by 1937 Act Counties was approximately 8%, following execution, the actuarial rate as recommended by the system's actuary was reduced to 6%

As of June 30, 2015, the FPRS was funded at 80 2%, satisfying the 80% requirement as calculated in accordance with the procedures of the Amended Contribution Agreement The funding history for the FPRS is shown in Table A-14 herein The FPRS actuary has projected, based on existing economic and demographic assumptions, that the FPRS funded ratio will remain at or above 80% and no Supplemental Payment will need to be made until fiscal year 2020

Consistent with prior reimbursement agreements, the Amended Contribution Agreement requires that the City use SB 481 Receipts to make debt service payments due on the City's pension obligation bonds and supplemental payments due to the FPRS, and to hold excess SB 481 Receipts in the City Treasurer's Pool, pending use for permitted purposes at a later date The use of SB 481 Receipts in accordance with the contribution agreements was validated in the judicial validation action undertaken in connection with the issuance of the Series 1999 Bonds

Until 2011, ABx1 legislation receipts received by the City under the Reimbursement Agreement had been sufficient to cover the debt service on the City's pension obligation bonds, to provide funds for the City to make required supplemental payments to the FPRS under the contribution agreement, as amended and superseded, and to generate a reserve fund to be used for future obligations of the FPRS

In 2011, the State of California enacted legislation (commonly referred to as "AB1x 26"), which required the dissolution of California redevelopment agencies ("CRAs") and the disposition and winding-up of the operations of those agencies Following the enactment of AB1x 26, the State Department of Finance of the State of California (the "DOF") challenged the enforceability of the Reimbursement Agreement, claiming that the agreement was not an "enforceable obligation" under AB1x 26 and, accordingly, claiming that all future payments under the Reimbursement Agreement, together with the SB 481 Receipts held by the City, should revert to the County (for redistribution to all taxing entities within the County) This issue is the subject of litigation in State court, herein referred to as the "SB 481 Litigation" and all SB 481 Receipts are required to be held in escrow by the County pending the resolution of the litigation See "SB 481 Litigation" below

As of the date of this Official Statement, the County holds all SB 481 Receipts in escrow, of which the City claims approximately $40 million The right to receive SB 481 Receipts terminated on December 31, 2014

The City had structured $121,490,000 principal amount of the Series 1999 Bonds, the Series 2004 Bonds and the Series 2012 Bonds to mature, or to be subject to mandatory tender, on May 15, 2015, with the expectation that the SB 481 Receipts would have been sufficient to pay approximately $40 million of the maturing principal amount or purchase price of such bonds, as applicable However, as the SB 481 Litigation was not resolved on May 15, 2015, the City refinanced all its Pension obligation bonds in 2015 In the event the City ultimately prevails in the SB 481 Litigation, any SB 481 Receipts held by the County and subsequently received by the City may be reserved and utilized for the redemption of the bonds in the future or used to pay debt service payments of the 2015 Bonds

SB 481 Lıtıgatıon

In 2011, the State of Calıfornıa enacted ABx1 26, whıch requıred the dıssolutıon of CRAs, ıncludıng the Commıssıon, and the dısposıtıon and wındıng-up of the operatıons of CRAs The CRAs, ıncludıng the Commıssıon, were dıssolved on February 1, 2012, pursuant to ABx1 26 However, ABx1 26 requıred that the Commıssıon's enforceable oblıgatıons "be honored " The Cıty elected to serve as the Commıssıon Successor Agency The Commıssıon Successor Agency ıs a separate legal entıty from the Cıty, and ıs requıred to admınıster the dıssolutıon of the Commıssıon and the wındıng down of the Commıssıon's actıvıtıes, ıncludıng makıng enforceable oblıgatıon payments and dısposıng of the Commıssıon's property

By letter dated December 18, 2012, the DOF notıfied the Cıty of Pasadena and ıts Commıssıon Successor Agency that ın the oblıgatıons under the Reımbursement Agreement (and certaın other housıng-related payment oblıgatıons of the Commıssıon) had been determıned by DOF to be unenforceable under ABx1 26 and to be ınelıgıble for payment from former tax ıncrement generated by the related redevelopment projects (known as Redevelopment Property Tax Trust Fund, or RPTTF, fundıng) Prevıously, the DOF, by letter dated June 29, 2012 had found such oblıgatıons of the Commıssıon to be enforceable oblıgatıons and had found both such ıtems to be elıgıble for payment from RPTTF fundıng

On December 28, 2012, the Cıty filed lıtıgatıon ın the Sacramento County Superıor Court seekıng to obtaın the RPTTF funds (for payment under the Reımbursement Agreement and the housıng oblıgatıons), and to restraın the dıstrıbutıon of these funds on January 2, 2013 to other property tax agencıes

On May 28, 2015, the trıal court ruled ın favor of the DOF However, the court also requıred the County to contınue to maıntaın $39 7 mıllıon ın escrow, pendıng final adjudıcatıon of the case, whıch ıncludes any appeal The Cıty appealed, and the case has been orally argued and submıtted to the Court of Appeal (Cıty of Pasadena v Cohen, Thırd Dıstrıct case no C079582) If the Cıty ıs unsuccessful on appeal, the Cıty expects that the escrowed amounts wıll be dıstrıbuted to the applıcable partıcıpatıng agencıes, ıncludıng the Cıty, wıth the Cıty receıvıng approxımately $8 4 mıllıon of the tax revenues The Cıty has assumed ın ıts 2016-2017 budget that no escrowed funds wıll be receıved by the Cıty durıng the fiscal year

Investment Status

As of June 30, 2016, FPRS' ınvestment assets were allocated as follows

TABLE A-9
CITY OF PASADENA
FIRE AND POLICE RETIREMENT SYSTEM
PORTFOLIO INFORMATION
as of June 30, 2016 *(unaudited)*

Description of Assets	Market Value	Percentage of Portfolio
Cash and cash equivalents	$ 587,697	0 47%
Interest	173,720	0 14
Government and agencies	31,319,542	24 80
Domestic corporate obligations	30,269,162	23 97
International corporate obligations	649,151	0 51
Real estate	17,843,493	14 13
Real estate investment trust (REITS)	145,174	0 11
Domestic corporate stocks	23,499,314	18 61
International corporate stocks	21,809,720	17 27
TOTAL	$126,296,972	100 00%

Source City of Pasadena, Department of Finance

FPRS has a number of investment objectives The primary goals are to provide participants with scheduled retirement benefits and meet or exceed the rate of inflation in its investments, as measured against the consumer price index In addition, its objective is to achieve a higher rate of return over a three- to five-year period with less than average volatility, with enhanced return over a longer period, such as five years, being more important than the preservation of capital during a one-year period of time

Under its investment guidelines, FPRS must maintain sufficient liquidity to meet FPRS' cash needs It may invest in equity securities, U S government bonds, corporate bonds and dollar denominated foreign bonds, certain kinds of mortgage backed securities, money market funds, and American Depository Receipts of foreign securities Fixed income securities must be rated Baa/BBB or better by nationally recognized rating agencies The assets of FPRS may not be invested in options, commodities or futures, nor may securities be sold short or purchased on margin

The City is responsible for paying benefits to FPRS, as described above A variety of factors will affect the extent of the City's liability to FPRS, including actual investment performance of FPRS' assets, actual changes in the consumer price index, FPRS' actual mortality and benefit payment experience, all as compared with the assumptions, and changes in actuarial assumptions and methods, including the assumed rate of investment return Further continued market volatility and the possibility of a "double dip" recession may require substantial additional contributions to FPRS over time

California Public Employees' Retirement System

General

Almost all permanent City employees, except police and fire 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 dated August 2016 (the "2015 Actuarial Valuation") The 2015 Actuarial Valuation includes information based on the June 30, 2015 Actuarial Valuation of assets 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 CalPERS report to the City can also be found on the City's website at http //cityofpasadena net/Finance/PERS-Actuarial-Reports

CalPERS is a contributory plan deriving funds from employer and employee contributions as well as earnings from investments Participants are required to contribute 8% (9% for safety employees) of their annual covered salary 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 9% 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

On March 14, 2012, CalPERS gave approval to a one-quarter point reduction in its annual investment return forecast (from 7 75% to 7 5%) CalPERS has phased-in the impact of the adjustment over two years, to lessen the strain on local governments As shown under "Funding Status of Plans" below, this reduction increased the City's reported unfunded pension liability There can be no assurances that CalPERS will not make additional changes in actuarial assumptions in the future

On January 1, 2013, the Public Employees' Pension Reform Act of 2013 ("PEPRA") took effect The impact of the PEPRA changes is reflected in the projected 2015-16 CalPERS contribution rates shown below

In April 2013, CalPERS approved new 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 These new policies have increased the City's required contribution rates, as shown under "Annual Payments and Contribution Rates" below

In 2014, CalPERS completed a 2-year asset liability management study incorporating actuarial assumptions and strategic asset allocation On February 19, 2014 the CalPERS Board of Administration adopted relatively modest changes to the current asset allocation that will reduce the expected volatility of returns The adopted asset allocation is expected to have a long-term blended return that continues to support a discount rate assumption of 7 5 percent The CalPERS Board of Administration also approved several changes to the demographic assumptions that more closely align with actual experience The most significant of these is mortality improvement to acknowledge the greater life expectancies seen in its membership and expected continued improvements The new actuarial assumptions will be used to set fiscal year 2016-17 contribution rates for public agency employers The increase in liability due to new actuarial assumptions was calculated in the 2014 actuarial valuation and was amortized over a 20-year period with a 5-year ramp-up/ramp-down in accordance with CalPERS Board of Administration policy

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 June 15, 2014, GASB 68 replaces GASB 27 Hence, the annual report issued by CalPERS for 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 2005-06 through fiscal year 2020-21 The City contributed 100% of its APC in each completed year shown The City estimates that approximately 60% 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"

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Also set forth below are the historic and projected contribution rates to the CalPERS plans The projected contribution rates for fiscal year 2016-17 through 2022-23 are provided by CalPERS in its August 2016 report The CalPERS projections assume, among other things, that CalPERS earns 0 00% for fiscal year 2015-16 and 7 50% every fiscal year thereafter, that all other actuarial assumptions will be realized In July 2016, CalPERS reported a preliminary 0 61% net return on investments for the fiscal year ended June 30, 2016 In the two prior fiscal years ended June 30, 2015 and 2014, the reported return was 2 4% and 18 4%, respectively CalPERS investment returns for the past five, ten and twenty years ending June 30, 2015 are 10 7, 6 2 and 7 8% respectively A complete explanation of the CalPERS assumptions can be found in the 2015 Actuarial Valuation

TABLE A-10
ANNUAL PAYMENTS TO RETIREMENT PLANS BY CITY
($ in Millions)

Fiscal Year Ended June 30	CalPERS— Misc. Employees Total Contribution	CalPERS- General Fund Contribution Misc. Employees[2]	CalPERS— Safety Employees Total Contribution	CalPERS- General Fund Contribution Safety Employees[2]
2006	$ 7,402	$2,887	$7,402	$6,728
2007	10,056	3,295	10,056	8,498
2008	12,228	3,435	9,283	9,097
2009	12,580	3,768	9,916	9,718
2010	12,566	3,765	10,459	10,250
2011	12,518	4,381	10,346	10,139
2012	16,744	5,860	11,370	11,143
2013	17,439	5,929	10,993	10,773
2014	17,909	6,089	11,176	10,952
2015	18,552	6,308	10,533	10,322
2016	20,751	7,055	11,641	11,409
2017[1]	25,894	8,804	15,724	15,410
2018[1]	27,999	9,520	16,782	16,446
2019[1]	31,343	10,657	18,688	18,315
2020[1]	34,847	11,848	20,714	20,300
2021[1]	36,965	12,568	22,018	21,578

(1) Projected annual payment to retirement plan based on projected contribution rates on CalPERS plus unfunded Accrual Liability actuarial report dated August 2016
(2) Historic payments are net of City "pick-up " See "Employee Relations" herein
Source City of Pasadena, Department of Finance

TABLE A-11
ANNUAL CONTRIBUTION RATES
TO CALPERS RETIREMENT PLANS BY CITY

Fiscal Year Ended June 30	CalPERS Misc. Employees	CalPERS Misc. UAL$	CalPERS Safety Employees	CalPERS Safety UAL$
2011	11 4%	--	23 6%	--
2012	15 5	--	26 6	--
2013	16 2	--	25 6	--
2014	17 4	--	27 2	--
2015	19 2	--	29 3	--
2016	21 1	--	31 8	--
2017(1)	22 8	--	35 1	--
2018(2)	8 0	$18,895,540	17 141	$ 9,230,863
2019(2)	8 0	22,041,626	17 1	11,004,335
2020(2)	8 0	25,359,472	17 1	12,875,908
2021(2)	8 0	27,287,672	17 1	14,023,412
2022(2)	8 0	29,544,896	17 1	15,355,789
2023(2)	8 0	31,425,427	17 1	15,993,375

(1) Projected annual payment to retirement plan based on projected contribution rates on CalPERS actuarial report dated October 2015 Does not include City "Pick Up"
(2) Projected annual payment to retirement plan based on projected contribution rates on CalPERS plus Unfunded Accrued Liability (UAL) actuarial report dated August 2016
Source City of Pasadena, Department of Finance

Funding Status of Plans Based on the 2015 Actuarial Valuation (which is the most recent actuarial valuation available), CalPERS reported an unfunded liability, as of June 30, 2015, of $247 8 million for the City's miscellaneous employees as compared to an underfunding of $218 3 million the previous year and an unfunded liability of $129 6 million for safety employees as compared to $106 0 million the previous year Based upon this report, the City reported that its CalPERS obligation had a funded ratio of 74 8% based upon the market value of plan assets with respect to the City's miscellaneous employees and a funded ratio of 75 6% based upon the market value of plan assets for safety employees As noted above, CalPERS 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

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 2014-15 was $4,114,866 The covered employees made the total required 7 5% contributions of $308,615

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, attached hereto as APPENDIX B – "CITY OF PASADENA CALIFORNIA COMPREHENSIVE ANNUAL FINANCIAL REPORT YEAR ENDED JUNE 30, 2015", and in the CalPERS reports to the City, which can be accessed at www cityofpasadena net/Finance/Annual_Finance_Reports

TABLE A-12
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* AVA	Funded Ratio* Market Value	Annual Covered Payroll	(Overfunded) Unfunded AAL as a % of Covered Payroll
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

(*) 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 through June 30, 2011 data is taken from annual valuation report dated October 2012 CalPERS actuarial valuation for June 30, 2012 and June 30, 2013 data is taken from annual valuation report dated October 2014 CalPERS actuarial valuations through June 30, 2014 data is taken from annual valuation report dated October 2015 CalPERS actuarial valuations through June 30,2015 data is taken from annual valuation report dated August 2016

TABLE A-13
CALPERS - SAFETY EMPLOYEES

Valuation Date (June 30)	Actuarial Accrued Liability (AAL) – Entry Age	Actuarial Asset Value*	(Overfunded) Unfunded AAL	Funded Ratio* AVA	Funded Ratio* Market Value	Annual Covered Payroll	(Overfunded) Unfunded AAL as a % of Covered Payroll
2007	$285,822	$238,041	$47,781	83 3%	95 4%	40,138	119 0%
2008	317,140	262,817	54,323	82 9	83 5	42,996	126 3
2009	352,610	283,880	68,730	80 5	58 7	45,516	151 0
2010	373,670	307,056	66,614	82 2	64 7	45,643	145 9
2011	403,626	331,603	72,023	82 2	73 6	44,058	163 5
2012	429,718	355,015	74,703	82 6	69 5	42,612	175 3
2013	457,271	338,082	119,189	73 9*	73 9*	41,383	288 0
2014	501,785	395,729	106,056	78 9	78 9	41,014	258 5
2015	530,414	400,797	129,617	75 6	75 6	40,318	321 5

(*) 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 through June 30, 2011 data is taken from annual valuation report dated October 2012 CalPERS actuarial valuation for June 30, 2012 and June 30, 2013 data is taken from annual valuation report dated October 2014 CalPERS actuarial valuations through June 30, 2014 data is taken from annual valuation report dated October 2015 CalPERS actuarial valuations through June 30, 2015 data is taken from annual valuation report dated August 2016

TABLE A-14
FPRS

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
2007	$183,046	$131,137	$51,909	71 6%	146	35 6%
2008	178,748	131,321	47,427	73 5	179	26 5
2009	177,803	119,551	58,252	67 2	-	N/A
2010	166,096	109,740	56,356	66 1	-	N/A
2011	179,284	105,811	73,473	59 0	-	N/A
2012	174,249	136,272	39,977	78 2	-	N/A
2013	168,781	127,985	40,796	75 8	-	N/A
2014	159,516	130,183	29,333	81 6	-	N/A
2015	162,154	129,984	32,170	80 2	-	N/A

Source FPRS actuarial valuations through June 30, 2015

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 $122 00 or $54 90 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 prior contribution requirements were $122 00 or $54 60 per month depending on the bargaining unit or the unrepresented group of which the employee was a member The City has historically funded these post-retirement health care benefits on a "pay-as-you-go" basis For fiscal year 2014-15, the City's contributions totaled $623,000 (representing 22 80% of the annual other post-employment benefit ("OPEB") cost (expense)) The City's annual OPEB cost (expense) is calculated based on the ARC of the employer, an amount actuarially determined in accordance with the parameters of GASB Statement 45 The ARC represents 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 thirty years As of June 30, 2015, the City's unfunded actuarial accrued OPEB liability was $28,619,000

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

APPENDIX B

AUDITED FINANCIAL STATEMENTS OF PASADENA WATER AND POWER ENTERPRISE FUNDS FOR THE FISCAL YEAR ENDED JUNE 30, 2015

APPENDIX C

BOOK-ENTRY ONLY SYSTEM

The description that follows of the procedures and recordkeeping with respect to beneficial ownership interests in the 2017A Bonds, payment of principal of and interest on the 2017A Bonds to Participants or beneficial owners, confirmation and transfer of beneficial ownership interests in the 2017A Bonds, and other 2017A 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 2017A Bonds (the "2017A Bonds") The 2017A 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 2017A 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 Standard & Poor's highest rating 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 2017A Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the 2017A Bonds on DTC's records The ownership interest of each actual purchaser of each 2017A 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 2017A 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 2017A Bonds, except in the event that use of the book-entry system for the 2017A Bonds is discontinued

To facilitate subsequent transfers, all 2017A 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 2017A 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 2017A Bonds DTC's records reflect only the identity of the Direct Participants to whose accounts such 2017A 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 2017A Bonds may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the 2017A Bonds, such as redemptions, defaults and proposed amendments to the Indenture For example, Beneficial Owners of 2017A Bonds may wish to ascertain that the nominee holding the 2017A 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 2017A 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 2017A 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 2017A Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy)

Principal, redemption price and interest payments on the 2017A 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 2017A 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 2017A 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 2017A 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, 2017A 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, 2017A Series in the aggregate principal amount of $_________ (the "2017A Bonds") The 2017A Bonds are being issued pursuant to the Charter of the City, as amended (the "Charter"), including Article XIV thereof, Ordinance No ______ (the "Ordinance"), adopted by the City Council of the City (the "Council") on March ___, 2017, 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 Fifth Supplement to Water Revenue Bond Indenture, dated as of March 1, 2017, 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

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 2017A 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 2017A Bonds

2 The Indenture has been 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 2017A 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 2017A 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 the 2017A 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 the 2017A Bonds, any premium thereon upon redemption prior to maturity or their interest The Owners of the 2017A Bonds 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 the 2017A 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 2017A Bonds, interest thereon and any premiums upon redemption

4 Under existing law, interest on the 2017A Bonds is exempt from personal income taxes of the State of California and, assuming compliance with the covenant described below, interest on the 2017A Bonds is excluded pursuant to section 103(a) of the Internal Revenue Code of 1986 (the "Code") from the gross income of the owners thereof for federal income tax purposes The 2017A Bonds are not "specified private activity bonds" within the meaning of section 57(a)(5) of the Code and, therefore, the interest on the 2017A Bonds is not treated as an item of tax preference for purposes of computing the alternative minimum tax imposed by section 55 of the Code, however, the receipt or accrual of interest on the 2017A Bonds owned by a corporation may affect the computation of its alternative minimum taxable income, upon which the alternative minimum tax is imposed

The Code imposes certain requirements that must be met subsequent to the issuance and delivery of the 2017A Bonds for interest thereon to be and remain excluded from the gross income of the owners thereof for federal income tax purposes Noncompliance with such requirements could cause the interest on the 2017A Bonds to be included in gross income retroactive to the date of issue of the 2017A Bonds The City has covenanted in the Indenture to maintain the exclusion of interest on the 2017A Bonds from the gross income of the owners thereof for federal income tax purposes

The opinions expressed in paragraphs 2 and 3 above are qualified to the extent that the enforceability of the 2017A 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 2017A 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)

Our opinions expressed in paragraph 4 above are rendered in reliance on representations and certifications of the City made in a Tax Certificate dated the date hereof pertaining to the use, expenditure, and investment of the proceeds of the 2017A Bonds Except as stated in paragraph 4 above, we express no opinion as to any federal or state tax consequences of the ownership or disposition of the 2017A Bonds Furthermore, we express no opinion as to any federal, state or local tax law consequences with respect to the 2017A Bonds, or the interest thereon, if any action is taken with respect to the 2017A 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 2017A Bonds

Very truly yours,