## OFFICIAL STATEMENT Dated April 26, 2018

Ratings: Fitch: "AA"
Moody's: "Aa2"
S&P: "AA"

(See "RATINGS" herein.)

#### NEW ISSUE - Book-Entry-Only

In the opinion of Co-Bond Counsel (named below), assuming continuing compliance by the City (defined below) after the date of initial delivery of the Bonds (defined below) with certain covenants contained in the Ordinance (defined below) pertaining to the Bonds and subject to the matters set forth under "TAX MATTERS" herein, interest on the Bonds for federal income tax purposes under existing statutes, regulations, published rulings, and court decisions (1) will be excludable from the gross income of the owners thereof pursuant to section 103 of the Internal Revenue Code of 1986, as amended (the "Code"), to the date of initial delivery of the Bonds, and (2) will not be included in computing the alternative minimum taxable income of the owners thereof who are individuals or, except as herein described, corporations. (See "TAX MATTERS" herein.)



## \$208,825,000

#### CITY OF SAN ANTONIO, TEXAS

(A political subdivision of the State of Texas located primarily in Bexar County)
WATER SYSTEM JUNIOR LIEN REVENUE AND REFUNDING BONDS,
SERIES 2018A (NO RESERVE FUND)

Dated Date: May 1, 2018 Interest to Accrue from Date of Delivery Due: May 15, as shown on inside cover

GENERAL... The City of San Antonio, Texas (the "City"), acting on behalf and for the benefit of the San Antonio Water System ("SAWS"), is issuing its \$208,825,000 Water System Junior Lien Revenue and Refunding Bonds, Series 2018A (No Reserve Fund) (the "Bonds") pursuant to the Constitution and the general laws of the State of Texas, including particularly Chapter 1207, Texas Government Code, as amended ("Chapter 1207"), Chapter 1371, Texas Government Code, as amended ("Chapter 1371" and, together with Chapter 1207, the "Act"), Chapter 1502, Texas Government Code, as amended, the City's Home Rule Charter, and an ordinance (the "Ordinance") relating to the Bonds adopted by the City Council of the City (the "City Council") on April 5, 2018. As permitted by the Act, the City Council has, in the Ordinance, delegated to certain authorized officials of the City and SAWS (each, an "Authorized Official") the authority to establish final terms of sale of the Bonds. These final sales terms are evidenced in an "Approval Certificate" executed by an Authorized Official on April 26, 2018 at the time of the sale of the Bonds.

PAYMENT TERMS... Interest on the Bonds will accrue from their date of initial delivery to the initial purchasers thereof identified below (the "Underwriters"), will be payable on May 15 and November 15 of each year, commencing November 15, 2018, and will be calculated on the basis of a 360-day year consisting of twelve 30-day months. The definitive Bonds will be initially registered and delivered only to Cede & Co., the nominee of The Depository Trust Company, New York, New York ("DTC"), acting as a securities depository (the "Securities Depository"), pursuant to the Book-Entry-Only System described herein. The City reserves the right to discontinue the use of the Securities Depository. Beneficial ownership of the Bonds may be acquired in denominations of \$5,000 or integral multiples thereof. No physical delivery of the Bonds will be made to the owners thereof. Principal of, premium, if any, and interest on the Bonds will be payable by the Paying Agent/Registrar to Cede & Co., which will make distribution of the amounts so paid to the participating members of DTC for subsequent payment to the beneficial owners of the Bonds (see "THE BONDS – Book-Entry-Only System" herein). The initial Paying Agent/Registrar is UMB Bank, N.A., Dallas, Texas (see "THE BONDS – Paying Agent/Registrar" herein).

Security . . . The Bonds are special obligations of the City, payable, both as to principal and interest, solely from and secured by, together with the other currently outstanding Junior Lien Obligations (as described herein), a junior lien on and pledge of the Net Revenues (as defined herein) of the City's combined water and wastewater system (the "System") remaining after the City's satisfaction of its debt service payment and reserve fund obligations, among other matters, relating to the Senior Lien Obligations (as described herein). The Reserve Fund (defined herein) providing additional security for certain of the outstanding Junior Lien Obligations does not additionally secure the Bonds. The City has not covenanted or obligated itself to pay the Bonds from money raised or to be raised from taxation (see "THE BONDS – Security and Source of Payment; Pledge of Net Revenues" herein). In the Ordinance, the City has authorized the SAWS Board of Trustees (the "Board") to manage, operate, and maintain the System.

Purpose . . . Proceeds from the sale of the Bonds will be used to provide funds for the purposes of (i) building, improving, extending, enlarging, equipping, and repairing the System, (ii) to refund certain currently outstanding Junior Lien Obligations for debt service savings and to refund certain currently outstanding hereinafter-defined Commercial Paper Notes (each, the "Refunded Obligations") identified in Schedule I hereto to convert variable rate interim financing into fixed rate, long term financing, and (iii) paying the costs of issuance of the Bonds.

## CUSIP PREFIX: 79642G MATURITY SCHEDULE & 9 DIGIT CUSIP SEE SCHEDULE ON INSIDE COVER

LEGALITY . . . The Bonds are offered for delivery when, as and if issued and received by the Underwriters named below, and subject to the approving opinion of the Attorney General of Texas and the approval of certain legal matters by Norton Rose Fulbright US LLP, San Antonio, Texas, and Kassahn & Ortiz, P.C., San Antonio, Texas, Co-Bond Counsel (see "APPENDIX D - FORM OF CO-BOND COUNSEL'S OPINION" herein). Certain legal matters will be passed upon for the City by the City Attorney, for the Board by its counsel, Langley & Banack, Incorporated, San Antonio, Texas, and for the Underwriters by their co-counsel, McCall, Parkhurst & Horton L.L.P., San Antonio, Texas and Mahomes Bolden PC, Dallas, Texas.

**DELIVERY...** It is expected that the Bonds will be available for initial delivery through the services of DTC on or about May 23, 2018 (the "Date of Delivery").

J.P. Morgan

MESIROW FINANCIAL, INC. LOOP CAPITAL MARKETS FTN FINANCIAL CAPITAL MARKETS
RAMIREZ & Co., INC.

## \$208,825,000 City of San Antonio, Texas Water System Junior Lien Revenue and Refunding Bonds, Series 2018A (No Reserve Fund)

#### \$125,325,000 Serial Bonds

Principal Amount (\$)	Stated Maturity (May 15)	Interest Rate (%)	Initial Yield (%)	CUSIP No. <sup>(1)</sup> Suffix	Principal Amount (\$)	Stated Maturity (May 15)	Interest Rate (%)	Initial Yield (%)	CUSIP No. <sup>(1)</sup> Suffix
2,220,000	2019	5.000	1.820	AA0	6,770,000	2030	4.000	$2.990^{(2)}$	AM4
2,330,000	2020	5.000	1.960	AB8	7,085,000	2031	5.000	$2.960^{(2)}$	AN2
2,450,000	2021	5.000	2.100	AC6	7,455,000	2032	5.000	$3.010^{(2)}$	AP7
2,575,000	2022	5.000	2.190	AD4	7,830,000	2033	5.000	$3.070^{(2)}$	AQ5
2,710,000	2023	5.000	2.310	AE2	8,230,000	2034	5.000	$3.130^{(2)}$	AR3
2,845,000	2024	5.000	2.420	AF9	8,655,000	2035	5.000	$3.180^{(2)}$	AS1
2,990,000	2025	5.000	2.520	AG7	9,105,000	2036	5.000	$3.230^{(2)}$	AT9
3,145,000	2026	5.000	2.620	AH5	9,575,000	2037	5.000	$3.270^{(2)}$	AU6
3,310,000	2027	5.000	2.700	AJ1	9,940,000	2038	5.000	$3.300^{(2)}$	AV4
3,475,000	2028	5.000	2.780	AK8	7,875,000	2039	5.000	$3.350^{(2)}$	AW2
6,475,000	2029	5.000	$2.850^{(2)}$	AL6	8,280,000	2040	5.000	$3.370^{(2)}$	AX0

#### \$83,500,000 Term Bonds

\$27,475,000, 5.000%, Term Bond due May 15, 2043, Priced to Yield 3.400%<sup>(2)</sup>, CUSIP No. Suffix<sup>(1)</sup> AY8 \$56,025,000, 5.000%, Term Bond due May 15, 2048, Priced to Yield 3.480%<sup>(2)</sup>, CUSIP No. Suffix<sup>(1)</sup> AZ5

#### (Interest accrues from the Date of Delivery)

#### REDEMPTION

Optional Redemption. The City has reserved the right, at its option, to redeem Bonds having stated maturities on and after May 15, 2029, in whole or in part, in principal amounts of \$5,000 or any integral multiple thereof, on May 15, 2028, or any date thereafter, at the par value thereof plus accrued interest to the date of redemption. See "THE BONDS – Redemption" herein.

Mandatory Redemption. The Bonds maturing on May 15, 2043 and May 15, 2048 are subject to mandatory sinking fund redemption. See "THE BONDS – Redemption" herein.

<sup>(1)</sup> CUSIP numbers are included solely for the convenience of owners of the Bonds. CUSIP is a registered trademark of the American Bankers Association. CUSIP data herein is provided by CUSIP Global Services, managed by S&P Global Market Intelligence on behalf of The American Bankers Association. 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, the Board, the Co-Financial Advisors, or the Underwriters is responsible for the selection or correctness of the CUSIP numbers set forth herein.

<sup>(2)</sup> Yield calculated based on the assumption the Bonds denoted and sold at a premium will be redeemed on May 15, 2028, the first optional redemption date for such Bonds, at the price of par plus accrued interest to such date of redemption.

#### **USE OF INFORMATION**

This Official Statement, which includes the cover page, the Schedule, and the Appendices hereto, does not constitute an offer to sell or the solicitation of an offer to buy in any jurisdiction to any person to whom it is unlawful to make such offer, solicitation or sale.

No dealer, broker, salesperson or other person has been authorized by the City, the Board, the Co-Financial Advisors, or the Underwriters to give information or to make any representation other than those contained in this Official Statement, and, if given or made, such other information or representations must not be relied upon as having been authorized by any of the foregoing.

The information set forth herein has been obtained from the City and other sources believed to be reliable, but such information is not guaranteed as to accuracy or completeness and is not to be construed as a representation, promise, or guarantee of the Co-Financial Advisors or the Underwriters. This Official Statement contains, in part, estimates and matters of opinion which are not intended as statements of fact, and no representation is made as to the correctness of such estimates and opinions, or that they will be realized.

The information and expressions of opinion contained 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 (including the System) or other matters described herein.

THE BONDS ARE EXEMPT FROM REGISTRATION WITH THE UNITED STATES SECURITIES AND EXCHANGE COMMISSION AND CONSEQUENTLY HAVE NOT BEEN REGISTERED THEREWITH. THE REGISTRATION, QUALIFICATION, OR EXEMPTION FOR THE BONDS IN ACCORDANCE WITH APPLICABLE SECURITIES LAW PROVISIONS OF THE JURISDICTIONS IN WHICH THE BONDS HAVE BEEN REGISTERED, QUALIFIED, OR EXEMPTED SHOULD NOT BE REGARDED AS A RECOMMENDATION FOR THE PURCHASE THEREOF.

THE UNDERWRITERS HAVE PROVIDED THE FOLLOWING SENTENCE FOR INCLUSION IN THIS OFFICIAL STATEMENT. THE UNDERWRITERS HAVE REVIEWED THE INFORMATION IN THIS OFFICIAL STATEMENT IN ACCORDANCE WITH, AND AS PART OF, THEIR RESPONSIBILITIES TO INVESTORS UNDER THE FEDERAL SECURITIES LAWS AS APPLIED TO THE FACTS AND CIRCUMSTANCES OF THIS TRANSACTION, BUT THE UNDERWRITERS DO NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF SUCH INFORMATION.

IN CONNECTION WITH THIS OFFERING, THE UNDERWRITERS MAY OVER-ALLOT OR EFFECT TRANSACTIONS WHICH STABILIZE THE MARKET PRICE OF THE ISSUE AT A LEVEL ABOVE THAT WHICH MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH STABILIZING. IF COMMENCED. MAY BE DISCONTINUED AT ANY TIME.

NONE OF THE CITY, THE BOARD, THE UNDERWRITERS, NOR THE CO-FINANCIAL ADVISORS MAKES ANY REPRESENTATION OR WARRANTY WITH RESPECT TO THE INFORMATION CONTAINED IN THIS OFFICIAL STATEMENT REGARDING DTC OR ITS BOOKENTRY-ONLY SYSTEM, AS SUCH INFORMATION WAS PROVIDED BY DTC.

THE AGREEMENTS OF THE CITY, THE BOARD, AND OTHERS RELATED TO THE BONDS ARE CONTAINED SOLELY IN THE CONTRACTS DESCRIBED HEREIN. NEITHER THIS OFFICIAL STATEMENT NOR ANY OTHER STATEMENT MADE IN CONNECTION WITH THE OFFER OR SALE OF THE BONDS IS TO BE CONSTRUED AS CONSTITUTING AN AGREEMENT WITH THE PURCHASERS OF THE BONDS. INVESTORS SHOULD READ THE ENTIRE OFFICIAL STATEMENT, INCLUDING THE SCHEDULE AND ALL APPENDICES ATTACHED HERETO, TO OBTAIN INFORMATION ESSENTIAL TO MAKING AN INFORMED INVESTMENT DECISION.

NEITHER THE UNITED STATES SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THE SECURITIES OR PASSED UPON THE ADEQUACY OR ACCURACY OF THIS DOCUMENT. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

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## CITY OFFICIALS, STAFF AND CONSULTANTS

#### ELECTED OFFICIALS - CITY OF SAN ANTONIO

City Council	Length of Service	Term Expires	Occupation
Ron Nirenberg, Mayor <sup>(1)</sup>	4 Years, 10 Months	May 31, 2019	Broadcast General Manager
Roberto C. Treviño, District 1	3 Years, 5 Months	May 31, 2019	Architect
William "Cruz" Shaw, District 2	10 Months	May 31, 2019	Attorney at Law
Rebecca J. Viagran, District 3	4 Years, 11 Months	May 31, 2019	Business Owner
Rey Saldaña, District 4	6 Years, 11 Months	May 31, 2019	Adjunct Professor
Shirley Gonzales, District 5	4 Years, 10 Months	May 31, 2019	Business Owner
Greg Brockhouse, District 6	10 Months	May 31, 2019	Consultant
Ana Sandoval, District 7	11 Months	May 31, 2019	Entrepreneur
Manny Pelaez, District 8	10 Months	May 31, 2019	Attorney at Law
John Courage, District 9	10 Months	May 31, 2019	Teacher
Clayton Perry, District 10	10 Months	May 31, 2019	Retired

<sup>(1)</sup> Elected as Mayor on June 10, 2017; served as District 8 Councilman for two 2-year terms, beginning in June of 2013.

#### APPOINTED OFFICIALS - SAN ANTONIO WATER SYSTEM BOARD OF TRUSTEES

Board	Length of Service	Term Expires	Occupation
Berto Guerra, Jr. Chairman	6 Years, 7 Months	May 31, 2018	Chairman and CEO Avanzar Interior Technologies
Patricia Jasso Vice Chairman	4 Years, 6 Months	May 31, 2020	Retired
Amy Hardberger Secretary	1 Month	May 31, 2021	Associate Dean/Law Professor St. Mary's University
Patricia E. Merritt Assistant Secretary	4 Years, 6 Months	May 31, 2018	Retired
David McGee Trustee	2 Years, 7 Months	May 31, 2021	President/CEO of San Antonio Region Amegy Bank of Texas
Eduardo Parra Trustee	1 Month	May 31, 2021	CEO – Principal Engineer Parra & Co., LLC
Ron Nirenberg, Mayor and Ex-Officio Member	9 Months	May 31, 2019	Broadcast General Manager

## ${\bf SELECTED} \ {\bf ADMINISTRATIVE} \ {\bf STAFF-SAN} \ {\bf ANTONIO} \ {\bf WATER} \ {\bf SYSTEM}$

Name	Position	Length of Service with System	Total Government Service
Robert R. Puente	President/Chief Executive Officer	9 Years, 11 Months	27 Years, 3 Months
Steven M. Clouse	Senior Vice President/Chief Operating Officer	28 Years, 9 Months	30 Years, 6 Months
Douglas P. Evanson	Senior Vice President/Chief Financial Officer	13 Years	13 Years
Nancy Belinsky	Vice President and General Counsel	15 Years	15 Years
Sharon De La Garza	Vice President - Human Resources	6 Years	22 Years
Donovan Burton	Vice President – Water Resources & Governmental	11 Years, 5 Months	25 Years, 9 Months
	Relations		
Gavino Ramos	Vice President – Communications & External		
	Affairs	3 Years	3 Years

#### CONSULTANTS AND ADVISORS

For additional information regarding the San Antonio Water System, please contact:

Mr. Douglas P. Evanson Senior Vice President/Chief Financial Officer San Antonio Water System 2800 U.S. Highway 281 North P.O. Box 2449 San Antonio, Texas 78298-2449 Telephone: (210) 233-3803 doug.evanson@saws.org

Ms. Phyllis Garcia Treasurer San Antonio Water System 2800 U.S. Highway 281 North P.O. Box 2449 San Antonio, Texas 78298-2449 Telephone: (210) 233-3813 phyllis.garcia@saws.org Mr. Daniel Hartman PFM Financial Advisors LLC 4350 North Fairfax Drive Arlington, Virginia 22203 Telephone: (703) 741-0175 hartmand@pfm.com

Mr. Donald J. Gonzales Estrada Hinojosa & Company, Inc. 1400 Frost Bank Tower 100 West Houston Street San Antonio, Texas 78205 Telephone: (210) 223-4888 don@ehmuni.com

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## SELECTED ADMINISTRATIVE STAFF - CITY OF SAN ANTONIO

		Tenure with	Tenure in
Name	Position	City of San Antonio	Current Position
Sheryl L. Sculley <sup>(1)</sup>	City Manager	12 Years, 6 Months	12 Years, 6 Months
Erik J. Walsh	Deputy City Manager	23 Years, 11 Months	6 Years, 7 Months
Peter Zanoni	Deputy City Manager	21 Years, 1 Month	5 Years, 5 Months
Lori Houston	Assistant City Manager	15 Years, 11 Months	2 Years, 11 Months
Carlos Contreras	Assistant City Manager	9 Years, 3 Months	5 Years, 5 Months
Maria Villagomez	Assistant City Manager	20 Years, 7 Months	2 Years, 7 Months
Roderick Sanchez <sup>(2)</sup>	Assistant City Manager	25 Years, 4 Months	1 Year, 3 Months
Andrew Segovia	City Attorney	1 Year, 8 Months	1 Year, 8 Months
Leticia M. Vacek	City Clerk	13 Years, 11 Months	13 Years, 11 Months
Ben Gorzell, Jr.	Chief Financial Officer	27 Years, 6 Months	7 Years, 9 Months
Troy Elliott	Deputy Chief Financial Officer	21 Years, 8 Months	1 Year, 9 Months
Justina Tate <sup>(3)</sup>	Director of Management and Budget	8 Years, 3 Months	1 Year, 3 Months

Hired as City Manager in November 2005, she has more than 41 years of public management experience, including serving as Assistant City Manager of the City of Phoenix, Arizona for 16 years and City Manager of Kalamazoo, Michigan, for which she worked for 15 years.

The City Manager appointed Roderick Sanchez as Assistant City Manager effective February 2, 2017.

The City Manager appointed Justina Tate as Director of the Office of Management and Budget effective February 2, 2017.

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#### **OFFICIAL STATEMENT**

#### **RELATING TO**

# \$208,825,000 CITY OF SAN ANTONIO, TEXAS (A political subdivision of the State of Texas located primarily in Bexar County) WATER SYSTEM JUNIOR LIEN REVENUE AND REFUNDING BONDS, SERIES 2018A (NO RESERVE FUND)

#### INTRODUCTION

This Official Statement, which includes the Schedule and Appendices hereto, provides certain information regarding the issuance of \$208,825,000 City of San Antonio, Texas Water System Junior Lien Revenue and Refunding Bonds, Series 2018A (No Reserve Fund) (the "Bonds"). Capitalized terms used in this Official Statement have the same meanings assigned to such terms in the Ordinance (hereinafter defined), except as otherwise indicated herein (see "SELECTED PROVISIONS OF THE ORDINANCE" in APPENDIX C).

There follows in this Official Statement descriptions of the Bonds and certain information regarding the San Antonio Water System ("SAWS"), its water and wastewater system (the "System") and its finances. All descriptions of documents contained herein are only summaries and are qualified in their entirety by reference to each such document. Copies of such documents may be obtained from the Co-Financial Advisors, PFM Financial Advisors LLC, Arlington, Virginia, and Estrada Hinojosa & Company, Inc., San Antonio, Texas, by electronic mail or upon payment of reasonable copying, handling, and delivery charges.

This Official Statement speaks only as of its date, and the information contained herein is subject to change. A copy of the Final Official Statement will be filed with the Municipal Securities Rulemaking Board ("MSRB") through its Electronic Municipal Market Access ("EMMA") system. See "CONTINUING DISCLOSURE OF INFORMATION" for a description of the City's (hereinafter defined) undertaking to provide certain information on a continuing basis.

In close proximity to the sale and delivery by the City of San Antonio, Texas (the "City" or "San Antonio") of the Bonds, the City will sell its \$10,500,000 "Water System Junior Lien Revenue Bonds, Series 2018B" to the Texas Water Development Board (the "TWDB") pursuant to its Drinking Water State Revolving Fund Program (the "DWSRF"), which will close on or about June 15, 2018. This Official Statement relates only to the sale of the Bonds and not to the sale of these other Junior Lien Obligations (hereinafter defined). In addition, in late 2018, the City intends to sell approximately \$150,000,000 of its "Water System Variable Rate Junior Lien Revenue and Refunding Bonds, Series 2018C (No Reserve Fund)" for the purpose of financing additional improvements to the System and to refund certain outstanding obligations for debt service savings, subject to then-prevailing market conditions. This Official Statement describes only the Bonds and not any other obligations mentioned herein or contemplated to be issued prospectively. Investors interested in investing in other City obligations should review the associated offering documents related thereto.

## **DESCRIPTION OF THE CITY**

The City is a political subdivision and municipal corporation of the State of Texas (the "State" or "Texas") duly organized and existing under the laws of the State, including the City's Home Rule Charter. The City was incorporated in 1837, and first adopted its Home Rule Charter in 1951. The City operates under a Council/Manager form of government with a City Council comprised of the Mayor and 10 Councilmembers. The terms of the Mayor and the Councilmembers are two years and subject to four term limitations imposed in the City's Home Rule Charter. The City Manager is the chief administrative officer for the City. Some of the services that the City provides are: public safety (police and fire protection), highways and streets, electric, gas, water and sanitary sewer utilities, health and social services, culture/recreation and parks, public transportation, public improvements, planning and zoning, and general administrative services. The 2010 Census population for the City was 1,327,407 and for Bexar County was 1,714,773. For the 2010 San Antonio population, it was determined that the U.S. Census Bureau had erroneously assigned 35 census blocks to the City that are actually outside of the City limits. The revised 2010 San Antonio population is 1,326,539. The U.S. Census Bureau ranks the City as the second largest city in Texas and the seventh largest city in the United States. The City's Information Technology Services Department estimated the City's population to be 1,475,416 in 2017. The City covers approximately 467 square miles within Bexar County. For additional information regarding the City, see "APPENDIX A - GENERAL INFORMATION REGARDING THE CITY."

## CITY'S COMBINED WATER AND WASTEWATER SYSTEM

The System consists of the City's combined water and wastewater system. Management, operation, and maintenance of the System is vested in the SAWS Board of Trustees (the "Board" or the "Board of Trustees") under the various City ordinances authorizing the issuance of SAWS' debt obligations, including the Ordinance.

#### PLAN OF FINANCING

## PURPOSE

Proceeds from the sale of the Bonds will be used to provide funds for the purposes of (i) building, improving, extending, enlarging, equipping, and repairing the System, (ii) to refund certain currently outstanding Junior Lien Obligations for debt service savings and to refund certain currently outstanding hereinafter-defined Commercial Paper Notes (each, the "Refunded Obligations") identified in Schedule I hereto to convert variable rate interim financing into fixed rate, long term financing, and (iii) paying the costs of issuance of the Bonds.

#### REFUNDED OBLIGATIONS

The Refunded Obligations, and interest due thereon, are to be paid on the scheduled interest payment, maturity, and redemption dates thereof from funds to be deposited with UMB Bank, N.A, Dallas, Texas (the "Escrow Agent") pursuant to an Escrow Deposit Letter dated as of the date of the approval of the Ordinance (the "Escrow Agreement"), between the City and the Escrow Agent. See Schedule I for a list of the Refunded Obligations. The refunding of those Refunded Obligations that are Commercial Paper Notes will result in fixing the long-term rate on such obligations (and not produce gross or present value savings for the System) and restore a like amount of issuance capacity under the Commercial Paper Program (described herein); the refunding of those Refunded Obligations that are outstanding Junior Lien Obligations will result in the City's realization of debt service savings.

The Ordinance provides that the City will deposit certain proceeds of the sale of the Bonds, along with other lawfully available funds of the City (if any), with the Escrow Agent in the amount necessary and sufficient to accomplish the discharge and final payment of the Refunded Obligations at their scheduled date or dates of maturity or at their scheduled date of redemption prior to stated maturity, as applicable. Such funds shall be held by the Escrow Agent in an escrow fund (the "Escrow Fund") irrevocably pledged to the payment of principal of and interest on the Refunded Obligations. Such escrowed funds will not be available to pay the debt service requirements on the Bonds.

PFM Financial Advisors LLC, in its capacity as Co-Financial Advisor to the City, will certify as to the sufficiency of the amount initially deposited to the Escrow Fund, without regard to investment (if any), to pay the principal of and interest on the Refunded Obligations when due (the "Certificate of Sufficiency"). Amounts on deposit in the Escrow Fund shall, until such time as needed for their intended purpose, be (i) held uninvested in cash, and/or (ii) invested in certain direct, noncallable obligations of the United States of America (including obligations unconditionally guaranteed by the United States of America) that were, on the date the Ordinance was adopted, rated as to investment quality by a nationally recognized rating firm of not less than "AAA". Cash and investments (if any) held in the Escrow Fund shall not be available to pay debt service requirements on the Bonds.

By the deposit of certain proceeds of the Bonds and cash, if any, with the Escrow Agent pursuant to the Escrow Agreement, the City will have effected the legal defeasance of all of the Refunded Obligations in accordance with applicable law. It is the opinion of Co-Bond Counsel in reliance upon the Certificate of Sufficiency provided by PFM Financial Advisors LLC, that, as a result of such defeasance, the Refunded Obligations will be outstanding only for the purpose of receiving payments from the Escrow Fund held for such purpose by the Escrow Agent and such Refunded Obligations will not be deemed as being outstanding obligations of the City payable from revenues of the Systems for the purpose of a limitation of indebtedness or for any other purpose. See "APPENDIX D – FORM OF CO-BOND COUNSEL'S OPINION" herein.

The City has covenanted in the Escrow Agreement to make timely deposits to the Escrow Fund, from lawfully available funds, of any additional amounts required to pay the principal of and interest on the Refunded Obligations if for any reason, the cash balances on deposit or scheduled to be on deposit in the Escrow Fund be insufficient to make such payment.

## THE BONDS

#### **DESCRIPTION OF THE BONDS**

The Bonds are dated May 1, 2018, and mature on May 15 in each of the years and in the amounts shown on the inside cover page hereof. Interest will accrue from their date of initial delivery to the initial purchasers thereof (the "Underwriters"), will be computed on the basis of a 360-day year composed of twelve 30-day months, and will be payable on May 15 and November 15, commencing November 15, 2018. The definitive Bonds will be issued only in fully registered form in any integral multiple of \$5,000 for any one maturity and will be initially registered and delivered only to Cede & Co., the nominee of DTC, pursuant to the Book-Entry-Only System described herein. No physical delivery of the Bonds will be made to the owners thereof. Principal of, premium, if any, and interest on the Bonds will be payable by the Paying Agent/Registrar to Cede & Co., which will make distribution of the amounts so paid to the participating members of DTC for subsequent payment to the beneficial owners of the Bonds (see "THE BONDS – Book-Entry-Only System" herein).

#### **AUTHORITY FOR ISSUANCE**

The Bonds are issued pursuant to the Constitution and the general laws of the State of Texas, including particularly Chapter 1207, Texas Government Code, as amended ("Chapter 1207"), Chapter 1371, Texas Government Code, as amended ("Chapter 1371" and, together with Chapter 1207, the "Act"), Chapter 1502, Texas Government Code, as amended, the City's Home Rule Charter, and an ordinance (the "Ordinance") authorizing the issuance of the Bonds adopted by the City Council of the City (the "City Council") on April 5, 2018. As permitted by the Act, the City Council has, in the Ordinance, delegated to certain authorized officials of the City and SAWS (each an "Authorized Official") the authority to establish final terms of sale of the Bonds. These final sales terms are evidenced in an "Approval Certificate" executed by an Authorized Official on April 26, 2018 at the time of the sale of the Bonds.

The Bonds are issued as Junior Lien Obligations—No Reserve Fund and, as a result thereof, the Bonds are not additionally benefited by the creation and establishment of a Reserve Fund (see "SECURITY FOR THE BONDS – Parity Lien Ordinance Amendment" herein).

#### SECURITY AND SOURCE OF PAYMENT; PLEDGE OF NET REVENUES

The Bonds are special obligations of the City, payable both as to principal and interest, solely from and secured by, together with the other Junior Lien Obligations (as described herein), a junior lien on and pledge of the Net Revenues of the System remaining after satisfaction of all City payment and reserve fund obligations, among other matters, relating to the Senior Lien Obligations. The Bonds are not additionally benefited by the creation and establishment of a Reserve Fund. The City has not covenanted or obligated itself to pay the Bonds from money raised or to be raised from taxation.

All Net Revenues of the System remaining after satisfaction of financial obligations of the City resulting from the prior pledge thereof and lien thereon securing the payment of the Senior Lien Obligations and any Additional Senior Lien Obligations hereafter issued by the City (as defined in the Ordinance) have been irrevocably pledged to the payment and security of the Junior Lien Obligations, which includes the Bonds, the Previously Issued Junior Lien Obligations, the Junior Lien Obligations—No Reserve Fund, and any Additional Junior Lien Obligations hereafter issued by the City (as each such term is defined in the Ordinance), including the establishment and maintenance of special funds or accounts created for the payment and security thereof. This pledge constitutes a junior lien on the Net Revenues of the System. In addition to the foregoing, the City has, in the Ordinance, reserved the right to pledge, and has in fact pledged, on a subordinate and inferior lien level of priority to the pledge thereof and lien thereon securing the payment of the Junior Lien Obligations, the Net Revenues of the System as security for the Subordinate Lien Obligations (as defined in the Ordinance), as well as the right to pledge, on a further subordinated and inferior lien level of priority to the pledge thereof and lien thereon securing the payment of the Subordinate Lien Obligations, the Net Revenues of the System as security for the Inferior Lien Obligations (as defined in the Ordinance). To date, the City has not issued any Inferior Lien Obligations. For a complete description of the security for the Bonds, see "SECURITY FOR THE BONDS" herein.

#### PERFECTION OF SECURITY FOR THE BONDS

Chapter 1208, Texas Government Code, as amended, applies to the issuance of the Bonds and the pledge of the Net Revenues, and such pledge is therefore, valid, effective, and perfected. Should Texas law be amended while the Bonds are outstanding and unpaid, the result of such amendment being that the pledge of the Net Revenues is to be subject to the filing requirements of Chapter 9, Texas Business and Commerce Code, as amended, in order to preserve to the registered owners of the Bonds a security interest in such pledge, the City has covenanted in the Ordinance to take such measures as it determines is reasonable and necessary to enable a filing of a security interest in said pledge to occur.

#### **OUTSTANDING DEBT**

As of the date of delivery of the Bonds, the City will have the following Senior Lien Obligations outstanding:

	Outstanding	
Dated Date	Debt (\$) <sup>(1)</sup>	Issue Description
November 1, 2009	91,570,000	Water System Revenue Bonds, Taxable Series 2009B (Direct Subsidy - Build America Bonds)
November 15, 2010	98,120,000	Water System Revenue Bonds, Taxable Series 2010B (Direct Subsidy - Build America Bonds)
March 15, 2011	30,790,000	Water System Revenue Refunding Bonds, Series 2011
August 15, 2011	150,550,000	Water System Revenue Refunding Bonds, Series 2011A
February 1, 2012	200,035,000	Water System Revenue Refunding Bonds, Series 2012
September 1, 2012	147,240,000	Water System Revenue and Refunding Bonds, Series 2012A
Total	718,305,000	

<sup>(1)</sup> Unaudited as of the date of this Official Statement; takes into account scheduled May 15, 2018 principal payments.

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In addition to the outstanding Senior Lien Obligations presented above, the City will, after the refunding of certain of the Refunded Obligations and the issuance of the Bonds, have outstanding the Junior Lien Obligations secured by and payable from Net Revenues as follows:

	Outstanding	
Dated Date	Debt (\$) <sup>(1)(2)</sup>	Issue Description
December 15, 2006	4,035,000	Water System Junior Lien Revenue and Refunding Bonds, Series 2007
November 1, 2009	42,595,000	Water System Junior Lien Revenue Bonds, Series 2009
November 1, 2009	28,230,000	Water System Junior Lien Revenue and Refunding Bonds, Series 2009A
February 1, 2010	7,675,000	Water System Junior Lien Revenue Refunding Bonds, Series 2010
December 1, 2010	14,075,000	Water System Junior Lien Revenue and Refunding Bonds, Series 2010A
May 15, 2011	16,380,000	Water System Junior Lien Revenue Bonds, Series 2011
May 15, 2011	15,015,000	Water System Junior Lien Revenue and Refunding Bonds, Series 2011A
April 1, 2012	13,340,000	Water System Junior Lien Revenue Refunding Bonds, Series 2012 (No Reserve Fund)
August 1, 2012	16,135,000	Water System Junior Lien Revenue Bonds, Series 2012
April 1, 2013	38,045,000	Water System Junior Lien Revenue Bonds, Series 2013A
May 1, 2013	65,195,000	Water System Junior Lien Revenue Refunding Bonds, Series 2013B (No Reserve Fund)
October 1, 2013	20,300,000	Water System Junior Lien Revenue Bonds, Series 2013C
October 1, 2013	52,380,000	Water System Junior Lien Revenue Bonds, Series 2013D
October 1, 2013	61,785,000	Water System Junior Lien Revenue and Refunding Bonds, Series 2013E (No Reserve Fund)
October 1, 2013	98,795,000	Water System Variable Rate Junior Lien Revenue and Refunding Bonds, Series 2013F (No Reserve Fund)
April 1, 2014	89,230,000	Water System Junior Lien Revenue and Refunding Bonds, Series 2014A (No Reserve Fund)
April 1, 2014	99,590,000	Water System Variable Rate Junior Lien Revenue and Refunding Bonds, Series 2014B (No Reserve Fund)
May 15, 2014	33,980,000	Water System Junior Lien Revenue Bonds, Series 2014C
June 1, 2014	18,195,000	Water System Junior Lien Revenue Bonds, Series 2014D
January 1, 2015	69,380,000	Water System Junior Lien Revenue Bonds, Series 2015A
February 1, 2015	291,470,000	Water System Junior Lien Revenue and Refunding Bonds, Series 2015B (No Reserve Fund)
January 1, 2016	168,510,000	Water System Junior Lien Revenue Refunding Bonds, Series 2016A (No Reserve Fund)
January 1, 2016	19,765,000	Water System Junior Lien Revenue Refunding Bonds, Taxable Series 2016B (No Reserve Fund)
October 1, 2016	305,065,000	Water System Junior Lien Revenue and Refunding Bonds, Series 2016C (No Reserve Fund)
December 1, 2016	11,950,000	Water System Junior Lien Revenue Bonds, Series 2016D
December 1, 2016	13,735,000	Water System Junior Lien Revenue Bonds, Series 2016E
January 1, 2017	78,735,000	Water System Junior Lien Revenue Refunding Bonds, Series 2017A (No Reserve Fund)
May 1, 2018	208,825,000	The Bonds
Total	1,902,410,000	

<sup>(1)</sup> Unaudited as of the date of this Official Statement; takes into account scheduled May 15, 2018 principal payments.

In addition to the outstanding Senior Lien Obligations and Junior Lien Obligations presented above, the City will, after the refunding of those Refunded Obligations that are outstanding Commercial Paper Notes, have the following Subordinate Lien Obligations outstanding:

Authorized Ame	ount
Amount (\$) <sup>(1)</sup> Outstand	ling (\$) <sup>(2)</sup> Issue Description
500,000,000 67,700	0,000 Water System Commercial Paper Notes, Series A <sup>(3)</sup>
500,000,000 80,995	5,000 Water System Commercial Paper Notes, Series B

<sup>(1)</sup> Represents the combined authorization of the Series A Notes and the Series B Notes (i.e., the combined principal amount of Series A Notes and Series B Notes that can be outstanding at any time is the lesser of total program capacity (currently, \$500,000,000) and liquidity support therefor (currently \$450,000,000 under the hereinafter-defined TECP Agreements)). See "COMMERCIAL PAPER PROGRAM" herein.

None of the above obligations, including the Bonds, are a charge upon any other income or revenues of the City, other than Net Revenues, and will never constitute an indebtedness or pledge of the general credit or taxing powers of the City. The Ordinance does not create a lien or mortgage on the System, except the Net Revenues with respect to the Bonds, and no judgment against the City may be enforced by levy and execution against any property owned by the City.

See the "Combined System Revenue Debt Service Requirements" table under "DEBT AND OTHER FINANCIAL INFORMATION" for a description of the debt service requirements on all outstanding indebtedness issued by the City for the benefit of the System.

## FLOW OF FUNDS

The flow of funds of the System requires that Gross Revenues of the System be applied in sequence to: (i) current Maintenance and Operating Expenses, including maintenance of an operating reserve equal to two months of expenses for the current Fiscal Year; (ii) payment of amounts required on any Senior Lien Obligations issued by the City; (iii) payment of amounts required on any Junior Lien Obligations issued by the City; (iv) payment of amounts required on any Inferior Lien Obligations issued by the City; and (vi) transfers to the City's General Fund and to the Renewal and Replacement Fund. The Commercial Paper Program (under which the City may issue Series A Notes and Series B Notes in a combined amount not to exceed \$500,000,000) represents the City's only currently outstanding Subordinate Lien Obligations, but it is authorized to issue Additional Subordinate Lien Obligations. The City has not issued any Inferior Lien Obligations, but the City is authorized to do so under the Ordinance. (See "THE BONDS – Security and Source

Excludes the Refunded Obligations that are Junior Lien Obligations. See "SCHEDULE OF REFUNDED OBLIGATIONS" attached hereto as Schedule I.

<sup>(2)</sup> Excludes the Refunded Obligations that are outstanding Commercial Paper Notes. See "SCHEDULE OF REFUNDED OBLIGATIONS" attached hereto as Schedule I.

<sup>(3)</sup> See "COMMERCIAL PAPER PROGRAM" herein for a description of the October 2018 expiration of the revolving credit agreement related to the Series A Notes.

of Payment; Pledge of Net Revenues" herein; see also "SECURITY FOR THE BONDS – Flow of Funds" and "APPENDIX C - SELECTED PROVISIONS OF THE ORDINANCE" herein).

#### RATES

The City has covenanted in the Ordinance that it will at all times charge and collect rates for services rendered by the System sufficient to (i) pay all Maintenance and Operating Expenses of the System, (ii) produce "Pledged Revenues" (substantively defined in the Ordinance to mean the senior and superior lien on and pledge of Net Revenues of the System securing the repayment of the Senior Lien Obligations and any Additional Senior Lien Obligations, plus any additional revenues, income, receipts, or other resources of the City pledged as security for the Senior Lien Obligations) at least equal to 1.25 times the interest on and the principal of the Senior Lien Obligations and the amounts required to be deposited in any reserve or contingency fund created for the payment and security of the Senior Lien Obligations, and (iii) produce Net Revenues, together with any other lawfully available funds, to pay the principal of and interest on the currently outstanding Junior Lien Obligations, which includes the Bonds, as the same become due and payable and to deposit the amounts required to be deposited in any special fund or account created and established for the payment and security of any Additional Junior Lien Obligations hereafter issued by the City. (See "SECURITY FOR THE BONDS – Rate Covenant" for a description of additional rate covenants of the City.)

#### ADDITIONAL OBLIGATIONS

In the Ordinance, the City has reserved the right to issue (i) Additional Senior Lien Obligations, which are primarily secured by and payable from a lien on and pledge of the Net Revenues of the System (included in the definition of Pledged Revenues) that is senior and superior to the pledge thereof and lien thereon securing the Bonds, (ii) Additional Junior Lien Obligations, which are secured by and payable from a lien on and pledge of the Net Revenues of the System on parity with the pledge thereof and lien thereon securing the Bonds, (iii) Additional Subordinate Lien Obligations, which are primarily secured by and payable from a lien on and pledge of the Net Revenues of the System that is subordinate and inferior to the pledge thereof and lien thereon securing the Bonds, and (iv) Inferior Lien Obligations, which are primarily secured by and payable from a lien on and pledge of the Net Revenues of the System that is further subordinated and inferior to the pledge thereof and lien thereon securing the Subordinate Lien Obligations and any Additional Subordinate Lien Obligations.

The issuance of Additional Senior Lien Obligations is subject to the requirements of the ordinances of the City authorizing the respective issuance of Senior Lien Obligations and include, as the primary threshold matter, the ability to demonstrate that the Pledged Revenues, for the preceding Fiscal Year or for any 12 consecutive calendar month period out of the 18-month period ending not more than ninety (90) days preceding the month the ordinance authorizing the issuance of the Additional Senior Lien Obligations is adopted, are equal to at least 125% of the maximum annual debt service requirements for all Senior Lien Obligations to be outstanding after giving effect to the issuance of the Additional Senior Lien Obligations then proposed.

The City's issuance of Additional Junior Lien Obligations payable from a parity lien pledge of the Net Revenues, which (together with the Previously Issued Junior Lien Obligations and the Junior Lien Obligations-No Reserve Fund (which includes the Bonds)) will be equally and ratably secured by a junior lien on and pledge of the Net Revenues of the System, is subject to complying with certain conditions in the Ordinance. For the issuance of Additional Junior Lien Obligations the repayment of which is not insured by a municipal bond insurance policy and that are not sold to the TWDB, and in addition to certain other covenants, the Net Revenues, for the preceding Fiscal Year or for any 12 consecutive calendar month period out of the 18-month period preceding the month the ordinance authorizing the issuance of the Additional Junior Lien Obligations is adopted, must be equal to at least the average annual requirement for the payment of principal of and interest on all outstanding Junior Lien Obligations after giving effect to the Additional Junior Lien Obligations then proposed. For the issuance of Additional Junior Lien Obligations the repayment of which is not insured by a municipal bond insurance policy and that are sold to the TWDB, the City must show that Net Revenues for the same reporting period identified above are at least equal to one and one-fourth times the average annual requirement for the payment of principal of and interest on all outstanding Junior Lien Obligations after giving effect to the Additional Junior Lien Obligations then proposed. The issuance of Additional Junior Lien Obligations that are Reserve Fund-Secured Junior Lien Obligations (defined herein) also requires satisfaction of certain conditions precedent, including additionally funding, as necessary, the Reserve Fund. (See "SECURITY FOR THE BONDS - Reserve Fund" herein). The Ordinance also specifies the conditions upon which Additional Subordinate Lien Obligations and Inferior Lien Obligations may be issued. See "APPENDIX C - SELECTED PROVISIONS OF THE ORDINANCE" for terms and conditions to be satisfied for the issuance of Additional Junior Lien Obligations herein.

#### REDEMPTION

Optional Redemption. The City reserves the right, at its option, to redeem Bonds having stated maturities on and after May 15, 2029, in whole or in part in principal amounts of \$5,000 or any integral multiple thereof, on May 15, 2028, or any date thereafter, at the par value thereof plus accrued interest to the date of redemption.

Mandatory Redemption. The Bonds maturing on May 15, 2043 and May 15, 2048 (the "Term Bonds") are subject to mandatory sinking fund redemption prior to their stated maturities from money required to be deposited in the Bond Fund for such purpose and shall be redeemed in part, by lot or other customary method, at the principal amount thereof plus accrued interest to the date of mandatory sinking fund redemption in the principal amounts on May 15 in each of the years as set forth on the following page.

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Term Bonds Stated to Mature on May 15, 2043 (5.000% Coupon) Term Bonds Stated to Mature on May 15, 2048 (5.000% Coupon)

	Principal		Principal
Year	Amount (\$)	Year	Amount (\$)
2041	8,705,000	2044	10,115,000
2042	9,150,000	2045	10,630,000
2043	9,620,000*	2046	11,175,000
		2047	11,750,000
		2048	12,355,000*

<sup>\*</sup>Payable at stated maturity.

The principal amount of a Term Bond required to be redeemed pursuant to the operation of the mandatory sinking fund redemption provisions shall be reduced, at the option of the City, by the principal amount of any Term Bond of such stated maturity which, at least 50 days prior to the mandatory sinking fund redemption date, (1) shall have been defeased or acquired by the City and delivered to the Paying Agent/Registrar for cancellation, (2) shall have been purchased and canceled by the Paying Agent/Registrar at the request of the City with money in the Bond Fund, or (3) shall have been redeemed pursuant to the optional redemption provisions, if any, set forth above and not theretofore credited against a mandatory sinking fund redemption requirement.

#### SELECTION OF BONDS FOR REDEMPTION

If less than all of the Bonds are to be redeemed, the City may select the maturities of Bonds to be redeemed. If less than all the Bonds of any maturity are to be redeemed, the Paying Agent/Registrar (or DTC while the Bonds are in Book-Entry-Only form) shall determine by lot the Bonds, or portions thereof, within such maturity to be redeemed. If a Bond (or any portion of the principal sum thereof) shall have been called for redemption and notice of such redemption shall have been given, such Bond (or the principal amount thereof to be redeemed) shall become due and payable on such redemption date and interest thereon shall cease to accrue from and after the redemption date, provided funds for the payment of the redemption price and accrued interest thereon are held by the Paying Agent/Registrar on the redemption date.

Bonds of a denomination larger than \$5,000 may be redeemed in part (\$5,000 or any integral multiple thereof). Any Bond to be partially redeemed must be surrendered in exchange for one or more new Bonds of the same stated maturity and interest rate for the unredeemed portion of the principal.

## NOTICE OF REDEMPTION

Not less than 30 days prior to a redemption date for the Bonds, the City shall cause a notice of redemption to be sent by United States mail, first class, postage prepaid, to the registered owners of the Bonds to be redeemed, in whole or in part, at the address of the registered owner appearing on the registration books of the Paying Agent/Registrar at the close of business on the business day next preceding the date of mailing such notice. By the date fixed for such redemption, due provision must be made with the Paying Agent/Registrar for the payment of the required redemption price for the Bonds or portions thereof which are to be so redeemed. ANY NOTICE SO MAILED SHALL BE CONCLUSIVELY PRESUMED TO HAVE BEEN DULY GIVEN, WHETHER OR NOT THE REGISTERED OWNER RECEIVES SUCH NOTICE. NOTICE HAVING BEEN SO GIVEN, AND SUCH PROVISION MADE FOR THE PAYMENT OF THE BONDS, THE BONDS CALLED FOR REDEMPTION SHALL BECOME DUE AND PAYABLE ON THE SPECIFIED REDEMPTION DATE, AND NOTWITHSTANDING THAT ANY BOND OR PORTION THEREOF HAS NOT BEEN SURRENDERED FOR PAYMENT, INTEREST ON SUCH BOND OR PORTION THEREOF SHALL CEASE TO ACCRUE AFTER THE DATE FIXED FOR REDEMPTION, AND THEY WILL NOT BE REGARDED AS BEING OUTSTANDING EXCEPT FOR THE RIGHT OF THE REGISTERED OWNER TO RECEIVE THE REDEMPTION PRICE FROM THE PAYING AGENT/REGISTRAR OUT OF THE FUNDS PROVIDED FOR SUCH PAYMENT.

The Paying Agent/Registrar and the City, so long as a Book-Entry-Only System is used for the Bonds, will send any notice of redemption, notice of proposed amendment to the Ordinance or other notices with respect to the Bonds only to DTC. Any failure by DTC to advise any Direct Participant (hereinafter defined), or of any Direct Participant or Indirect Participant (hereinafter defined) to notify the Beneficial Owner (hereinafter defined), will not affect the validity of the redemption of the Bonds called for redemption or any other action premised on any such notice. Redemption of portions of the Bonds by the City will reduce the outstanding principal amount of such Bonds held by DTC. In such event, DTC may implement, through its Book-Entry-Only System, a redemption of such Bonds held for the account of Direct Participants in accordance with its rules or other agreements with Direct Participants and then Direct Participants and Indirect Participants may implement a redemption of such Bonds from the Beneficial Owners. Any such selection of Bonds to be redeemed will not be governed by the Ordinance and will not be conducted by the City or the Paying Agent/Registrar. Neither the City nor the Paying Agent/Registrar will have any responsibility to Direct Participants, Indirect Participants, or Beneficial Owners of the selection of portions of the Bonds for redemption.

#### AMENDMENTS

Subject to the provisions of the Ordinance, the City may amend the Ordinance without the consent of or notice to any registered owners of Bonds in any manner not detrimental to the interests of such registered owners, including the curing of any ambiguity, inconsistency, or formal defect or omission therein. In addition, the City may, with the written consent of the registered owners of a majority in aggregate principal amount of the Bonds then outstanding affected thereby, amend, add to, or rescind any of the provisions of the Ordinance; except that, without the consent of the registered owners of all of the Bonds, no such amendment, addition, or rescission may (i) change the date specified as the date on which the

principal of or any installment of interest on any Bond is due and payable, reduce the principal amount thereof, the rate of interest thereon, or the redemption price therefor, change the place or places at or the coin or currency in which any Bond or interest thereon is payable, or in any other way modify the terms of payment of the principal of or interest on the Bonds, (ii) give any preference to any Bond over any other Bond, or (iii) reduce the aggregate principal amount of Bonds required for consent to any amendment, addition, or rescission.

#### DEFEASANCE

The Ordinance provides that any Bond will be deemed paid and will no longer be considered to be outstanding within the meaning of the Ordinance when payment of principal of and interest on such Bond to its stated maturity or date of prior redemption has been made or provided for. Payment may be provided for by deposit of any combination of (i) money in an amount sufficient to make such payment and/or (ii) Government Securities (defined herein). Any such deposit must be certified by an independent public accountant, the System's Co-Financial Advisor, the Paying Agent/Registrar, or another qualified third party certifying as to such maturities and interest payment dates and bear such interest as will, without further investment or reinvestment of either the principal amount thereof or the interest earnings therefrom, be sufficient to make such payment. The Ordinance provides that "Government Securities" means (a) direct, noncallable obligations of the United States of America, including obligations that are unconditionally guaranteed by the United States of America, (b) noncallable obligations of an agency or instrumentality of the United States of America, including obligations that are unconditionally guaranteed or insured by the agency or instrumentality and that are rated as to investment quality by a nationally recognized investment rating firm not less than "AAA" or its equivalent, (c) noncallable obligations of a state or an agency or a county, municipality, or other political subdivision of a state that have been refunded and that are rated as to investment quality by a nationally recognized investment rating firm not less than "AAA" or its equivalent, and (d) any additional securities and obligations hereafter authorized by Texas law as eligible for use to accomplish the discharge of obligations such as the Bonds. An Authorized Official may limit these eligible securities as deemed necessary, in connection with the sale of the Bonds. There is no assurance that the ratings for U.S. Treasury securities acquired to defease any Bonds, or those for any other Government Securities, will be maintained at any particular rating category. Further, there is no assurance that current Texas law will not be amended in a manner that expands or contracts the list of permissible defeasance securities (such list consisting of those securities identified in clauses (a) through (c) above), or any rating requirement thereon, that may be purchased with defeasance proceeds relating to the Bonds ("Defeasance Proceeds"), though the City has reserved the right to utilize any additional securities for such purpose in the event the aforementioned list is expanded. Because the Ordinance does not contractually limit such permissible defeasance securities and expressly recognizes the ability of the City to use lawfully available Defeasance Proceeds to defease all or any portion of the Bonds, registered owners of Bonds are deemed to have consented to the use of Defeasance Proceeds to purchase such other defeasance securities, notwithstanding the fact that such defeasance securities may not be of the same investment quality as those currently identified under Texas law as permissible defeasance securities.

Upon such deposit as described above, such Bonds will no longer be regarded to be outstanding obligations for any purpose, including the application of any limitation on indebtedness. After firm banking and financial arrangements for the discharge and final payment of the Bonds have been made as described above, all rights of the City to initiate proceedings to call the Bonds for redemption or take any other action amending the terms of the Bonds are extinguished; provided, however, that, the City's right to redeem the Bonds defeased to stated maturity is not extinguished if the City has reserved the option, to be exercised at the time of the defeasance of the Bonds, to call for redemption, at an earlier date, those Bonds which have been defeased to their stated maturity date, if the City: (i) in the proceedings providing for the firm banking and financial arrangements, expressly reserves the right to call the Bonds for redemption; (ii) gives notice of the reservation of that right to the owners of the Bonds immediately following the making of the firm banking and financial arrangements; and (iii) directs that notice of the reservation be included in any redemption notices that it authorizes.

#### BOOK-ENTRY-ONLY SYSTEM

This section describes how ownership of the Bonds is to be transferred and how the principal of, premium, if any, and interest on the Bonds are to be paid to and accredited by DTC while the Bonds are registered in its nominee name. The information in this section concerning DTC and the Book-Entry-Only System has been provided by DTC for use in disclosure documents such as this Official Statement. The City, the Board, the Co-Financial Advisors, and the Underwriters believe the source of such information to be reliable, but take no responsibility for the accuracy or completeness thereof.

The City and the Board cannot and do not give any assurance that (i) DTC will distribute payments of debt service on the Bonds, or redemption or other notices, to DTC Participants, (ii) DTC Participants or others will distribute debt service payments paid to DTC or its nominee (as the registered owner of the Bonds), or redemption or other notices, to the Beneficial Owners, or that they will do so on a timely basis, or (iii) DTC will serve and act in the manner described in this Official Statement. The current rules applicable to DTC are on file with the United States Securities and Exchange Commission, and the current procedures of DTC to be followed in dealing with DTC Participants are on file with DTC.

The Depository Trust Company ("DTC"), New York, New York, will act as securities depository for the Bonds. The Bonds will be issued as fully-registered securities registered in the name of Cede & Co. (DTC's partnership nominee). One fully registered certificate will be issued for each maturity of the Bonds in the aggregate principal amount of each such maturity and will be deposited with DTC.

DTC, the world's largest 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, as amended. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity, corporate and municipal debt issues, and money market instrument (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 of 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 S&P Global Ratings' rating of "AA+". The DTC Rules applicable to its Participants are on file with the United States Securities and Exchange Commission. More information about DTC can be found at www.dtcc.com.

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

To facilitate subsequent transfers, all 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 Bonds with DTC and their registration in the name of Cede & Co. or such other DTC nominee do not affect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the Bonds; DTC's records reflect only the identity of the Direct Participant to whose account such Bonds are credited, which may or may not be the Beneficial Owners. The 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.

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

Neither DTC nor Cede & Co. will consent or vote with respect to the Bonds unless authorized by a Direct Participant in accordance with DTC's 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 the Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Payments on the Bonds will be made to 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 Paying Agent/Registrar on payable dates in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as in 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 Paying Agent/Registrar or the City, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of redemption proceeds and principal of and interest on the Bonds to DTC is the responsibility of the City, disbursement of such payments to Direct Participants shall be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners shall be the responsibility of Direct and Indirect Participants.

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

Use of Certain Terms in Other Sections of this Official Statement. In reading this Official Statement it should be understood that while the Bonds are in the Book-Entry-Only System, references in other sections of this Official Statement to registered owners should be read to include the person for which the Participant acquires an interest in the Bonds, but (i) all rights of ownership must be exercised through DTC and the Book-Entry-Only System, and (ii) except as described above, notices that are to be given to registered owners under the Ordinance will be given only to DTC.

Information concerning DTC and the Book-Entry-Only System has been obtained from DTC and is not guaranteed as to accuracy or completeness by, and is not to be construed as a representation by the City, the Board, the Co-Financial Advisors, or the Underwriters.

Effect of Termination of Book-Entry-Only System. In the event that the Book-Entry-Only System is discontinued by DTC or the use of the Book-Entry-Only System is discontinued by the City, printed certificates representing the Bonds will be issued to the holders and the Bonds will be subject to transfer, exchange, and registration provisions as set forth in the Ordinance and summarized under "THE BONDS - Transfer, Exchange, and Registration" below.

#### PAYING AGENT/REGISTRAR

The initial paying agent/registrar is UMB Bank, N.A., Dallas, Texas (the "Paying Agent/Registrar"). In the Ordinance, the City retains the right to replace the Paying Agent/Registrar. The City covenants to maintain and provide a Paying Agent/Registrar at all times until the Bonds are duly paid and any successor Paying Agent/Registrar must be a commercial bank, trust company, financial institution, or other agency organized under the laws of the State and duly qualified and legally authorized to serve as and perform the duties and services of Paying Agent/Registrar for the

Bonds. Upon any change in the Paying Agent/Registrar for the Bonds, the City agrees to promptly cause a written notice thereof to be sent to each registered owner of the Bonds by United States mail, first class, postage prepaid, which notice will also give the address of the new Paying Agent/Registrar.

Principal of the Bonds will be payable to the registered owner at maturity or prior redemption upon presentation at the designated payment office of the Paying Agent/Registrar in Dallas, Texas. Interest on the Bonds will be payable by check, dated as of the interest payment date, and mailed by the Paying Agent/Registrar to registered owners as shown on the records of the Paying Agent/Registrar on the Record Date (defined herein) (see "THE BONDS – Record Date for Interest Payment" herein), or by such other method, acceptable to the Paying Agent/Registrar, requested by, and at the risk and expense of, the registered owner. If the date for the payment of the principal of or interest on the Bonds is a Saturday, Sunday, legal holiday, or day on which banking institutions in the city where the Paying Agent/Registrar is located are authorized by law or executive order to close, then the date for such payment will be the next succeeding day which is not such a Saturday, Sunday, legal holiday, or day on which banking institutions are authorized to close, and payment on such date will have the same force and effect as if made on the original date payment was due.

Initially, the Bonds are issued utilizing the Book-Entry-Only System of the DTC. No physical delivery of the Bonds will be made to the Beneficial Owners of the Bonds and the registered owner of the Bonds appearing on the books of the Paying Agent/Registrar will be Cede & Co., the nominee of DTC. The use of the Book-Entry-Only System may affect the method and timing of payment to the Beneficial Owners of the Bonds. (See "THE BONDS - Book-Entry-Only System" above.)

#### TRANSFER, EXCHANGE, AND REGISTRATION

In the event the Book-Entry-Only System should be discontinued, the Bonds may be transferred and exchanged on the registration books of the Paying Agent/Registrar only upon presentation and surrender thereof to the Paying Agent/Registrar and such transfer or exchange shall be without expense or service charge to the registered owner, except for any tax or other governmental charges required to be paid with respect to such registration, exchange, and transfer. Bonds may be assigned by the execution of an assignment form on the respective Bonds or by other instrument of transfer and assignment acceptable to the Paying Agent/Registrar. New Bonds will be delivered by the Paying Agent/Registrar, in lieu of the Bonds being transferred or exchanged, at the corporate trust office of the Paying Agent/Registrar, or sent by United States mail, first class, postage prepaid, to the new registered owner or his designee. To the extent possible, new Bonds issued in an exchange or transfer of Bonds will be delivered to the registered owner or assignee of the registered owner in not more than three business days after the receipt of the Bonds to be canceled, and the written instrument of transfer or request for exchange duly executed by the registered owner or his duly authorized agent, in form satisfactory to the Paying Agent/Registrar. New Bonds registered and delivered in an exchange or transfer will be in any integral multiple of \$5,000 for any one maturity and for a like aggregate principal amount as the Bonds surrendered for exchange or transfer. See "THE BONDS - Book-Entry-Only System" herein for a description of the system to be utilized initially in regard to ownership and transferability of the Bonds. Neither the City nor the Paying Agent/Registrar will be required to transfer or exchange any Bond (i) during the period commencing with the close of business or any Record Date and ending with the opening of business on the following principal or interest payment date, or (ii) with respect to any Bond called for redemption, in whole or in part, within 45 days of the date fixed for redemption; provided, however, such limitation of transfer is not applicable to an exchange by the registered owner of the uncalled balance of a Bond.

#### RECORD DATE FOR INTEREST PAYMENT

The record date ("Record Date") for determining the person to whom interest on a Bond is payable on any interest payment date means the close of business on the last business day of the preceding month.

In the event of a non-payment of interest on a scheduled payment date, and for 30 days thereafter, a new record date for such interest payment (a "Special Record Date") will be established by the Paying Agent/Registrar, if and when funds for the payment of such interest have been received from the City. Notice of the Special Record Date and of the scheduled payment date of the past due interest ("Special Payment Date", which must be 15 days after the Special Record Date) will be sent at least five business days prior to the Special Record Date by United States mail, first class postage prepaid, to the address of each holder of a Bond appearing on the registration books of the Paying Agent/Registrar at the close of business on the last business day next preceding the date of mailing of such notice.

#### PAYMENT RECORD

The City has never defaulted in payments on its bonded indebtedness.

#### **BONDHOLDERS' REMEDIES**

If the City defaults in the payment of principal, interest, or redemption price on the Bonds when due, or if it fails to make payments into any fund or funds created in the Ordinance, or defaults in the observation or performance of any other covenants, conditions, or obligations set forth in the Ordinance, the registered owners may seek a writ of mandamus to compel City officials to carry out their legally imposed duties with respect to the Bonds, if there is no other available remedy at law to compel performance of the Bonds or the Ordinance and the City's obligations are not uncertain or disputed. The issuance of a writ of mandamus is controlled by equitable principles, and rests with the discretion of the court, but may not be arbitrarily refused. There is no acceleration of maturity of the Bonds in the event of default and, consequently, the remedy of mandamus may have to be relied upon from year to year. The Ordinance does not provide for the appointment of a trustee to represent the interest of the bondholders upon any failure of the City to perform in accordance with the terms of such Ordinance, or upon any other condition and accordingly all legal actions to enforce such remedies would have to be undertaken at the initiative of, and be financed by, the registered owners. The Texas Supreme Court ruled in *Tooke v. City of Mexia*, 197 S.W.3d 325 (Tex. 2006) ("Tooke") that a waiver of sovereign immunity in a contractual dispute must be provided for by statute in "clear and unambiguous" language. Chapter 1371, which pertains to the issuance of public securities by issuers such as the City, permits the City to waive sovereign immunity in the proceedings authorizing the issuance of the Bonds. Notwithstanding its

reliance upon the provisions of Chapter 1371 in connection with the issuance of the Bonds (as further described under the caption "THE BONDS – Authority for Issuance"), the City has not waived the defense of sovereign immunity with respect thereto.

Furthermore, Tooke, and subsequent jurisprudence, held that a municipality is not immune from suit for torts committed in the performance of its proprietary functions, as it is for torts committed in the performance of its governmental functions (the "Proprietary-Governmental Dichotomy"). Governmental functions are those that are enjoined on a municipality by law and are given by the State as a part of the State's sovereignty, to be exercised by the municipality in the interest of the general public, while proprietary functions are those that a municipality may, in its discretion, perform in the interest of the inhabitants of the municipality.

In Wasson Interests, Ltd. v. City of Jacksonville, 489 S.W.3d 427 (Tex. 2016) ("Wasson"), the Texas Supreme Court (the "Court") addressed whether the distinction between governmental and proprietary acts (as found in tort-based causes of action) applies to breach of contract claims against municipalities. The Court analyzed the rationale behind the Proprietary-Governmental Dichotomy to determine that "a city's proprietary functions are not done pursuant to the 'will of the people" and protecting such municipalities "via the [S]tate's immunity is not an efficient way to ensure efficient allocation of [S]tate resources". While the Court recognized that the distinction between governmental and proprietary functions is not clear, the Wasson opinion held that the Proprietary-Governmental Dichotomy applies in contract-claims context. Therefore, in regard to municipal contract cases (as in tort claims), it is incumbent on the courts to determine whether a function is proprietary or governmental based upon the statutory guidance and definitions found in the Texas Civil Practice and Remedies Code, determination of which will dictate the availability of the defense of immunity for causes of action arising under such contract.

Notwithstanding the foregoing new case law issued by the Court, such sovereign immunity issues have not been adjudicated in relation to bond matters (specifically, in regard to the issuance of municipal debt). Each situation will be prospectively evaluated based on the facts and circumstances surrounding the contract in question to determine if a suit, and subsequently, a judgment, is justiciable against a municipality. If a judgment against the City could be obtained, it could not be enforced by direct levy and execution against the City's property. Further, the registered owners cannot themselves foreclose on property within the City or sell property within the City to enforce the tax lien on taxable property to pay the principal of and interest on the Bonds. Furthermore, the City is eligible to seek relief from its creditors under Chapter 9 of the United States Bankruptcy Code ("Chapter 9"). Although Chapter 9 provides for the recognition of a security interest represented by a specifically pledged source of revenues, such as the Junior Lien Pledged Revenues, such provision is subject to judicial construction. Chapter 9 also includes an automatic stay provision that would prohibit, without Bankruptcy Court approval, the prosecution of any other legal action by creditors or bondholders of an entity which has sought protection under Chapter 9. Therefore, should the City avail itself of Chapter 9 protection from creditors, the ability to enforce would be subject to the approval of the Bankruptcy Court (which could require that the action be heard in Bankruptcy Court in state of other federal or state court); and the Bankruptcy Code provides for broad discretionary powers of a Bankruptcy Court in administering any proceeding brought before it. The opinion of Co-Bond Counsel will note that all opinions relative to the enforceability of the Ordinance and the Bonds are qualified with respect to the customary rights of debtors relative to their creditors and principles of equity which permit the exercise of judicial

## SOURCES AND USES OF BOND PROCEEDS

Proceeds from the sale of the Bonds, along with a cash contribution of the System are expected to be expended as follows:

Sources of Funds	
Par Amount of the Bonds	\$ 208,825,000.00
Reoffering Premium	29,186,270.75
System Contribution	3,161,343.08
Total Sources of Funds	\$ 241,172,613.83
Uses of Funds	
Construction Fund Deposit	\$ 72,947,871.00
Escrow Fund Deposit	166,774,747.79
Underwriters' Discount	730,648.92
Cost of Issuance and Additional Proceeds	719,346.12
Total Uses of Funds	\$ 241,172,613.83

#### SECURITY FOR THE BONDS

#### COMBINED SYSTEM

The City has previously authorized the creation of the System, a single, unified water system consisting of the City's then existing waterworks, wastewater, and water reuse systems, together with all future improvements and additions thereto, and all replacements thereof. In addition, the System Ordinance (hereinafter defined) permits the City to incorporate into the System a stormwater system (including all existing drainage facilities) and any other related system to the extent permitted by law. Currently, the City assumes the overall responsibility of the stormwater program. See "THE SAN ANTONIO WATER SYSTEM - Stormwater System" herein. The System will not include (i) any Special Projects which are declared by the City, upon the recommendation of the Board, not to be part of the System and which are financed with obligations payable from sources other than ad valorem taxes, Pledged Revenues, or Net Revenues, or (ii) any water or water-related properties and facilities owned by the City as part of its electric and gas systems.

To accommodate the assumption of the former Bexar Metropolitan Water District ("BexarMet") waterworks system, the City, by ordinance of the City Council, created a "Special Project", as authorized by the passage of Senate Bill 341 ("SB 341") by the 82nd Texas Legislature in 2001 and pursuant to City ordinances authorizing then-outstanding Senior Lien Obligations, where that waterworks system resided from the time of

assumption as a segregated component unit of SAWS until the occurrence of operational integration within the System. This Special Project is referred to herein as the "District Special Project" or the "DSP"; the former BexarMet waterworks system assumed by the City and held in the DSP is referred to as the "DSP System." Following the retirement of all obligations secured by a lien on and pledge of and payable from the revenues of the DSP System, the DSP was dissolved and the DSP System was consolidated into the System. See "THE SAN ANTONIO WATER SYSTEM – Integration of Former BexarMet System under SB 341."

#### PLEDGED REVENUES

The Bonds are special obligations of the City which, together with the currently outstanding Previously Issued Junior Lien Obligations, Junior Lien Obligations-No Reserve Fund, and any Additional Junior Lien Obligations hereafter issued (collectively, the "Junior Lien Obligations"), are payable solely from and equally and ratably secured by a lien on and pledge of the Net Revenues of the System that is junior and inferior to the pledge thereof and lien thereon securing the repayment of the Senior Lien Obligations and any Additional Senior Lien Obligations hereafter issued by the City (which first lien on Net Revenues is included in the definition of "Pledged Revenues"), along with any other additional revenues, income, receipts, or other resources that are pledged by the City to the payment of the Junior Lien Obligations (but excluding revenues excluded from Gross Revenues). At this time, no such additional revenues, income, receipts, or other resources are so pledged. The term "Net Revenues" means Gross Revenues less Maintenance and Operating Expenses. The term "Gross Revenues" means all revenue with respect to or on account of the operation and ownership of the System (which, since dissolution of the DSP, includes the DSP System), excluding (i) payments received by the Board under the CPS Contract (as defined herein) together with earnings thereon, (ii) income derived from the investment or deposit of money in the Construction Fund and, until the Reserve Fund contains the Required Reserve Amount, money in the Reserve Fund, and (iii) certain other amounts. Maintenance and Operating Expenses means all current expenses of operating and maintaining the System not paid from the proceeds of any Debt, including, for example, the cost of all salaries, labor, and materials; certain expenses of repairs and extensions; the costs of employee benefits; and the costs of purchasing water and wastewater treatment services from other entities, but excluding allowance for depreciation and other items not requiring an outlay of cash, and excluding interest on the Bonds or any other Debt. For a more detailed description of the defined terms referenced above, see "APPENDIX C - SELECTED PROVISIONS OF THE ORDINANCE" herein.

The Bonds do not constitute an indebtedness or general obligation of the City, the State of Texas, or any other entity; the Bonds are not payable from any funds raised or to be raised by taxation; and owners of the Bonds shall never have the right to demand payment thereof from the levy of ad valorem taxes or from any other source not pledged to the payment of the Bonds. No lien has been created on the physical properties of the System to secure payment of the Bonds (see "BONDHOLDERS' REMEDIES" herein).

#### FLOW OF FUNDS

The Ordinance provides that the Gross Revenues will be deposited by the Board, upon receipt, into the System Fund and will be pledged and appropriated to the extent required for the following uses and in the order of priority shown:

FIRST: to the payment of all necessary and reasonable Maintenance and Operating Expenses as defined herein or required by statute, including, but not limited to, Chapter 1502, Texas Government Code, as amended (formerly Texas Revised Civil Statutes Annotated Article 1113, as amended), to be a first charge on and claim against the Gross Revenues, including a two-month reserve amount based upon the budgeted amount of Maintenance and Operating Expenses for the current Fiscal Year, which amount shall be retained in the System Fund.

SECOND: to the payment of the amounts required to be deposited into the special funds and accounts created and established for the payment, security and benefit of the currently outstanding Senior Lien Obligations and any Additional Senior Lien Obligations hereafter issued by the City.

THIRD: to the payment of the amounts required to be deposited into the special funds and accounts created and established for the payment, security, and benefit of the currently outstanding Junior Lien Obligations and any Additional Junior Lien Obligations hereafter issued by the City.

FOURTH: to the payment of the amounts that must be deposited in any special funds and accounts created and established for the payment, security and benefit of the currently outstanding Subordinate Lien Obligations and any Additional Subordinate Lien Obligations hereafter issued by the City.

FIFTH: to the payment of the amounts that must be deposited in any special funds and accounts created and established for the payment, security, and benefit of any Inferior Lien Obligations hereafter issued by the City.

SIXTH: to the payment of the amounts to be transferred to the City's General Fund and into the Renewal and Replacement Fund, in accordance with the applicable provisions of the Ordinance.

For a more detailed description of the funds referenced above, and the Board's obligations with respect thereto, see "APPENDIX C - SELECTED PROVISIONS OF THE ORDINANCE" herein.

## BOND FUND; EXCESS BOND PROCEEDS

For purposes of providing funds to pay the principal of and interest on the Bonds as the same become due and payable, the City shall maintain, at the Depository, a separate and special fund or account created and known as the "Bond Fund". The City has covenanted that there shall be deposited from the System Fund into the Bond Fund prior to each principal and interest payment date from the available Pledged Revenues an amount equal to one hundred percent (100%) of the amount required to fully pay the interest on and the principal of the Bonds then falling due and payable, such deposits to pay maturing principal and accrued interest on the Bonds to be made in substantially equal monthly installments on or before the first

day of each month, beginning on or before the first day of the month next following the delivery of the Bonds to the Underwriters. No such deposit shall be required if, on the first day of each month, revenues sufficient to pay the maturing principal and interest payments are, and remain on deposit in the Bond Fund. If the Net Revenues in any month are insufficient to make the required payments into the Bond Fund, then the amount of any deficiency in such payment shall be added to the amount otherwise required to be paid into the Bond Fund in the next month.

The required monthly deposits to the Bond Fund for the payment of principal of and interest on the Bonds shall continue to be made as hereinabove described until such time as (i) the total amount on deposit in the Bond Fund is equal to the amount required to fully pay and discharge all Outstanding Junior Lien Obligations (principal and interest) or (ii) the Bonds are no longer Outstanding.

Accrued interest and premium, if any, received from the Underwriters shall be taken into consideration and reduce the amount of the monthly deposits hereinabove required to be deposited into the Bond Fund from the Net Revenues. Additionally, any proceeds of the Bonds, and investment income thereon, not expended for authorized purposes shall be deposited into the Bond Fund and shall be taken into consideration and reduce the amount of monthly deposits required to be deposited into the Bond Fund from the Net Revenues.

#### PARITY LIEN ORDINANCE AMENDMENT

By ordinance of the City Council adopted on March 8, 2012, the City has amended the respective City ordinances authorizing the issuance of each series of the then-outstanding Previously Issued Junior Lien Obligations. These ordinance amendments permitted the City to issue, under certain circumstances described below, Junior Lien Obligations—No Reserve Fund, which are City obligations payable from and secured by a junior and inferior lien on and pledge of Net Revenues on parity with the lien thereon and pledge thereof securing the Reserve Fund-Secured Junior Lien Obligations (defined below), but that are not additionally benefited by money on deposit in the Reserve Fund.

Prior to the effectiveness of these ordinance amendments, all Additional Junior Lien Obligations were required to be additionally secured by a lien on and pledge of the Reserve Fund. The aforementioned ordinance amendments, which are now effective, allow the City to issue Junior Lien Obligations-No Reserve Fund so long as such Junior Lien Obligations-No Reserve Fund are sold to parties other than the TWDB. The City remains permitted to issue from time to time Reserve Fund-Secured Junior Lien Obligations upon satisfaction of the conditions described below under "SECURITY FOR THE BONDS – Reserve Fund" (in addition to the other prerequisites to the issuance of Additional Junior Lien Obligations described herein under "THE BONDS – Additional Obligations").

The necessary amendments to City ordinances to permit the issuance of Junior Lien Obligations—No Reserve Fund were consented to by each bond insurer and surety fund provider for each series of then-outstanding Previously Issued Junior Lien Obligations, as well as the TWDB (being the sole owner or consent right holder with respect to this matter for each series of then-outstanding Previously Issued Junior Lien Obligations).

As used herein, "Junior Lien Obligations—No Reserve Fund" means the City's (i) Water System Junior Lien Revenue Refunding Bonds, Series 2012 (No Reserve Fund), (ii) Water System Junior Lien Revenue Refunding Bonds, Series 2013B (No Reserve Fund), (iii) Water System Junior Lien Revenue and Refunding Bonds, Series 2013F (No Reserve Fund), (iv) Water System Variable Rate Junior Lien Revenue and Refunding Bonds, Series 2014A (No Reserve Fund), (vi) Water System Variable Rate Junior Lien Revenue and Refunding Bonds, Series 2014A (No Reserve Fund), (vii) Water System Variable Rate Junior Lien Revenue and Refunding Bonds, Series 2014B (No Reserve Fund), (viii) Water System Junior Lien Revenue Refunding Bonds, Series 2016A (No Reserve Fund), (ix) Water System Junior Lien Revenue Refunding Bonds, Series 2016A (No Reserve Fund), (ix) Water System Junior Lien Revenue Refunding Bonds, Series 2016A (No Reserve Fund), (xii) Water System Junior Lien Revenue Refunding Bonds, Series 2017A (No Reserve Fund), (xiii) upon issuance, the Bonds, and (xiii) any Additional Junior Lien Obligations hereafter issued that are not additionally benefited by money on deposit in the Reserve Fund; the term "Reserve Fund-Secured Junior Lien Obligations" means the Previously Issued Junior Lien Obligations and any Additional Junior Lien Obligations that are secured by a parity lien on and pledge of the Reserve Fund and specifically excluding the Junior Lien Obligations—No Reserve Fund.

#### RESERVE FUND

The City ordinances authorizing the respective issuance of the Previously Issued Junior Lien Obligations require the Board to accumulate and maintain a reserve for the payment of the currently outstanding Junior Lien Obligations that are Reserve Fund – Secured Junior Lien Obligations (the "Required Reserve Amount") equal to the Average Annual Debt Service Requirements (calculated on a Fiscal Year basis and determined as of the date of issuance of the most recently issued series of Additional Junior Lien Obligations that are Reserve Fund – Secured Junior Lien Obligations) of the Junior Lien Obligations that are Reserve Fund – Secured Junior Lien Obligations. To comply with this requirement, the City has heretofore created and established and now maintains, a separate and special fund or account known as the "City of San Antonio, Waterworks and Sewer System Junior Lien Revenue Bond Reserve Fund" (the "Reserve Fund"), which fund or account is maintained at the Depository. All funds deposited into the Reserve Fund (excluding earnings and income derived or received from deposits or investments which will be transferred to the System Fund during such period as there is on deposit in the Reserve Fund the Required Reserve Amount) shall be used solely for the payment of the principal of and interest on the currently outstanding Junior Lien Obligations that are Reserve Fund – Secured Junior Lien Obligations when and to the extent other funds available for such purposes are insufficient, and, in addition, may be used to retire the last stated maturity or interest on any Junior Lien Obligations that are Reserve Fund – Secured Junior Lien Obligations. As of the date of issuance of the Bonds, the Reserve Fund is fully funded with a combination of cash, investments, and reserve fund surety policies issued by qualified providers. The Reserve Fund does not additionally secure the Bonds.

Except as hereinafter described, as and when Additional Junior Lien Obligations that are Reserve Fund – Secured Junior Lien Obligations are delivered and incurred, the Required Reserve Amount shall be increased, if required, to an amount calculated in the manner provided in the City ordinances authorizing the respective issuance of the Previously Issued Junior Lien Obligations that are Reserve Fund-Secured Junior Lien Obligations. Any additional amount required to be maintained in the Reserve Fund shall be so accumulated by the deposit of the necessary amount of the proceeds of the issue or other lawfully available funds in the Reserve Fund immediately after the delivery of the issue of the then proposed Additional Junior Lien Obligations that are Reserve Fund – Secured Junior Lien Obligations, or, at the option of the City, by the deposit of monthly

installments, made on or before the tenth day of each month following the month of delivery of the then proposed Additional Junior Lien Obligations that are Reserve Fund – Secured Junior Lien Obligations, of not less than 1/60th of the additional amount to be maintained in the Reserve Fund by reason of the issuance of the Additional Junior Lien Obligations that are Reserve Fund – Secured Junior Lien Obligations then being issued (or 1/60th of the balance of the additional amount not deposited immediately in cash), thereby ensuring the accumulation of the appropriate Required Reserve Amount.

When and so long as the cash and investments in the Reserve Fund equal the Required Reserve Amount, no deposits need be made to the credit of the Reserve Fund; but, if and when the Reserve Fund at any time contains less than the Required Reserve Amount other than as the result of the issuance of Additional Junior Lien Obligations that are Reserve Fund – Secured Junior Lien Obligations as described in the preceding paragraph), the City has covenanted and agreed to cure the deficiency in the Required Reserve Amount by resuming the Required Reserve Fund Deposits to said Fund or account from the Net Revenues of the System, or any other lawfully available funds, such monthly deposits to be in amounts equal to not less than 1/60th of the Required Reserve Amount covenanted by the City to be maintained in the Reserve Fund with any such deficiency payments being made on or before the tenth day of each month until the Required Reserve Amount has been fully restored. The City has further covenanted and agreed that, subject only to the prior payments to be made to the Bond Fund relating to the Junior Lien Obligations and as required by the ordinances authorizing the issuance of the currently outstanding Senior Lien Obligations or any Additional Senior Lien Obligations hereafter issued by the City, the Net Revenues shall be applied and appropriated and used to establish and maintain the Required Reserve Amount and to cure any deficiency in such amounts as required by the terms of the ordinances authorizing the respective issuance of Previously Issued Junior Lien Obligations that are Reserve Fund–Secured Junior Lien Obligations and any other ordinance pertaining to the issuance of any Additional Junior Lien Obligations that are Reserve Fund–Secured Junior Lien Obligations.

During such time as the Reserve Fund contains the Required Reserve Amount, the City may, at its option, withdraw all surplus funds in the Reserve Fund in excess of the Required Reserve Amount and deposit such surplus in the System Fund; provided, however, to the extent that such excess amount represents bond proceeds, then such amounts must be transferred to the Bond Fund.

See "THE BONDS – Security and Source of Payment" and "SELECTED PROVISIONS OF THE ORDINANCE – Reserve Fund" in APPENDIX C herein.

#### PAYMENTS TO GENERAL FUND OF THE CITY

Pursuant to the Ordinance, the Board is required to transfer to the General Fund of the City, no later than the last business day of each month, an amount of money calculated not to exceed 5% (or such lesser amount as may be determined from time to time by the City Council) of the Gross Revenues (after payment of all Maintenance and Operating Expenses and debt service requirements on any outstanding Debt) for the preceding month to be utilized by the City in the manner permitted by the provisions of Chapter 1502, Texas Government Code, as amended. The amount so transferred shall be net of all amounts owed by the City to the Board for use of the System's services and facilities by the City and its instrumentalities. The amounts payable to the General Fund of the City are required to be paid *pari passu* with deposits to the Renewal and Replacement Fund. (See "SECURITY FOR THE BONDS – Renewal and Replacement Fund" below.)

To the extent that the available Net Revenues in any month are insufficient for the Board to make all or part of the transfer otherwise required to be made to the General Fund of the City, the Board is required to make up such shortfall (i) in the next month in which available Net Revenues exceed the amounts otherwise required to be transferred to the General Fund of the City and the *pari passu* payment to the Renewal and Replacement Fund, or (ii) to the extent such shortfall has not been made up by the last month of the Fiscal Year, solely from any surplus funds deposited into the Renewal and Replacement Fund during such Fiscal Year. The Board's obligation to make up any shortfall in a Fiscal Year does not carry over to a subsequent Fiscal Year.

See "APPENDIX C - SELECTED PROVISIONS OF THE ORDINANCE - Payments to City General Fund" herein.

#### RENEWAL AND REPLACEMENT FUND

The Renewal and Replacement Fund has been established and confirmed under the Ordinance for the purpose of (i) paying the costs of improvements, enlargements, extensions, additions, replacements or other capital expenditures related to the System, (ii) paying the costs of unexpected or extraordinary repairs or replacements of the System for which System funds are not available, (iii) paying unexpected or extraordinary expenses of operation and maintenance of the System for which System funds are not otherwise available, (iv) depositing any funds received by the City pursuant to the contract with CPS Energy, the City owned electricity and gas utility, for the provision of recycled water (the "CPS Contract"), and such funds, including any interest or income thereon, are required to be maintained in a separate, segregated account of the Renewal and Replacement Fund and may only be used to pay Maintenance and Operating Expenses of the System's water reuse facilities or the debt service requirements on any obligations incurred as permitted by the CPS Contract and in no event may any such amount, including interest and income thereon, be transferred to the General Fund of the City, except as permitted by the CPS Contract, (v) paying bonds or other obligations of the System for which other System revenues are not available, (vi) in the last month of any Fiscal Year to make up any shortfall in the required payments to the General Fund of the City, or (vii) for any other lawful purpose in support of the System.

Deposits to the Renewal and Replacement Fund are required to be *pari passu* with the gross amount payable to the General Fund of the City (prior to the deduction of any charges for water utility services provided by the System to the City) until the full amount payable to the City has been paid. That is, such deposits to the Renewal and Replacement Fund are to be made equally and ratably, without preference, and on a dollar-fordollar basis with the gross amount payable to the General Fund of the City, prior to the deduction of any charges for services, until the full amount to be paid to the General Fund of the City in a Fiscal Year has been paid. Thereafter all surplus Net Revenues are to be deposited to the Renewal and Replacement Fund. See "APPENDIX C - SELECTED PROVISIONS OF THE ORDINANCE – Renewal and Replacement Fund" herein.

#### RATE COVENANT

The City has agreed, while any of the Senior Lien Obligations and Junior Lien Obligations are outstanding, to establish and maintain rates and charges for facilities and services afforded by the System that are reasonably expected, on the basis of available information and experience and with due allowance for contingencies, to produce Gross Revenues in each Fiscal Year sufficient:

- (a) to pay Maintenance and Operating Expenses;
- (b) to produce Pledged Revenues sufficient to pay (i) 1.25 times the Annual Debt Service Requirements for such Fiscal Year on the Senior Lien Obligations, and (ii) the amounts required to be deposited in any reserve or contingency fund created for the payment and security of the Senior Lien Obligations and any other obligations or evidences of indebtedness issued or incurred that are payable from and equally and ratably secured solely by a first lien on and pledge of the Pledged Revenues;
- (c) to produce Net Revenues, together with any other lawfully available funds (including the proceeds of Debt which the City expects will be utilized to pay all or part of the principal and interest on any obligations described in this subparagraph), sufficient to pay the principal of and interest on the currently outstanding Junior Lien Obligations and the Subordinate Lien Obligations or any Additional Junior Lien Obligations, Additional Subordinate Lien Obligations, and/or Inferior Lien Obligations hereafter issued by the City and the amounts required to be deposited in any special fund created for the payment and security of any such obligations, and any other obligations payable from and secured by a junior, subordinate or inferior lien on and pledge of the Net Revenues;
- (d) to produce Net Revenues, together with any other lawfully available funds, to make the required transfers to the General Fund of the City as described in the Ordinance; and
- (e) to pay any other Debt payable from the Net Revenues or secured by a lien on revenues of the System.

See "SAWS STATISTICAL SECTION AND MANAGEMENT DISCUSSION – Monthly, Water, Sewer, and Water Supply Fee Rates" and "APPENDIX C - SELECTED PROVISIONS OF THE ORDINANCE – Rates and Charges" herein.

#### REFUNDABLE TAX CREDIT BONDS

The refundable tax credits to be received by the City in connection with any obligations secured by System revenues that are designated as obligations entitling the City to the receipt of refundable tax credits from the United States Department of the Treasury under the Internal Revenue Code of 1986, as amended (the "Code") (including, but not limited, to obligations designated as "build America bonds" and "qualified bonds" under the Code), will be considered as an offset to debt service on those obligations to which the credit relates for the purpose of satisfying any debt service coverage requirements under the Ordinance, including satisfaction of any rate covenant, reserve fund requirement, or prerequisite to the issuance of additional indebtedness at any lien level.

The City has determined that the reduced amount of refundable tax credit payments to be received from the United States Treasury in relation to its outstanding obligations designated as "build America bonds" or "qualified bonds" under the Code as a result of the automatic reductions in federal spending effective March 1, 2013 pursuant to the Budget Control Act of 2011 (commonly referred to as "Sequestration"), and extensions thereof pursuant to the Bipartisan Budget Act of 2013, will not have a material impact on the financial condition of the City or its ability to pay regularly scheduled debt service on its outstanding obligations when and in the amounts due and owing. See Footnote (2) to the table appearing under "DEBT AND OTHER FINANCIAL INFORMATION – Combined System Revenue Debt Service Requirements" herein.

Under current law, Sequestration is scheduled to continue through 2025. Assuming Congress does not repeal the sequester, the percentage reduction that will be applied to payments of issuers of direct-pay bonds for Fiscal Year 2018 will be 6.6 percent.

#### COMMERCIAL PAPER NOTE PROGRAM

The City Council has authorized a Tax-Exempt Commercial Paper Program for the System (the "TECP") in the amount of \$500,000,000, to be issued from time to time as the City of San Antonio, Texas Water System Commercial Paper Notes, Series A and the City of San Antonio, Texas Water System Commercial Paper Notes, Series B (the "Series A Notes" and "Series B Notes", respectively). The purpose of the TECP is to provide funds for the interim financing of a portion of the costs of capital improvements to the System. Scheduled maturities of the short-term borrowing under the TECP may not extend past September 20, 2042. The TECP is supported by separate revolving credit agreements, the first with Bank of Tokyo-Mitsubishi UFJ, Ltd., acting through its New York branch ("Bank of Tokyo"), which expires in accordance with its terms on October 4, 2018. The System intends to address liquidity matters related to the Series A Notes prior to this expiration date to keep active this series of the TECP. The second agreement is with Wells Fargo Bank, N.A. ("Wells Fargo"), which expires in accordance with its terms on January 15, 2021 (together, such revolving agreements, the "TECP Agreements"). Bank of Tokyo supports the Series A Notes in the amount of \$350,000,000 and Wells Fargo supports the Series B Notes in the amount of \$100,000,000, providing for the combined liquidity support for this program of \$450,000,000. As of the date of this Official Statement, \$148,695,000 in Commercial Paper Notes are outstanding, comprised of \$67,700,000 in Series A Notes and \$80,995,000 in Series B Notes (each excluding the Refunded Obligations that are outstanding Commercial Paper Notes). Any advances for payment of Commercial Paper Notes under the TECP Agreements are secured by a lien and pledge of the Net Revenues of the System subordinate to the Senior Lien Obligations, and the Junior Lien Obligations (including the Bonds) and on a parity with the Commercial Paper Notes (which are the only Subordinate Lien Obligations currently outstanding) and the System's obligations under the interest hedge transaction described herein.

#### THE SAN ANTONIO WATER SYSTEM

#### HISTORY AND MANAGEMENT

On February 13, 1992, the City Council determined that it was in the best interest of the citizens of the City and the customers served by the water and wastewater systems to consolidate all water related systems, functions, agencies and activities into one agency. This action was taken due to the myriad of issues confronting the City related to the development and protection of its water resources. The consolidation provided the City a singular voice of representation when promoting or defending the City's goals and objectives for water resource protection, planning and development when dealing with local, regional, state, and federal water authorities and officials.

Final City Council approval for the consolidation was given on April 30, 1992 with the approval of Ordinance No. 75686 (the "System Ordinance"). The System Ordinance approved the creation of the System, a single unified system consisting of the City's existing waterworks (formerly the City Water Board), wastewater and water reuse systems (formerly departments of the City), together with all future improvements and additions thereto, and all replacements thereof. In addition, the System Ordinance authorizes the City to incorporate into the System a stormwater system and any other related system to the extent permitted by law.

Simultaneously with the creation of the System, the City sold its \$635,925,000 City of San Antonio, Texas Water System Revenue Refunding Bonds, Series 1992 for the purpose of (i) enabling the City to consolidate its waterworks, wastewater and water reuse systems, and (ii) refunding all outstanding obligations of the City issued to finance improvements to and extensions of its waterworks, wastewater and water reuse systems; and refunding certain other outstanding obligations relating to the City's waterworks, wastewater and water reuse systems, which are secured by and payable from a pledge of revenues derived from, the City's waterworks, wastewater and water reuse systems, respectively. The City believes that refunding the obligations and establishing the System in 1992 has allowed the City greater flexibility in meeting future financing requirements. More importantly, it has allowed the City to develop, implement, and plan for its water needs through a single agency.

The System provides water and wastewater service to the majority of the population within the corporate limits of the City and Bexar County which totaled approximately 1.7 million residents in 2010. The System employs approximately 1,700 personnel and maintains approximately 12,500 miles of water and sewer mains.

The complete management and control of the System is vested in the Board, which initially had five members. Subsequent legislation authorized expansion to a board consisting of seven members. The Board consists of the Mayor of San Antonio (as an ex-officio Board member) and up to six persons who are residents of the City or reside within the area serviced by the System. With the exception of the Mayor, all other Board members are appointed by the City Council for four-year, staggered terms, and are eligible for reappointment for one additional four-year term. Four Board members must be appointed from four different quadrants in the City and two Board members are appointed from the north and south sides of the City. Notwithstanding the foregoing, the membership on the Board may be increased to an amount greater than seven, to include the Mayor of the City as an ex-officio member, as otherwise appointed by the City Council.

Attached hereto as APPENDIX B is the SAWS' Annual Financial Report for the year ended December 31, 2017 which provides the System's recent operating results. See "APPENDIX B - SAN ANTONIO WATER SYSTEM ANNUAL FINANCIAL REPORT".

The present members of the Board are:

Board	Length of Service	Term Expires	Occupation
Berto Guerra, Jr. Chairman	6 Years, 7 Months	May 31, 2018	Chairman and CEO Avanzar Interior Technologies
Patricia Jasso Vice Chairman	4 Years, 6 Months	May 31, 2020	Retired
Amy Hardberger Secretary	1 Month	May 31, 2021	Associate Dean/Law Professor St. Mary's University
Patricia E. Merritt Assistant Secretary	4 Years, 6 Months	May 31, 2018	Retired
David McGee Trustee	2 Years, 7 Months	May 31, 2021	President/CEO of San Antonio Region Amegy Bank of Texas
Eduardo Parra Trustee	1 Month	May 31, 2021	CEO – Principal Engineer Parra & Co., LLC
Ron Nirenberg, Mayor and Ex-Officio Member	9 Months	May 31, 2019	Broadcast General Manager

Except as provided in the System Ordinance, the Board has absolute and complete authority and power to control, manage, and operate the System and controls the expenditure and application of the Gross Revenues of the System and in connection therewith is vested with all of the powers of the City with respect thereto, including all powers necessary or appropriate for the performance of all covenants, undertakings, and agreements of the City contained in the System Ordinance, and with the exception of fixing rates and charges for services rendered by the System and other matters hereinafter described, the Board has full power and authority to make rules and regulations governing the furnishing of services of the System to customers for the payment of the same, and for the discontinuance of such services upon the failure of customers to pay for the services.

The Board, to the extent authorized by law, has authority to make extensions, improvements, and additions to the System and to acquire by purchase or otherwise properties of every kind in connection therewith.

#### EXCEPTIONS

As noted, under the System Ordinance, only the City Council can fix rates and charges for service rendered by the System. Similarly, State law provides that only the City Council can authorize the sale of revenue bonds or other securities, exercise the use of condemnation for the acquisition of real property, and select and appoint members of the Board. Additionally, Ordinance No. 74050 adopted on August 1, 1991, provides that the disposition of real property by the System requires some degree of oversight by the City.

The general operations of the System are under the supervision of the President/Chief Executive Officer who is employed by the Board. The Board shall appoint and employ all other officers, employees, and professional consultants, which it may deem desirable.

#### ADVISORY COMMITTEES

There are three ongoing advisory committees which provide comment and report to the Board and the System staff on System projects and activities: the Citizens Advisory Panel ("CAP"), the Community Conservation Committee ("CCC"), and the Capital Improvements Advisory Committee ("CIAC"). Members for each of these committees are sought to represent diverse interests from the System's service area.

Citizen Advisory Panel ("CAP"). The CAP was established in 1998 to provide System staff and the Board with indications of the acceptability of water resource projects, policies, and programs. The CAP's charge is to support the development of the System's 50-year water resource plan; review the application of evaluative criteria for the plan; identify concerns raised under these criteria; and to suggest ways for adjusting the System's programs to meet these concerns.

CAP meetings are held monthly and open to the public. CAP members are actively engaged in the process to develop new water supplies for the City and Bexar County region.

Community Conservation Committee ("CCC"). The CCC was organized in 1996 to provide input to System staff and the Board on conservation issues. The CCC is the cornerstone of the System's public involvement in conservation and drought management efforts.

The CCC provides input on program development, program performance, and new program ideas. Some of its work is accomplished through focus groups that enlist community experts to address specific issues – residential, commercial, institutional, and industrial. Over the last several years, the CCC's major accomplishments included the development of a pilot program to evaluate and reduce water use among the System's top commercial and residential users and assistance in the development of better marketing methods to inform the community about conservation programs. The CCC has also been instrumental in providing input as the System's conservation focus shifted to a primarily outdoor paradigm.

Capital Improvements Advisory Committee ("CIAC"). The CIAC advises the City Council on impact fees and was first formed in 1987. The 11-member committee is appointed by City Council (one from each City Council district and one member appointed by the Mayor to represent the City's extraterritorial jurisdiction), with representation from the real estate and development industry and the general community.

Impact fees are one-time fees charged to developers for new development to pay for general benefit facilities such as treatment plants, tanks, wells, water supply projects, and large transmission mains and outfall mains. Collecting adequate impact fees helps fund construction of infrastructure needed to support growth with minimum impact on existing ratepayers. The impact fees are updated once every 5 years, with the most recent update approved June 9, 2014. (See "SAWS STATISTICAL SECTION AND MANAGEMENT DISCUSSION - Impact Fees" herein.)

#### ADMINISTRATION AND OPERATING PERSONNEL

The President/Chief Executive Officer of SAWS is Robert R. Puente. Prior to joining SAWS in May 2008, Mr. Puente served in the Texas House of Representatives where he was Chair of the House Natural Resources Committee and served on the House Local Ways and Means Committee. Mr. Puente was first elected to the Texas House of Representatives in 1991. Mr. Puente also received his Doctor of Jurisprudence from The University of Texas School of Law in 1982, and practiced law as a private attorney and managed his own firm from 1983 to 2008.

The Senior Vice President/Chief Operating Officer is Steven M. Clouse. During his tenure with SAWS, Mr. Clouse has worked in several departments and served in many capacities including three plus years as the Vice President – Production and Treatment Operations. Prior to the System's inception in 1992, he worked for the Environmental Management Department of the City of San Antonio.

The Senior Vice President/Chief Financial Officer is Douglas P. Evanson. Mr. Evanson joined SAWS in April of 2005. Prior to joining SAWS, Mr. Evanson was the Assistant Treasurer at Black & Veatch. Before that, he was the Chief Financial Officer for United Energy and Multinet Gas, electricity and natural gas distribution companies located in Melbourne, Australia.

The Vice President and General Counsel is Nancy Belinsky. Ms. Belinsky joined the System in 2003. Prior to joining SAWS, Ms. Belinsky practiced commercial real estate law with the law firm of Akin Gump Strauss Hauer and Feld LLP. Ms. Belinsky received her Doctor of Jurisprudence from St. Mary's University School of Law.

The Vice President of Human Resources is Sharon De La Garza. Ms. De La Garza joined the System in 2012. Prior to joining SAWS, Ms. De La Garza was Assistant City Manager for the City of San Antonio, having spent a total of ten years with the City. Ms. De La Garza also served as the Assistant Human Resources Director and Human Resource Director for the City of Dallas, Texas from 1999 to 2004.

The Vice President of Water Resources & Governmental Relations is Donovan Burton. Mr. Burton joined SAWS in November of 2006. Prior to joining SAWS, he worked for 10 years for a local State Representative in Austin, heading up a legislative office and a committee with primary jurisdiction over military and homeland security issues. Mr. Burton also served in the U.S. Navy for four years from 1989-1993.

The Vice President of Communications & External Affairs is Gavino Ramos. Mr. Ramos joined the System in early 2015. Prior to joining the System, Mr. Ramos served as Director of Corporate Communications for the Leonard Holding Company. Mr. Ramos also serves as the Vice Chairman of the Alamo Regional Mobility Authority.

		Length of	Total
Name	Position	Service with System	Government Service
Robert R. Puente	President/Chief Executive Officer	9 Years, 11 Months	27 Years, 3 Months
Steven M. Clouse	Senior Vice President/Chief Operating Officer	28 Years, 9 Months	30 Years, 6 Months
Douglas P. Evanson	Senior Vice President/Chief Financial Officer	13 Years	13 Years
Nancy Belinsky	Vice President and General Counsel	15 Years	15 Years
Sharon De La Garza	Vice President - Human Resources	6 Years	22 Years
Donovan Burton	Vice President – Water Resources & Governmental	11 Years, 5 Months	25 Years, 9 Months
	Relations		
Gavino Ramos	Vice President – Communications & External Affairs	3 Years	3 Years

#### SYSTEM STRUCTURE

The System is structured to strategically position functions to maximize efficiencies and responsiveness to System customers. Six groups report to the President/CEO, which include the Senior Vice President/COO, Senior Vice President/CFO, Vice President and General Counsel, Vice President – Human Resources, Vice President – Water Resources & Governmental Relations, and Vice President – Communications & External Affairs.

The Internal Audit Department, which is responsible for financial and operational audits of System departments, divisions, activities, and programs, reports functionally to the Board and administratively to the President/CEO.

**President/Chief Executive Officer.** The President/CEO is responsible and accountable for overall leadership and management of SAWS. Following the guidance and direction of the Board and City Council, the President/CEO implements policy, directs and works alongside employees to achieve the System's mission and goals as well.

Senior Vice President/Chief Operating Officer. The Senior Vice President/Chief Operating Officer is responsible for the day-to-day operations of the System. The following groups report directly to the Chief Operating Officer:

#### **Operations Group**

The Operations Group, which includes the Office of the Senior Vice President/Chief Operating Officer, consists of the following:

- Office of Energy Management Manages CPS Energy metering and bill review and payment process. Develops the energy budget and tracks expenses and analysis trends. Monitors the energy Demand Side Management program with CPS Energy; and
- Environmental Laboratory Services Provides analytical services that ensure data integrity, reliability, responsiveness, and accuracy for the monitoring and compliance of water quality. The lab is accredited by the Texas Commission on Environmental Quality (the "TCEO") under the National Environmental Laboratory Accreditation Program.

#### **Production and Treatment Operations and Maintenance**

The Production and Treatment Operations group provides the essential function of managing the 24-hour-a-day operation of the Waterworks System and Wastewater System (each as defined herein). The group is responsible for the production and distribution of potable water; the treatment of wastewater for distribution in the recycle system or discharge; the processing of wastewater biosolids for ultimate disposal; and the distribution of recycled water for reuse purposes and management of the City-wide odor control program. The group consists of the following departments:

- Production Manages the production of potable water across the System's service area. Oversees contract water deliveries, operates the Medina River water treatment plant (hereinafter referred to and defined as the Plant) and the H2Oaks Center (hereinafter defined). Manages centralized instrumentation and maintenance functions for all System services;
- Treatment Operations Management Oversees all the operations of the wastewater treatment plants of the System as well as manages all the biosolids to ensure proper recycling or disposal in compliance with State and federal regulations. Manages the Wastehauler program and odor control program. Operates the recycle water system outfalls and manages environmental flows to the river:
- Chilled Water Responsible for the production of chilled water to provide centralized thermal services to federal, city, and private facilities in the City;
- Fleet Maintenance Provides comprehensive maintenance services for vehicles and equipment. The Fleet Department manages vehicle replacement and disposal;
- Security Manages a proactive security program and associated support contracts for the System facilities; and
- Treatment Maintenance Management Manages centralized mechanical and electrical maintenance across all of the System's production, treatment, and lift station facilities, and the Aquifer Storage and Recovery and desalination plants. The department also maintains the recycle water system outfalls and special project construction and repairs across the System.

#### **Sewer System Improvements**

The Sewer System Improvements Department is responsible for developing, implementing, and administering various programs designed to reduce sanitary sewer overflows in the wastewater collection and transmission system, including the following:

- Capacity Assessment Responsible for evaluating the capacity of the wastewater collection and transmission system that includes flow monitoring and a series of hydraulic modeling and investigative steps to identify and prioritize capacity constraints;
- Capacity, Management, Operation & Maintenance ("CMOM") Comprehensive program encompassing activities to optimize the performance of the wastewater collection and transmission system related to sanitary sewer overflow ("SSO") reduction, including a System-wide cleaning program and Fats, Oils, and Grease Control Program;
- Program Administration Leads the comprehensive Sewer System Improvement program activities related to SSO reduction.
   Provides overall data management and reporting pertaining to the operations and maintenance of the wastewater collection and transmission system; and
- Structural Sewer Assessment Provides program direction for activities associated with inspecting, assessing, and performing remedial measures associated with condition and capacity constraints in the wastewater collection and transmission system.

#### **Distribution and Collection Operations**

The Distribution and Collection Operations group operates, maintains, and repairs the water distribution and wastewater collection systems ensuring the System's customers receive uninterrupted, quality potable water and associated wastewater services. This is accomplished by providing:

- Construction & Maintenance Offers in-house construction services, including asphalt and concrete services, preventative
  maintenance programs to ensure the integrity of water and wastewater lines including sewer televising and cleaning, leak detection
  to ensure water leaks are identified and repaired, and meter repair and maintenance and fire hydrant maintenance;
- Emergency Operations Center Manages 24-hour emergency center and reports/dispatches crews for water leaks, main breaks, and
  overall tactical response to problems with the System;
- Eastern & Western Service Centers Provides critical support to System customers by maintaining the integrity of water, wastewater, recycle, and cooling underground infrastructure throughout the System service area; and
- Facility Maintenance Provides building management and maintenance services; also space planning, office reconfigurations, and
  oversight of all facility construction projects.

#### **Engineering and Construction**

The Engineering and Construction group coordinates the development and execution of the System's annual Capital Improvements Program ("CIP"; see "DEBT AND OTHER FINANCIAL INFORMATION — Capital Improvement Program" herein). The group performs engineering analysis of existing facilities and plans new infrastructure to meet the increasing water and wastewater demands of the growing community. The group also designs and manages the construction of new and replacement water and wastewater infrastructure. The Engineering and Construction group is further broken down into the following departments:

- Pipelines Plans and coordinates design activities and manages construction for new and rehabilitated water distribution system and wastewater collection system projects;
- Construction Inspects pipeline construction projects for water and sewer and water supply projects;
- Development Manages impact fee program, develops water and wastewater master plans, coordinates infrastructure necessary for new development, and provides engineering support to Distribution and Collection Operations and Production and Treatment Operations;
- Plants and Major Projects Plans and coordinates design activities and manages construction for water supply integration projects, new water supply development, potable and recycled water production facilities, and wastewater treatment plants; and
- Vista Ridge Manages SAWS' obligations and interests in a Public Private Partnership (P3) contract (hereinafter referred to as the Agreement) with Vista Ridge LLC for the annual supply of 50,000 acre-feet of a new, non-Edwards Aquifer source of water for San Antonio. SAWS staff continue to monitor the Vista Ridge LLC's activities during the development, construction, and operation phases of the contract. See "THE SAN ANTONIO WATER SYSTEM Water Transmission and Purchase Agreement for Carrizo and Simsboro Aquifer Water" herein.

Senior Vice President/CFO. The Senior Vice President and Chief Financial Officer ("CFO") is responsible for the overall financial management of the System. The following groups report directly to the CFO:

## **Financial Services**

The Financial Services Group is headed by the Senior Vice President/CFO and ensures the utility's efficient operation by effectively managing and reporting on the corporate financial position, ensuring financial compliance with current legal and regulatory requirements, and providing timely financial support, services and guidance to internal and external stakeholders. This is accomplished through the following functions:

• Accounting and Business Planning:

Financial Planning - Ensures that SAWS' strategic objectives are financially supported through short and long range financial planning, developing and implementing the annual budget and developing rates sufficient to fund SAWS' capital and operating activities;

Accounting - Responsible for accurate and timely accounting and financial reporting through the general accounting, property accounting, payroll, and accounts payable departments; and

Continuous Improvement and Innovation - Conducts business performance reviews and process analysis across the organization to streamline operations, maximize budgetary resources, promote efficiencies, enhance customer service and implement innovative management practices.

- Treasury Responsible for banking relationships, investment and debt management, and remittance (customer payment) processing;
   and
- Purchasing Manages the processing and contracting of all procurement requests for materials, supplies and services. Also manages
  the inventory control function.

#### **Information Services**

Information Services is responsible for the delivery of applications and information technology services, designed to promote innovation, to sustain growth and enable the System to better serve the community. This group is further broken down into the following functions:

- Applications Supports all functional areas of SAWS and responsible for SAWS' software from requirements, analysis and design through programming, configuration, implementation, operations, and related upgrades and sustainability;
- Shared Services Supports SAWS' technology initiatives through program administration, project management, business process re-engineering, quality assurance, and organizational change management;
- Information Technology:
  - Data Center Responsible for all aspects of systems administration, database administration, systems software and hardware, the storage area network, backup and disaster recovery.
  - Computer Operations and Print Shop Provides computer operations and bill printing services as well as copy services.
- Network Security Services:
  - Network Engineering Provides network and internet services, including all aspects of network architecture and engineering, wired and wireless network infrastructure for SAWS facilities.
  - Network Operations Manages telecommunication services including IP telephony, teleconferencing, call center systems, interactive voice response systems, recording systems, digital radio systems and 911 systems.
  - Network Security Responsible for developing, monitoring, and maintaining cyber security controls to protect the confidentiality, integrity and availability of information systems assets.

Client Services and Desktop Support – Supports workstation and related peripheral devices across SAWS, including desktop support services as well as technology and software orders and requisitions.

## **Customer Service**

Customer Service is responsible for providing the highest level of service to System customers at all times, responding in the most expedient and professional manner possible. This group is also responsible for the accurate and timely billing of System customers and maintenance of customer accounts. This group consists of the following departments:

- Billing Reviews the billing process for accuracy of all the System's bills printed daily; resolves customer service billing issues;
- Customer Care Promptly handles all inbound telephone customer inquiries regarding billing, account information, service problems, payments, and collections, and operates three full service walk-in locations;
- Field Operations Responsible for meter reading; service turn-on/off requests; collection of delinquent accounts; and setting, removing, and testing water meters; and
- Performance Analysis and Training Responsible for training and process improvements throughout Customer Service.

*Vice President and General Counsel*. The Vice President and General Counsel provides legal advice and counsel to the Board and System management and is responsible for strategic management and all real estate assets and purchases, and administration of all contracts for construction and professional services. This group consists of the following departments:

- Legal Services Provides full service, in-house legal support to the Board, Executive Management, staff, and manages the activities
  of outside legal counsel. The range of legal expertise includes water resources, labor and employment, litigation management, real
  estate, general transactional, environmental, and public law;
- Contracting Manages the procurement and administration of all construction and professional services contracts and oversees administration of the System's Small, Minority, and Women Owned Business Program;
- Corporate Real Estate Implements property acquisitions, dispositions, and lease management activities and supports all
  construction and maintenance activities by obtaining all rights of entry and easements; and
- Records Management Manages all utility records in compliance with Texas Open Meetings Act, Texas Public Information Act, and best records management practices.

*Vice President - Human Resources*. The Vice President - Human Resources is responsible for all aspects of human resources. Human Resources engages in attracting, training, and retaining a workforce of qualified employees to help the System in reaching its organization goals and mission through a focus on excellence and continuous improvement. Human Resources consists of the following departments:

- Learning & Development Develops and administers a variety of employee development programs, including career development, leadership training, orientations, performance evaluation training and specialized, custom training;
- Employee Relations Provides proactive assistance to employees and supervisors regarding the interpretation and implementation
  of policies, procedures, and directives. Provides direction and oversight for a variety of employment matters, including performance

- and disciplinary issues, investigations into formal complaints, and other workplace concerns. Recruits employee resources required by all administrative and operational areas;
- Compensation & Benefits Plans, develops, and manages the employees' compensation, benefit and wellness programs, as well as balancing competitiveness and cost efficiency for these plans and programs. Oversees administration of all medical and prescription plans, pension programs, wellness initiatives, and is also primarily responsible for plan development and fiscal accountability in these areas; and
- Risk Management Addresses risk management issues, managing all facets of the comprehensive commercial insurance program as well as the administration of premises risk assessments. Safety staff coordinates all workplace safety activities to ensure a safe environment for employees, while claims' staff operates as an in-house insurance office. Handles all workers compensation, casualty, and subrogation claims.

*Vice President – Water Resources & Governmental Relations*. The Vice President – Water Resources & Governmental Relations is responsible for the development and management of water supplies. The group consists of the following departments:

- Water Resources Develops and implements long-term, sustainable water supply projects while proactively managing existing supplies;
- Governmental Relations Identifies and manages critical issues that have public impact and manages key strategic relationships
  with elected officials and agencies at the county, regional, state, and federal levels; and
- Resource Protection & Compliance Ensures water quality of all sources are protected; enforces the regulatory requirements
  established to protect regional water quality; monitors best management practices at construction sites; utilizes an extensive sampling
  and monitoring network for compliance purposes.

*Vice President – Communications & External Affairs*. The Vice President – Communications & External Affairs is responsible for providing proactive strategic outreach and partnerships to inform and involve System customers and stakeholders, driving the image and success of the organization. This is accomplished through:

- Communications Manages and directs mass communications efforts through the following departments:
  - Creative Services Develops the creative content for all internal and external communication efforts including newsletters, brochures, website and advertisements; and
  - Public Relations Manages news media relations for accuracy and appropriate messaging in news coverage concerning SAWS. Coordinates community events, manages social media content and directs advertising to promote awareness of SAWS' programs, projects and image.
- External Affairs Manages outreach efforts with customers, neighborhood and civic leaders, and City Council members. Develops
  and conducts adult and youth educational programs to inform and promote water awareness in our community; and
- Conservation Delivers nationally recognized programs that achieve cost-effective water savings while enhancing quality of life.
   San Antonio's cheapest source of water is conservation. To help keep rates affordable, SAWS aggressively promotes efficient commercial and residential water use through education, outreach, incentives and drought ordinance rules.

#### UTILITY SYSTEM

The System includes all water resources, properties, facilities, and plants owned, operated, and maintained by the City relating to supply, storage, treatment, transmission, and distribution of treated potable water, and chilled water (collectively, the "Waterworks System"); collection and treatment of wastewater (the "Water Reuse System"). The System does not include any "Special Projects" which are declared by the City, upon the recommendation of the Board, not to be part of the System and are financed with obligations payable from sources other than ad valorem taxes, Pledged Revenues, or Net Revenues or any water or water-related properties and facilities owned by the City as part of its electric and gas system. See "SECURITY FOR THE BONDS – Pledged Revenues" herein and "APPENDIX C - SELECTED PROVISIONS OF THE ORDINANCE" herein.

In addition to the water related utilities, which the Board has under its control, on May 13, 1993, the City Council approved Ordinance No. 77949 which established initial responsibilities over the stormwater quality program with the Board and adopted a schedule of rates to be charged for stormwater drainage services and programs. As of the date hereof, the stormwater program is not a part of the System. (See "THE SAN ANTONIO WATER SYSTEM - Stormwater System" herein.)

Since 2006, the System has submitted 21 separate applications to the TCEQ to expand its CCN (defined herein) or service areas for water and sewer service to the extraterritorial jurisdiction (the "ETJ") boundary of the City. These applications have added 28,309 acres to the water service area and 276,849 acres to the sewer service area. When the TCEQ grants a CCN to a water or sewer purveyor, it provides that purveyor with a monopoly for retail service. By expanding the CCN to the ETJ, developments needing retail water and sewer service within the ETJ must apply to SAWS. Service can then be provided according to System standards, avoiding small, undersized systems servicing new development. The expansion of the CCN to the ETJ supports development regulations for the City. Within the ETJ, the City has certain standards for the development that ensure areas developed in the ETJ and when annexed by the City will already have some City development regulations in place.

#### WATERWORKS SYSTEM

The City acquired its Waterworks System in 1925 through the acquisition of the San Antonio Water Supply Company, a privately owned company. Since such time and until 1992, when the System was created, management and operation of the Waterworks System was under the control of the City Water Board. The System's authority to provide potable water service within a defined area was established by Certificate of Public Convenience and Necessity No. 10640 ("CCN") originally issued by the Public Utility Commission of Texas on November 1, 1979, as amended and updated with substantial expansion as reflected in its certificate currently on file at the TCEQ. The System's Waterworks System (including

the former DSP) service area currently extends over approximately 934 square miles, making it the largest water purveyor in Bexar County. The System serves approximately 93% of the water utility customers in Bexar County (which includes the customers of the former DSP). As of December 31, 2017, the System (including the former DSP) provided potable water service to over 496,500 customer connections. Potable water service is provided to residential, commercial, multifamily, industrial, and wholesale accounts. The System monitors its Waterworks System on a constant basis to ensure compliance with the Safe Drinking Water Act. (See "ENVIRONMENTAL MATTERS AND REGULATORY MATTERS" herein.)

The Waterworks System (including the former DSP) currently utilizes 57 elevated storage tanks and 68 ground storage reservoirs, of which 28 act as both, with combined storage capacities of approximately 277.2 million gallons. As of December 31, 2017, the Waterworks System (including the former DSP) maintained 7,060 miles of distribution mains, ranging in size from 4 inches to 61 inches in diameter, the majority of which are between 6 inches and 12 inches in diameter.

#### INTEGRATION OF FORMER BEXARMET SYSTEM UNDER SB 341

Since dissolution of the DSP and consolidation of the DSP System into the System, the accomplishment of rate parity among the System's customers and the customers of the former BexarMet remained as the final outstanding element necessary for the City to achieve "integration" in accordance with and as required by SB 341. In connection with the dissolution of the DSP, the City, by ordinance adopted on November 19, 2015, incorporated as a separate rate class the rates imposed by SAWS, through the DSP, upon the customers of the DSP System. This action retains rate and revenue neutrality through the consolidation of the DSP System into the System. SAWS maintained this separate rate classification for customers of the System and the DSP, respectively, until December 14, 2016 when the Board repealed the DSP rates effective January 1, 2017. As a result, full integration was achieved on January 1, 2017, as required by SB 341.

The dissolution of the DSP and transfer of assets, liabilities, and operations to SAWS is treated as a governmental merger in accordance with GASB 69 Government Combinations and Disposals of Government Operations whereby one legally separate government entity, DSP, is absorbed into a continuing government, SAWS. Since SAWS reports comparative financial statements, the merger has been reported effective January 1, 2015 and all information provided in the financial statements, notes, and required supplemental information for the year ended December 31, 2015 has been restated to incorporate the financial results of the DSP for that same period. See "APPENDIX B - SAN ANTONIO WATER SYSTEM ANNUAL FINANCIAL REPORT".

#### WASTEWATER SYSTEM

The City Council created the City Wastewater System in 1894. A major sewer system expansion program began in 1960 with bond proceeds for new treatment facilities and an enlargement of the Wastewater System. In 1970, the City became the regional agent of the TCEQ. In 1992, the Wastewater System was consolidated with the City's Waterworks and Recycling Systems to form the System.

The System serves a substantial portion of the residents of the City, 12 governmental entities, and other customers outside the corporate limits of the City. As regional agent, the System has certain prescribed boundaries that currently cover an area of approximately 630 square miles. The System also coordinates with the City for wastewater planning for the City's total planning area, its ETJ, of approximately 1,107 square miles. The population for this planning area is approximately 1.6 million people. As of December 31, 2017, the System provided wastewater services to approximately 445,000 customer connections.

In addition to the treatment facilities owned by SAWS, there are six privately owned and operated sewage and treatment plants within the City's ETL

The Wastewater System is composed of approximately 5,482 miles of mains and three major treatment plants, Dos Rios, Leon Creek, and Medio Creek. All three plants are conventional activated sludge facilities. The System holds Texas Pollutant Discharge Elimination System ("TPDES") wastewater discharge permits, issued by the TCEQ for 187 million gallons per day ("MGD") in treatment capacity and 46 MGD in reserve permit capacity. See "ENVIRONMENTAL MATTERS AND REGULATORY MATTERS" herein. The permitted flows from the Wastewater System's three regional treatment plants represent approximately 98% of the municipal discharges within the City's ETJ.

#### CHILLED WATER SYSTEM

The System owns, operates, and maintains five thermal energy facilities providing chilled water services to governmental and private entities. Two of the facilities, located in the City's downtown area, provide chilled water to 21 customers. They include various City facilities such as the Henry B. Gonzalez Convention Center and the Alamodome, which constitute a large percentage of the System's downtown chilled water annual production requirements. In addition to City facilities, the two central plants also provide chilled water service to a number of major hotels in the downtown area, including the Grand Hyatt, Marriott Riverwalk, and Hilton Palacio Del Rio. The other three thermal facilities, owned and operated by the System, are located at the Port of San Antonio industrial area (formerly Kelly USA) and provide chilled water to large industrial customers that include Lockheed Martin and Boeing Aerospace. The System's chilled water producing capacity places it as one of the largest producers of chilled water in south Texas. The chilled water system had gross revenues of \$11.4 million in Fiscal Year 2017.

## RECYCLING WATER SYSTEM

The System is permitted to sell Type I (higher quality) recycled water from its Water Recycling Centers located on the City's south side, and has been doing so since 2000. The water recycling program is designed to provide 35,000 acre-feet per year of recycled water to commercial and industrial businesses in the City. The original system was comprised of two major transmission lines, running east and west. In 2008, these two major transmission lines were interconnected at the northern end, providing additional flexibility to this valuable water resource. In 2013, an additional Water Recycling Center and pipeline was connected to the western line, providing further recycled water system redundancy. Currently, approximately 130 miles of pipeline deliver highly treated effluent to approximately 60 customers. Recycled water is being delivered for industrial

processes, cooling towers, and irrigation of golf courses and parks, all of which would otherwise rely on potable-quality water. Aside from supporting the local economy, this water recycling system also releases water into the upper San Antonio River and Salado Creek to sustain base flows. The result has been significant and lasting environmental improvements for the aquatic ecosystems in these streams.

Combined with the 50,000 acre-feet per year used by CPS Energy, this is the largest recycled water system in the United States. The System recently amended its contract with CPS Energy to provide such recycled water through 2060. The revenues derived from the CPS Contract have been excluded from the calculation of Gross Revenues, and are not included in any transfers by SAWS to the City.

#### STORMWATER SYSTEM

The TPDES is administered by the TCEQ. The System is a co-permittee with the City under TPDES Permit No. WQ0004284000 (the "Stormwater Permit"). The Stormwater Permit was originally issued on September 28, 2007 and amended on April 11, 2011, but expired on September 28, 2012. An application for renewal was submitted to TCEQ and a Notice of Receipt for permit renewal was issued on June 7, 2012. The co-permittees continue to operate under the terms of the expired permit until its renewal by the TCEQ. The Stormwater Permit identifies the joint and individual requirements of the City and the System. Each of the co-permittees have developed a Stormwater Management Plan outlining their operational responsibilities. See "ENVIRONMENTAL MATTERS AND REGULATORY MATTERS" herein. An agreement between the System and the City for stormwater services has been in place since October 3, 1996.

In September of 1997, the City established a Stormwater Utility by ordinance. The System is contractually obligated to perform certain program requirements as described in the Stormwater Permit. The City has the overall responsibility for the program. The approved annual budget for the System's share of program responsibilities for Fiscal Year 2018 was approximately \$5.2 million for which the System anticipates being reimbursed in full from the stormwater utility fee imposed by the City.

#### WATER SUPPLY

In 1996, the City Council initiated the current era of San Antonio water supply planning when it appointed a 34-member citizens committee to develop strategic policies and goals for management of the City's water resources. The Citizens Committee on Water Policy report, entitled "A Framework for Progress: Recommended Water Policy Strategy for the San Antonio Area," was unanimously accepted by the City Council and became the foundation of the System's efforts. On November 5, 1998, the City Council accepted the Water Resources Plan entitled "Securing Our Water Future Together" (the "1998 Plan") as the first comprehensive, widely supported water resource plan for the City. The 1998 Plan established programs for immediate implementation, as well as a process for developing long-term water resources. In October 2000, the City Council created a permanent funding mechanism (known as the Water Supply Fee) for water supply development and water quality protection through Ordinance No. 92753. The Water Supply Fee provides a specific fund for the development of water resources.

In August 2005, the Board unanimously approved the Water Resource Plan 2005 Update (the "2005 Update"). The 2005 Update represented a comprehensive review of the assumptions governing population and per capita consumption projections in Bexar County through 2050. The 2005 Update included an analysis of each water supply alternative available for meeting future needs and demonstrated the System's commitment to obtain additional water supplies. The projected capital cost of the water supply projects approved in the 2005 Update totaled more than \$2 billion. As a result of continuing concerns relative to the cost of the projects identified, potential changes in projects, and changes in SAWS personnel, a new Water Supply Task Force was assembled in June 2008 to review, evaluate, and update the System's Water Resource plan. This task force completed its review in early 2009. After a comprehensive public outreach period, the Board and the City Council approved the 2009 Water Management Plan. The 2009 Water Management Plan was subsequently updated in 2012 to incorporate the results of the 2010 United States Census, the assumption of BexarMet by the System, changes in water resource projects, the results of the Edwards Aquifer Habitat Conservation Plan (the "HCP"), and additional information on supply and demand during drought. This effort resulted in the 2012 Water Management Plan, which was approved by the Board on December 4, 2012. Building on SAWS' long-standing tradition of planning and implementing a balanced mix of water supply projects and progressive water conservation programs, the 2017 Water Management Plan, was introduced on October 1, 2017 and contains a number of innovative planning ideas aimed at continuing to diversify the water supply and promoting additional water conservation.

The System's 2017 Water Management Plan outlines a diversified foundation for the City's water supply. While the Edwards Aquifer will always be the cornerstone of the City's water supply, the System has already successfully developed several alternative water sources, such as Canyon Lake, the Trinity Aquifer, and the Carrizo/Wilcox Aquifer. The System's recycled water program provides highly treated wastewater to CPS Energy and other industrial and commercial customers who would otherwise use potable water. The System's underground Aquifer Storage and Recovery facility allows SAWS to retain excess Edwards Aquifer permitted water supplies during wet years and use in times of drought.

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As of December 31, 2017, the System's unrestricted, permitted contractual water supply includes the following:

Water Source	Acre-Feet	Percentage of Total Supply
Edwards Aquifer	286,294(1)	47%
H2Oaks Center Aquifer Storage and Recovery (underground storage)	153,949	26%
H2Oaks Center Brackish Groundwater Desalination	13,440	2%
Recycled Water to CPS Energy	50,000	8%
Recycled Water to Other Customers	25,000	4%
Canyon Lake	9,000	2%
Regional Carrizo Aquifer	11,688	2%
Local Carrizo Aquifer	9,900	2%
Trinity Aquifer	22,000	4%
Canyon Regional Water Authority	6,300	1%
Medina System	<u>13,000</u>	<u>2%</u>
Total	600,571	100%

<sup>(1)</sup> Includes the former DSP System.

See "THE SAN ANTONIO WATER SYSTEM – Water Transmission and Purchase Agreement for Carrizo and Simsboro Aquifer Water" herein for a description of a recent (and significant) water resource acquisition.

#### **EDWARDS AQUIFER BACKGROUND**

For most of its modern history, the City obtained nearly all of its water from the Edwards Aquifer. The Edwards Aquifer lies beneath an area approximately 3,600 square miles in size. Including its recharge zone, it underlies all or part of 13 counties, varying from five to 30 miles in width, and stretching over 175 miles in length, beginning in Brackettville, Kinney County, Texas, in the west and stretching to Kyle, Hays County, Texas, in the east. The Edwards Aquifer receives most of its water from rainfall runoff, rivers, and streams flowing across the 4,400 square miles of drainage basins located above it.

Much of the Edwards Aquifer region consists of agricultural land, but it also includes areas of population ranging from communities with only a few hundred residents to the City and its surrounding metropolis, which serves as a home for nearly two million residents. In 2016, the Edwards Aquifer directly supplied approximately 81% of the potable water for municipal, domestic, industrial, and commercial needs for the System's service area. Naturally occurring artesian springs, such as the Comal Springs and the San Marcos Springs, are fed by Edwards Aquifer water and are utilized for commercial, municipal, agricultural, and recreational purposes, while at the same time supporting ecological systems containing rare and unique aquatic life.

The Edwards Aquifer is recharged by seepage from streams and by precipitation infiltrating directly into the cavernous, honeycombed, limestone outcroppings in its north and northwestern area. Practically continuous recharge is furnished by spring fed streams, with storm water runoff adding additional recharge. The historical annual recharge, from 1934 to the present, to the reservoir is approximately 556,900 acre-feet. The average annual recharge over the last four decades is approximately 695,900 acre-feet. The lowest recorded recharge was 43,000 acre-feet in 1956, while the highest was 2,485,000 acre-feet in 1992. Recharge has been increased by the construction of recharge dams over an area of the Edwards Aquifer exposed to the surface known as the recharge zone. The recharge dams, or flood-retarding structures, slow floodwaters and allow much of the water that would have otherwise bypassed the recharge zone to infiltrate the Edwards Aquifer.

#### **EDWARDS AQUIFER REGULATION**

In 1993, the Texas Legislature adopted the Edwards Aquifer Authority Act (the "EAA Act"). This act created the Edwards Aquifer Authority ("EAA" or "Edwards Aquifer Authority") as a conservation and reclamation district under Article XVI, Section 59, of the Texas Constitution. The EAA is governed by a 17 member Board of Directors, with 15 voting directors elected from single member districts apportioned to counties within the EAA's jurisdiction, and two non-voting directors appointed to reflect downstream and western regional interests, all pursuant to and in accordance with the EAA Act. The EAA has broad powers to manage, conserve, preserve, and protect the Edwards Aquifer and to increase the recharge of, and prevent the waste or pollution of water in, the Edwards Aquifer. Among other charges, the EAA was directed to limit groundwater withdrawals from the Edwards Aquifer through a permitting system. The EAA was also directed by the Texas Legislature to ensure that, not later than December 31, 2012, the continuous minimum springflows of the Comal Springs (in New Braunfels) and the San Marcos Springs (in San Marcos) are maintained to protect endangered and threatened species to the extent required by federal law and to achieve other purposes of the EAA Act. To date, the EAA's exercise of power has been primarily limited to managing Edward Aquifer withdrawals, although the EAA has initiated efforts in recent years to regulate water quality (as evidenced by its adoption of rules concerning water quality).

As a consequence of the EAA's permitting regime, the System's access to Edwards Aquifer supplies is now limited to its highest, pre-1991 annual historic use plus any additional permitted withdrawal rights that the System can acquire by lease or purchase. As of December 31, 2017, through permitting, purchases, and leases, the System has access to 284,278 acre-feet per year of Edwards Aquifer groundwater withdrawal rights, which is approximately 50% of the regional pumping cap. See "THE SAN ANTONIO WATER SYSTEM – Edwards Aquifer Recovery Implementation Program and the Edwards Aquifer Habitat Conservation Plan" herein. Approximately 248,147 acre-feet of this inventory is owned and the remainder leased. All Edwards Aquifer permitted withdrawal rights are subject to on-going regulation by the EAA, with more stringent use limitations applied during periods of drought.

#### EDWARDS AQUIFER MANAGEMENT; CITY'S EDWARDS AQUIFER MANAGEMENT PLAN

Edwards Aquifer Authority. Pursuant to applicable Texas law, including the EAA Act and legislation enrolled subsequent thereto serving to supplement and/or amend this legislation, the EAA has adopted rules that require a reduction in the amount of permitted Edwards Aquifer water rights that may be pumped annually for the duration of a drought event. During a period of drought management, water rights are impacted on a pro rata basis based on the number of days of a calendar year that there exists a particular category of drought (depending on severity) requiring a reduction in pumping. Reductions of permitted rights to withdraw water are generally applied to all permit holders, although there do exist some limited exceptions applicable to agricultural users. The various stages of reduction in permitted water rights are declared by the EAA General Manager in accordance with rules adopted by the EAA Board of Directors and impact the System's access to its permitted Edwards Aquifer water rights, without input or action by the City or the System. The EAA's drought triggers and requisite reduction in pumping for the San Antonio and Uvalde Pools of the Edwards Aquifer are indicated in the following tables. The entirety of the System's Edwards Aquifer water rights is subject to the restrictions associated with the San Antonio Pool.

SAN ANTONIO POOL				
	San Marcos Springs	Index Well J-17		Withdrawal Reduction
Comal Springs Flow <sup>(1)</sup>	Flow <sup>(1)</sup>	Level <sup>(2)</sup>	Critical Period Stage <sup>(3)</sup>	(%)
< 225	< 96	< 660	I	20
< 200	< 80	< 650	II	30
< 150	N/A	< 640	III	35
< 100	N/A	< 630	IV	40
< 45/40 <sup>(4)</sup>	N/A	< 625	V <sup>(4)</sup>	44

UVALDE POOL				
	San Marcos Springs	Index Well J-27		Withdrawal Reduction
Comal Springs Flow <sup>(1)</sup>	Flow <sup>(1)</sup>	Level <sup>(2)</sup>	Critical Period Stage <sup>(3)</sup>	(%)
N/A	N/A	N/A	I	N/A
N/A	N/A	< 850	II	5
N/A	N/A	< 845	III	20
N/A	N/A	< 842	IV	35
N/A	N/A	< 840	V	44

<sup>(1)</sup> Measured in cubic feet per second.

Due to varying weather patterns, the EAA has, from time to time, imposed various Critical Period Stage withdrawal reduction notices. As of the date hereof, the San Antonio Pool and the Uvalde Pool are not currently subject to any "Stage" restrictions imposed by the EAA. For additional information on the various levels of drought restrictions imposed by the EAA and current level of the Edwards Aquifer, see www.edwardsaquifer.org.

City's Edwards Aquifer Management Plan. In addition, and separate and apart from the EAA's rules governing withdrawal of Edwards Aquifer water during drought, the City has established a proactive Aquifer Management Plan to manage the region's water resources during periods of drought. Established by City ordinance, the Aquifer Management Plan also restricts water use based on specific levels of the Edwards Aquifer. The City approved the following Edwards Aquifer level triggers in 2009 and updated certain revisions to the water use restrictions in 2014.

Year Round – Year round restrictions are in effect when the Edwards Aquifer level is above 660 feet mean sea level at the monitored well (J-17 Index Well). During year round watering restrictions, SAWS customers are permitted to water landscape with an irrigation system or sprinkler any day of the week before 11 a.m. or after 7 p.m.

Stage One – Stage One restrictions begin when the 10-day rolling average of the Edwards Aquifer level drops to 660 feet mean sea level at the monitored well (J-17 Index Well). SAWS customers are limited to one-day-per week landscape watering with an irrigation system or sprinkler based on the last number of the customer's street address and are only allowed to water before 11 a.m. or after 7 p.m.

Stage Two – Stage Two restrictions begin when the 10-day rolling average of the Edwards Aquifer level drops to 650 feet mean sea level at the monitored well (J-17 Index Well). SAWS customers are limited to one-day-per week landscape watering with an irrigation system or sprinkler based on the last number of the customer's street address and are only allowed to water from 7 a.m. to 11 a.m. and 7 p.m. to 11 p.m.

Stage Three – Stage Three restrictions may begin when the 10-day rolling average of the Edwards Aquifer level drops to 640 feet mean sea level at the monitored well (J-17 Index Well) and the total supply of water to SAWS from the Edwards Aquifer

<sup>(2)</sup> Measured in mean sea level.

<sup>(3)</sup> A change to a critical period stage with higher withdrawal reduction percentages, including initially into Stage I for the San Antonio Pool and Stage II for the Uvalde Pool, is triggered if the 10-day average of daily springflows at the Comal Springs or the San Marcos Springs or the 10-day average of daily Edwards Aquifer levels at the J-17 or J-27 Index Wells, as applicable, drop below the lowest number of any of the trigger levels for that stage. A change from any critical period stage to a critical period stage with a lower withdrawal reduction percentage, including existing from Stage I for the San Antonio Pool and Stage II for the Uvalde Pool, is triggered only when the 10-day average of daily springflows at the Comal Springs and the San Marcos Springs and the 10-day average of daily Edwards Aquifer levels at the J-17 or J-27 Index Wells, as applicable, are all above the same stage trigger level.

<sup>(4)</sup> In order to enter into Critical Period Stage V, the applicable springflow trigger is either less than 45 cubic feet per second based on a ten-day rolling average or less than 40 cubic feet per second based on a three-day rolling average. Expiration of Critical Period Stage V is based on a ten-day rolling average of 45 cubic feet per second or greater.

and other available sources is insufficient to meet customer demand while complying with applicable regulations governing water supply withdrawals. SAWS customers are limited to landscape watering with an irrigation system or sprinkler once every other week based on the last number of the customer's street address and are only allowed to water from 7 a.m. to 11 a.m. and from 7 p.m. to 11 p.m. on their assigned day.

Stage Four – Stage Four restrictions may be declared if the total supply of water from the Edwards Aquifer and other available water sources to SAWS is insufficient to meet customer demand while complying with applicable regulations governing water supply withdrawals. Stage Four restrictions may be declared at the discretion of the City Manager upon completion of a 30-day monitoring period following Stage Three declaration. SAWS customers are limited to landscape watering with an irrigation system or sprinkler once every other week based on the last number of the customer's street address and are only allowed to water from 7 a.m. to 11 a.m. and from 7 p.m. to 11 p.m. on their assigned day. Also during Stage Four, a drought surcharge is assessed on all accounts for water used or assumed to be used for landscape irrigation. The surcharge is the highest volumetric rate assessed by SAWS and is assessed on any residential and irrigation account with monthly water usage exceeding 12,717 and 5,236 gallons, respectively. The surcharge rate is assessed in addition to the regular water and wastewater rates.

Due to varying weather patterns, the City has been in and out of drought restrictions based on the fluctuating mean sea level of the Edwards Aquifer at the J-17 monitoring well as well as changes in spring flow. See "THE SAN ANTONIO WATER SYSTEM – Recent Weather Extremes and Management Efforts" for the System's efforts relative to ongoing drought management and the potential impact thereof. As of the date hereof, all drought restrictions have been lifted; effective October 17, 2017, year-round water use rules apply. For additional information on the various levels of drought restrictions and current level of the Edwards Aquifer, see www.saws.org.

#### EDWARDS AQUIFER RECOVERY IMPLEMENTATION PROGRAM AND THE EDWARDS AQUIFER HABITAT CONSERVATION PLAN

In 2007, the Texas Legislature adopted legislation commonly known as Senate Bill 3 ("SB 3") to address various water-related environmental issues confronting the State. Among other provisions, the legislation established a new, higher pumping cap of 572,000 acre-feet for the Edwards Aquifer, thus making more water available for pumping when Edwards Aquifer levels are high. However, it also incorporated into State statute certain existing regulatory restrictions on water availability during periods of drought. When Edwards Aquifer levels at certain gauges and springflows at Comal Springs and San Marcos Springs fall to identified trigger points, pumping allocations are reduced by the EAA by 20% to 44% depending on the severity of the drought. In February 2009, the City's Code of Ordinances was updated to ensure that restrictions on water usage by City residents are permitted to commence in close proximity to the occurrence of these restrictions on pumping by SAWS and other water purveyors in the City. (See "THE SAN ANTONIO WATER SYSTEM – Edwards Aquifer Management; City's Edwards Aquifer Management Plan".) The EAA made changes to these restrictions in 2012 as part of the HCP.

SB 3 also directed the EAA to develop a Recovery Implementation Program for federally listed threatened or endangered species associated with the Edwards Aquifer. The legislation called for the program to be developed through a facilitated, consensus-based process that involved input from the United States Fish and Wildlife Service (the "USFWS"), other appropriate federal agencies, and all interested stakeholders. The EAA and certain State agencies were specifically charged to develop and execute a program document that may be in the form of an HCP used in issuance of an Incidental Take Permit.

In response to this directive, the EAA and various regional stakeholders initiated the Edwards Aquifer Recovery Implementation Program ("EARIP") in 2007 pursuant to a Memorandum of Agreement and various other documents. The EARIP was managed by a steering committee of 26 voting members representing a wide cross-section of regional interests, including the System. The System was represented with one vote on this Steering Committee. Various other stakeholders also participated in the program. The EARIP engaged Dr. Robert Gulley, a scientist and attorney with extensive experience in Endangered Species Act issues, as its program manager and Texas A&M University for program administrative support. The EARIP also engaged a professional facilitation team and appointed an expert science committee to guide the program's work.

Acting through work groups, committees, and meetings of the whole, the EARIP actively pursued its legislative mandates. The System participated at all levels through its Steering Committee representative and a team of staff professionals. The EARIP elected to develop the HCP as the program document required by SB 3.

On November 7, 2011, the EARIP steering committee and stakeholders endorsed the final draft of the HCP, an Implementing Agreement, and a Funding and Management Agreement by a vote of 24-1 (with one abstention) all of which were recommended to the Board of Directors of the EAA. The steering committee members who objected or abstained from the recommendation clearly stated support of the program as a whole, but declined to endorse the program funding method. The stakeholders and the members of the Steering Committee reached broad consensus on the fundamental elements and associated details of a multi-year adaptive management plan which formed the foundation of the HCP in support of the desired Incidental Take Permit with a term of 15 years. The stakeholders also reached consensus on the level of springflow to be achieved by Phase One of the management plan. Studies and action undertaken during Phase One will determine whether different levels of springflow need to be pursued in Phase Two.

The City, acting by and through SAWS, along with the EAA, the City of New Braunfels, the City of San Marcos, and Texas State University – San Marcos, filed an application for an Incidental Take Permit ("ITP") to protect future groundwater withdrawals from the Edwards Aquifer and other activities affecting listed threatened or endangered species associated with the Edwards Aquifer. On March 18, 2013, the USFWS approved the submitted HCP and issued Incidental Take Permit No. TE63663A-0.

These five entities are individually, and in certain cases collectively, responsible for implementing the conservation measures, as well as the minimization and mitigation measures, defined in the HCP. With the addition of the Guadalupe-Blanco River Authority ("GBRA") as a non-voting observer, these five partners comprise the HCP Implementing Committee. The HCP Implementing Committee is responsible for supervising all

aspects of the implementation of the HCP, including routine decisions and strategic policy matters. The HCP Implementing Committee operates under a requirement of 100% consensus agreement. The System is active and engaged in the HCP Implementing Committee.

The Steering Committee of the EARIP has transitioned into the role of a Stakeholder Committee. The Stakeholder Committee will consult with and advise the program manager and HCP Implementing Committee. The System is represented on and engages with the Stakeholder Committee.

The Phase One activities associated with ensuring minimum continuous springflows will include a Voluntary Irrigation Suspension Program Option ("VISPO"), a Regional Conservation Program, prescribed use of the Aquifer Storage and Recovery ("ASR") Facility, and an EAA Critical Period Stage V Drought Management stage as a back-up to the other activities. The ASR commitment anticipates that the EAA will lease and deliver to SAWS up to 50,000 acre-feet of Edwards Aquifer groundwater withdrawal rights for pumping and storage in the ASR Facility during periods of water availability. SAWS will then be required at certain drought trigger levels over a 10-year period similar in hydrologic character to the drought of record to forbear pumping from the Edwards Aquifer in like amounts to what was previously stored on behalf of the HCP (up to 46,300 acrefect of water in the driest year). SAWS may use the ASR, or other supplies of water, to accomplish this forbearance at its discretion. EAA Critical Period Stage V pumping restrictions could reduce firm yield of Edwards Aquifer permits to 56% of the face permit amount if the San Antonio Pool of the Edwards Aquifer reaches one of the Stage V trigger levels discussed previously for an entire year. The 2017 Water Management Plan accounted for and addressed these changes.

In addition to the springflow management activities, the proposed management plan requires mitigation and habitat restoration activities at the Comal and San Marcos Springs. These activities include recreation management, additional biological research, modeling enhancement, expansion of refugia facilities, and control of non-native species. Ongoing effort in all of these activities are showing positive benefits to the endangered species as documented in the HCP annual reports.

Total average annual cost over the term of the Phase One activities is currently estimated to be \$17.4 million (funding for which is described below).

In addition to the Phase One conservation measures, additional model development and scientific research is underway during Phase One as part of the adaptive management process. Phase One conservation measures will continue in Phase Two unless terminated by a decision of the Permit holders. An additional, or "presumptive", Phase Two conservation measure has been identified for implementation if monitoring indicates that the results of the Phase One activities are inadequate to provide the necessary habitat protection, and no other Phase Two measure is agreed upon by all of the Permit holders. This presumptive Phase Two activity will be expanded use of the ASR, after completion of the water resources integration pipeline. The concept generally involves using the expanded pipeline capacity to deliver the same volume of water (46,300 acre-feet) more quickly from the ASR into the SAWS distribution system, thereby also more quickly reducing pumping at selected SAWS pumping facilities during deep, extended drought periods. Current aquifer models indicate that additional reductions in pumping in EAA Critical Period Stage V (to 44%) may be necessary to accomplish the level of minimum springflow protectiveness outlined in the HCP. The applied research in Phase One, including aquifer hydrological model refinements and improvements, biological studies, ecological studies, and species life history requirements investigations will provide a basis for a better-informed scientific assessment of the necessity of Phase Two, the springflow levels, and the appropriateness of the habitat goals within the HCP. The impact of these additional pumping restrictions on the 2017 Water Management Plan has not yet been fully analyzed.

In 2011, the EARIP determined that the imposition of fees on pumpers of Edwards Aquifer groundwater was the best available way to fund the activities. Due to the legislative cap on agricultural pumping fees, the burden of EARIP's program costs fell upon municipal and industrial pumpers. The Edwards Aquifer Authority approved an annual special program fee of \$50/acre-foot to support the HCP (in addition to the standard EAA management fee), which became effective April 2, 2012. The total Edwards Aquifer Authority annual fee has been \$84/acre-foot since 2015. The EAA anticipates maintaining total management fees of \$84/acre-foot for the near-term, but may adjust the balance between the special program fee (HCP) and the standard EAA management fee (operations).

The HCP-supported activities of 2015 were focused on ecological restoration of critical habitat and flood-flow biological and ecological monitoring. These models are in final documentation and publishing phases, ready to be used to navigate through future decision making processes. As the program proceeds, it is anticipated that these tools will be updated and tested periodically to remain relevant to the decision making process. The 2016 HCP activities included implementation of proposals and actions through the Adaptive Management Process ("AMP") to refine the HCP permit. Amendments were anticipated by the HCP and management documents when the AMP required adjustments resulting in improvements to existing permit parameters and budgets. Additional AMP opportunities still in various stages of progress include improving permit protection with potential cost savings/program optimizations.

In September 2014, in anticipation of a year of triggered payments, the VISPO program was fully subscribed, with more than 40,000 acre-feet of Edwards Aquifer permits enrolled. 2014 also marked the first time VISPO triggered, with the Edwards Aquifer level several feet below the VISPO trigger threshold. This amount of enrolled water was suspended from use for the 2015 growing season. The effects of triggering VISPO on Edwards Aquifer levels in 2015, combined with record-breaking rainfall in the spring and fall of 2015, led to Edwards Aquifer levels climbing back to levels not seen since January of 2011. 2015 marked the second full year of operations under a complex interlocal contract developed in 2013 between the System and the EAA for the use and management of the ASR Facility for springflow protection purposes.

Leasing activities by the EAA for the ASR springflow protection program has enrolled over 85,000 acre-feet in various lease frameworks since 2013. The System has successfully stored all the EAA leases in the ASR. In the event of a return to drought of record-like conditions as specified in the interlocal contract and the HCP, the System will be required to further forbear pumping from the Edwards Aquifer beyond required reductions in the amount provided by the EAA. The System has several options to accomplish this forbearance including: using HCP provided stored water, conservation measures, or additional water supplies. Determining whether the region has returned to drought of record-like conditions is based on the 10-year rolling average of Edwards Aquifer recharge in combination with J-17 Index Well levels. The most recently calculated (2007-2016) 10-year rolling average of Edwards Aquifer recharge is 669,430 acre-feet. The previous 10-year rolling average of Edwards Aquifer recharge was 567,480 acre-feet, illustrating the abundant rainfall in the Edwards region since 2015. Based on the recorded levels of annual recharge during the

last 10 years, and should drought conditions return, 2019 is the earliest potential date that such a determination could be made. In 2014, estimated recharge to the Edwards Aquifer was 107,200 acre-feet, the second-lowest amount of recharge on record. Recharge totals have increased considerably since then, with 1,358,000 and 1,221,000 acre-feet of recharge in 2015 and 2016, respectively.

In 2013, the HCP was nominated for and awarded the prestigious Secretary of the Interior's Partners in Conservation Award, a national award presented annually to the nation's premier conservation programs. The Partners in Conservation Awards recognize outstanding examples of conservation achievements that highlight cooperation among diverse federal, state, and local governments; public and private entities; non-profit organizations; and individuals. The Award was presented by the Secretary of the Interior to the HCP participants, including the System, in January 2014 in Washington, D.C. In 2016, the City of San Marcos and Texas State University were recognized for ecological restoration of the San Marcos River shorelines, funded by the HCP, with the TCEQ's Texas Environmental Excellence Award.

#### **H2O**AKS CENTER AQUIFER STORAGE AND RECOVERY

An ASR project involves storing ground or surface water into an aquifer, and later recovering it for use. Essentially, it accomplishes storage that is traditionally provided through surface water reservoirs without the concern of evaporation. The ASR is primarily designed to optimize use of water from the Edwards Aquifer; the optimization takes place when aquifer levels are high and the System is able to store excess Edwards Aquifer water rights to help offset demand on the Edwards Aquifer when those levels reach critical stages in future years. During those critical stages the System will deliver stored Edwards Aquifer water from ASR to its customers; it is during this time that the Edwards Aquifer is most vulnerable to increased demand. The reduced demand helps slow the downward trend of declining levels until rain events return to recharge the Edwards Aquifer. In December 2002, the Evergreen Underground Water Conservation District and the System approved an Aquifer Protection and Management Agreement. This agreement ensures operation of the ASR if the property is annexed into the district, manages groundwater production, and commits the System to monitoring water levels and mitigation of potential negative impacts.

The System began study of an ASR project in 1996, acquired 3,200 acres in southern Bexar County and completed construction of Phase I of the \$125 million ASR project and the approximately \$60 million "integration facilities" to transport this water into the System's distribution system. Phase I of the project was dedicated on June 18, 2004 and gave the System the ability to store or recover up to 30,000 acre-feet of Edwards Aquifer water per year.

In 2008, the System continued capital improvements to complete Phase II of the project, which involved well field expansion and treatment plant improvements through the completion of 13 additional wells, the addition of a 7.5 million gallon storage tank, and the addition of various pumping facilities. The \$55 million Phase II expansion completed in January 2010 effectively doubled the System's ability to inject Edwards Aquifer groundwater of approximately 60,000 acre-feet per year and recover a significant volume to facilitate meeting demand.

In 2006, the ASR became an integral component of the System's drought management strategy, and in the 2009 Water Management Plan, the role of the ASR was expanded to use the facility as a longer-term storage reserve and to expand the ASR storage capability to serve as a long-term strategy to optimize available water resources. Also, as described under "THE SAN ANTONIO WATER SYSTEM – Edwards Aquifer Recovery Implementation Program and the Edwards Aquifer Habitat Conservation Plan" herein, the ASR is an integral component of the HCP.

The System has stored and recovered Edwards Aquifer water from the ASR based on annual weather patterns. The chart on the following page provides a summary of the acre-feet of Edwards Aquifer water stored and recovered each year since 2004 when the ASR became operational, as well as the amount of Edwards Aquifer water stored on behalf of the HCP.

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H2Oaks Aquifer Storage and Recovery (acre-feet)				
Year	SAWS ASR Recharge	EAHCP Recharge	ASR Recovery*	Total ASR Storage
2004	5,527		461	5,066
2005	13,491		937	17,620
2006	9,056		6,391	20,285
2007	20,200		432	40,053
2008	10,849		1,250	49,652
2009	17,007		1,448	65,211
2010	25,532		1,706	89,037
2011	12,054		13,223	87,869
2012	11,485		4,436	94,917
2013	6,201	1,868	14,711	88,275
2014	783	4,031	19,562	73,527
2015	9,135	12,075	5,840	88,897
2016	987	33,259	2,139	121,004
2017	2,889	31,475	1,418	153,950
2018**	0	7,429	0	161,379

<sup>\*</sup> Includes operational authorized water use not put in distribution.

#### TRINITY AQUIFER PROJECTS

The System reached a milestone in February 2002 with the introduction of the first non-Edwards Aquifer drinking water supply from the Lower Glen Rose/Cow Creek formation of the Trinity Aquifer in northern Bexar County. The System has wholesale contracts with Massah Corporation ("Oliver Ranch") and Sneckner Partners, Ltd. ("BSR Water Company") for delivery of up to 5,000 acre feet per year of non-Edwards Aquifer groundwater from the Trinity Aquifer from two properties located in north-central Bexar County. The construction cost to produce and deliver this water supply was approximately \$15.8 million. Initial delivery of water from the Oliver Ranch project began in February 25, 2002 with BSR Water Company production commencing in July 2003 and becoming fully operational in June 2004.

In July 2012, SAWS, on behalf of the DSP, entered into an agreement with Water Exploration Company, Ltd. ("WECO") to purchase groundwater produced by WECO from the Trinity Aquifer. In connection with this agreement, two prior water purchase agreements between the DSP and WECO were terminated. The agreement expires in 2027, with two optional five year extensions. Currently, SAWS is obligated to purchase up to 17,000 acre-feet per year in monthly increments not to exceed 1,417 acre-feet. SAWS is only required to pay for water made available which meets all State and federal drinking water standards. During the last several years, the amount of water made available from these three projects has varied depending on the level of the Trinity Aquifer. In 2014, total production from the Trinity Aquifer under all three projects totaled 4,761 acrefeet. In 2015, above average rainfall causing increased recharge into the Trinity Aquifer resulted in increased production. Total production from all Trinity Aquifer projects was 11,625 acre-feet. In 2016, SAWS delivered 17,652 acre-feet of Trinity Aquifer water to customers. Due to below average rainfall and below average recharge of the Trinity Aquifer, SAWS delivered 12,803 acre-feet of Trinity Aquifer water to customers in 2017. As a result of both valuable experience gained during the recent drought, as well as thoughtful and sustainable management, the System now considers its supply from the Trinity Aquifer to be 16,100 acre-feet per year in average years, and firm at 4,000 acre-feet per year.

#### WESTERN CANYON PROJECT

The System, along with entities in Comal and Kendall Counties (together, the "Participants"), contracted with the GBRA to deliver water from the Canyon Lake Reservoir. The System has been receiving project water since April of 2006 and, in 2017, received 8,649 acre-feet. Over time, the amount received could decline to a guaranteed amount of 4,000 acre-feet as GBRA's in-district Participants in the project complete infrastructure necessary to enable them to obtain their contracted supply and their growth allows the Participants to utilize their full allotment of reserved water.

The System receives all water produced by the project that is not used by other Participants. Pursuant to its terms, the contract with GBRA expires in 2037, with an option to extend.

#### BRACKISH GROUNDWATER DESALINATION PROGRAM

A brackish groundwater desalination ("BGD") program is well suited for the south central Texas region, which contains more than 300 million acre-feet of brackish groundwater.

SAWS feasibility work on a brackish groundwater desalination project was completed in 2008. The purpose of the feasibility work was to determine the long-term sustainability of the water supply, the water quality, and if treatment of brackish water through reverse osmosis would be successful.

<sup>\*\*</sup> As of March 31, 2018.

Sustainable brackish water resources were identified in south Bexar County to support operation of a desalination plant for greater than 50 years. The salinity of the brackish water is low and therefore very favorable for use with the reverse osmosis process. Successful pilot testing of the reverse osmosis membranes was conducted during 2009 and 2010 and indicated that a recovery rate of 90% is sustainable. The pilot testing report was submitted to the TCEQ in June 2010 for review and approval. Formal approval of three different membranes was received by TCEQ. Concentrate disposal was designed to use deep well injection. SAWS submitted a Notice of Intent for a Class I Underground Injection Control ("UIC") General Permit to TCEQ in June 2011. Authorization under the Class I General Permit allowed SAWS to complete the test injection well and develop four additional injection well sites. SAWS received authorization to drill the Class I test injection well on August 2, 2011 and the four additional Class I injection wells on September 4, 2011. The test injection well was drilled and completed in June 2012. The first phase of SAWS' BGD program requires two Class I injection wells.

SAWS selected a Program Manager and received Board approval on May 1, 2012 to begin the conceptual design of this program. In December 2012, the Board approved the Construction Manager at Risk. The Construction Manager at Risk provides constructability review of the design work and manages the construction of the BGD program. Design engineering was approved by the Board in January 2013. In early 2014, SAWS Program Manager Black & Veatch completed the design of the first phase of the BGD program. Following the completion of the design, a Guaranteed Maximum Price ("GMP") construction contract was developed by the construction manager, Zachry-Parsons. On March 4, 2014, the Board awarded the remaining construction funds, increasing Zachry-Parsons' GMP contract to \$120,405,870 for the remaining construction items of the BGD program. SAWS and City officials broke ground on the City's new desalination plant in southern Bexar County on July 2, 2014. Design of the BGD was completed in early 2014 and construction of the treatment plant, pipelines, remaining wells, and other facilities began in mid-2014. After a period of testing the BGD became fully operational in December 2016. In January 2017, the plant was commissioned and named "H2Oaks Center", and produced 5,596 acre-feet of high quality drinking water. Full operation of the plant will provide up to 13,440 acrefeet per year of drought-proof desalinated groundwater to the City's taps. Future phases will eventually bring the total supply from this program to 33,600 acre-feet per year. Development of additional phases of the project will be determined based on population and demand projections of the System. Based upon information included in the System's 2017 Water Management Plan, these additional phases may not be required for decades dependent upon the ultimate quantity of water received under the hereinafter-defined Agreement for Carrizo and Simsboro Aquifer Water (see "THE SAN ANTONIO WATER SYSTEM - Water Transmission and Purchase Agreement for Carrizo and Simsboro Aquifer Water" herein) and the success of the System's conservation initiatives (see "THE SAN ANTONIO WATER SYSTEM - Conservation" herein).

The City has received support for this project from the TWDB through subsidized loans. In December 2009, the City sold to TWDB its "Water System Junior Lien Revenue and Refunding Bonds, Series 2009A" pursuant to the TWDB's Water Infrastructure Fund ("WIF") program to provide funds for the planning and design (and to refund outstanding commercial paper notes initially issued) for the desalination project. In August 2011, the City sold "Water System Junior Lien Revenue Bonds, Series 2011" for the construction of production wells, a test injection well, and property acquisition for the Phase One production well fields, and in May 2013, the City sold its "Water System Junior Lien Revenue Bonds, Series 2013A (WIF)" for construction related costs of the desalination project.

#### REGIONAL CARRIZO PROGRAM

The System has been receiving Carrizo Aquifer water from an agreement with the Schertz/Seguin Local Government Corporation ("SSLGC") since late 2013 and producing water from the System's Buckhorn wellfield since 2014.

Developing and sustaining the Regional Carrizo Aquifer Program requires permits for groundwater drilling, production, and transport from the Gonzales County Underground Water Conservation District (the "District"). The District is a local governmental entity with a locally elected Board of Directors. The District operates pursuant to statutory authority set forth in Chapter 36, Texas Water Code, as amended. SAWS submitted an initial, consolidated permit application to the District in June 2005 for production and transportation of approximately 23,000 acre-feet per year of Carrizo Aquifer groundwater. That application was rejected by the District's General Manager as being administratively incomplete. Shortly after the application was rejected, the District changed its rules to reduce by half the amount of groundwater that can be produced per acre of land controlled. SAWS re-filed its application in June 2006 to request permits for the production and transportation of 11,688 acre-feet per year of Carrizo Aquifer groundwater.

SAWS' application was declared administratively complete on July 12, 2006, and contested by several parties on October 10, 2006. Throughout 2007, 2008, and 2009, SAWS participated in several public hearings, multiple mediation sessions, and extensive pre-hearing discovery as part of the contested case hearing process. The contested case hearing took place during October and December of 2009, in Gonzales, Texas. Additional mediation sessions were held in December 2009 and February 2010, ultimately resulting in four entities withdrawing their protests of SAWS' applications. Two entities continued to oppose the applications. On July 13, 2010, the District approved SAWS' permit application to drill, produce, and transport 11,688 acre-feet of Carrizo Aquifer water from Gonzales County. The permit was issued by the District on July 13, 2010 and renewed by the District on July 13, 2015 (see "LITIGATION – SAWS Litigation and Potential Litigation" herein).

The remaining contesting parties filed a motion for rehearing with the District on July 30, 2010. The District's Board of Directors took no action on the motion. Consequently, pursuant to the rules of the District, the Motion for Rehearing was deemed denied on October 29, 2010. The Water Protection Association ("WPA"), one of the contesting parties, filed an appeal from the District's decision in the Judicial District Court of Gonzales County.

The District and SAWS filed motions to dismiss the appeal for want of jurisdiction because WPA failed to timely exhaust its administrative remedies. The motions were denied by the district court by interlocutory order dated April 27, 2011. The District and SAWS appealed the district court's decision to the Court of Appeals for the Thirteenth District of Texas in Corpus Christi. On May 31, 2012, the Court vacated the trial court's judgment and dismissed the case for want of jurisdiction. WPA did not file a motion for rehearing. Therefore, the permits became final and non-appealable.

In order to minimize the cost of the project by foregoing the need for a major new pipeline, SAWS negotiated a contract with the cities of Schertz and Seguin and the SSLGC for shared use of that entity's existing infrastructure in Gonzales County and Guadalupe County, located in the vicinity

of the System's project well field. The SSLGC is a statutory quasi-governmental corporation created by the cities of Schertz and Seguin to develop and operate a ground water supply for those municipalities. It also provides services to certain other small municipalities in the area.

Negotiations concluded in December 2010 and were formalized by the Board, the Board of Directors of the SSLGC, and the City Councils of Schertz and Seguin on February 1, 2011 when they entered into the Mutual Regional Water Supply Contract (the "MRWS Contract"). On July 19, 2012, the SSLGC initially delivered its \$25,425,000 Contract Revenue Bonds, Series 2012 (San Antonio Water System Expansion Water Treatment Project 2), the repayment of which is secured by the payments to be made by SAWS to the SSLGC under the aforementioned MRWS Contract. As a result of the issuance of these contract revenue bonds, the obligation of the System to make payments to SSLGC under the MRWS Contract, as Maintenance and Operating Expenses of the System, is unconditional. In addition to funding the expansion of the treatment facilities, the System will pay the SSLGC for water treatment and transportation services relative to the 11,688 acre-feet per year of water expected to be produced by SAWS from the Carrizo Aquifer. The System may also purchase surplus water produced by SSLGC at the same rate charged to the cities of Schertz and Seguin. Utilizing SSLGC's pipeline reduced the capital investment by SAWS necessary to complete this water supply project by approximately \$88 million.

Delivery of surplus water from SSLGC was initiated on November 12, 2013, with initial delivery of water from SAWS' wellfield in Gonzales County occurring in the first half of 2014. Construction and testing of SSLGC's water treatment plant expansion to treat and transport all of SAWS' water was completed June 6, 2014. SAWS received approximately 13,300 acre-feet of SAWS wellfield and SSLGC surplus water in 2015 and 10,014 acre-feet from the SAWS wells in 2016. Due to availability of SAWS' water supplies, SAWS did not purchase surplus water from SSLGC in 2016, but purchased 2,483 acre-feet in 2017, resulting in a total yield in 2017 of 13,188 acre-feet.

#### CANYON REGIONAL WATER AUTHORITY; LAKE DUNLAP AND WELLS RANCH

The Canyon Regional Water Authority ("CRWA") is a public entity created by the Texas Legislature to develop non-Edwards Aquifer water supplies for its members. The CRWA has a contract with GBRA for the purchase of raw water from Canyon Lake, and has constructed a treatment plant for the water downstream on Lake Dunlap. Under the terms of a multi-party agreement between CRWA, GBRA, SAWS and others, SAWS is allocated the right and obligation to purchase 4,000 acre-feet of this water, although 500 acre-feet were sub-leased to the City of Cibolo, Texas through December 31, 2018. The City of Cibolo, Texas sought early release from this agreement (which terminated on December 31, 2015). Effective January 1, 2016, Springs Hill Water Supply Corporation purchased this 500 acre-feet of Lake Dunlap surface water through December 31, 2023 through a multiparty agreement between City of Cibolo, Texas, Springs Hill Water Supply Corporation, SAWS, CRWA, and GBRA. The CRWA agreement with GBRA expires in 2024, at which time CRWA is obligated by contract with SAWS to replace the 4,000 acre-feet of Canyon Lake water with water from other sources. CRWA has also constructed a groundwater project known as the Wells Ranch Project to produce water from the Carrizo-Wilcox Aquifer in Gonzales and Guadalupe Counties. Pursuant to a contract with CRWA, SAWS (as the successor in interest to the DSP) has a right and obligation to purchase 2,800 acre-feet of water per year from this project. The agreement between SAWS and CRWA for the purchase of water from the Wells Ranch Project expires in 2047, but includes an extension option.

SAWS received approximately 2,468 acre-feet from Lake Dunlap and Wells Ranch supplies in 2017.

During 2016, CRWA refunded bonds associated with the Lake Dunlap, Mid-Cities and Wells Ranch projects. The refunding of the bonds resulted in savings to the System of approximately \$6.2 million over the life of such refunded bonds. In addition, \$2.95 million of capital was added for the purchase of ozone disinfection and related equipment. The conversion to free chlorine through the use of ozone gas, provides the System the operational flexibility to utilize the full contractual volume of water available from CRWA sources.

#### LOCAL CARRIZO WATER PROJECT

A provision of the 2002 Water Resource Protection and Management Agreement with the Evergreen Underground Water Conservation District gives the System the ability to withdraw up to 2 acre-feet per year of Carrizo Aquifer water per surface acre of land owned or leased. This equates to a firm yield of approximately 9,900 acre-feet per year.

The approximately \$17 million Local Carrizo Water Supply program is comprised of two phases: an onsite phase and an offsite phase. The onsite phase began production in August 2008, with production of 383 acre-feet in 2008 and approximately 5,300 acre-feet in 2009. The offsite phase was completed in August 2010. This project will reduce the effects of the naturally occurring movement of water and provide increased operational flexibility of recovering the stored water. Due to the significant amount of rainfall in San Antonio in 2016 which allowed SAWS to store excess supplies into its ASR virtually all year, no water was produced from this project in 2016 with a nominal amount of 1,982 acre-feet produced in 2017.

#### **EXPANDED CARRIZO PRODUCTION**

In early 2012, a preliminary analysis was performed to determine the potential for additional production from the Carrizo Aquifer in southern Bexar County. Based on the analysis, a more in-depth study of the feasibility for expanded Carrizo Aquifer production was begun in late 2012.

The study looked at the possibility of developing additional Carrizo Aquifer production in a three phase approach of 7,000 acre-feet per year per phase for a total of 21,000 acre-feet per year by 2026. These production numbers were included in the 2012 Water Management Plan. Initial analysis of available data indicates that productivity of the Carrizo Aquifer in the study area appears to be sufficient to supply the proposed production levels without resulting in significant effects on surrounding Carrizo Aquifer wells. Modeling efforts are completed for Phase I and Phase II locations, while modeling efforts for Phase III locations continues to recommend optimum well spacing and production levels for the project.

A formal design contract for the first phase of this project was awarded in September 2014. Although the design of the project has been completed, the actual construction has been moved beyond the current five year planning horizon in order to focus on the development of the brackish

groundwater project and Water Transmission and Purchase Agreement for Carrizo and Simsboro Aquifer Water. In the 2017 Water Management Plan, this project may not be required for decades dependent upon the ultimate quantity of water received under the Agreement for Carrizo and Simsboro Aquifer Water (see "THE SAN ANTONIO WATER SYSTEM – Water Transmission and Purchase Agreement for Carrizo and Simsboro Aquifer Water" herein) and the success of the System's conservation initiatives (see "THE SAN ANTONIO WATER SYSTEM – Conservation" herein).

#### WATER TRANSMISSION AND PURCHASE AGREEMENT FOR CARRIZO AND SIMSBORO AQUIFER WATER

In an effort to achieve significant diversification of the City's water supply, the Board, on January 14, 2011, solicited requests for competitive sealed proposals for the provision and delivery of alternative water supplies for the purpose of meeting the System's water supply needs (the "Solicitation"). In response to the Solicitation, the Board received nine responses, from which three finalists were selected and reviewed prior to determining that a joint-venture proposal (such proposer, Abengoa Vista Ridge, LLC, hereafter referred to as "Abengoa VR") to deliver Carrizo and Simsboro aquifer water presented the most advantageous possibility for the City to obtain an alternative water source. On July 1, 2014, the Board formally selected the water supply proposal of Abengoa VR as the most advantageous to the System, subject to negotiation of an acceptable contract and City Council support.

On September 29, 2014 and October 15, 2014 the Board adopted resolutions, and on October 30, 2014 the City Council unanimously adopted an ordinance, approving the execution of a Water Transmission and Purchase Agreement (the "Agreement") between the City, acting by and through SAWS, and Abengoa VR, pursuant to which Abengoa VR committed to make available to SAWS, and SAWS agreed to pay for, up to 50,000 acrefect of potable water ("Project Water") per year for an initial period of 30 years plus a limited (10 year) extension period under certain events (hereinafter referred to as the "operational" phase). To produce and deliver the Project Water, Abengoa VR will develop well fields to withdraw water from the Carrizo and Simsboro aquifers in Burleson County, Texas pursuant to currently-held long-term leases with landowners and construct (or cause to be constructed) a 142-mile pipeline from this well field to northern Bexar County (the well fields and the pipeline, together, the "Project"). The pipeline will be connected to the SAWS distribution system at this delivery point in northern Bexar County (the "Connection Point").

The Agreement is separated into three distinct phases. The "development" phase commenced on November 4, 2014, which was the date of complete execution and delivery of the Agreement. The "development" phase concluded on November 2, 2016 upon satisfaction of certain contractual requirements, referred to as "financial closure", and conclusion of which commenced the "construction" phase of the Project. During the "construction" phase of the Project, SAWS will also begin construction of improvements to the System necessary to accept and integrate the Project Water. The anticipated capital cost of SAWS' improvements was initially estimated at approximately \$145 million. As design of these improvements has not been completed, the potential cost of more improvements could materially differ from the initial estimate. This "construction" phase is scheduled to last 42 months and its conclusion will result in the commencement of the aforementioned 30-year "operational" phase, during which period SAWS is obligated to pay for Project Water (up to 50,000 acre-feet annually) made available to it by Vista Ridge LLC at the Connection Point.

During the "construction" phase, SAWS has retained the right to terminate the Agreement by purchasing the Project for the aggregate amount of the outstanding Project debt, contract breakage costs and return of and on equity contributions by Abengoa VR's principals. At the end of the "operational" phase, ownership of the Project will be transferred to SAWS at no cost. SAWS has also entered into a separate agreement with Blue Water Vista Ridge, LLC, the lessee of the Project Water, to continue to acquire the 50,000 acre-feet of untreated groundwater, for an additional 30 year period, upon the termination of the Agreement and transfer of the Project to SAWS, and the cost of such water at the end of the Agreement will be tied to the costs of then-prevailing two-year Edwards Aquifer water leases.

Pursuant to the terms of the Agreement, SAWS will pay costs arising under the Agreement, as Maintenance and Operating Expenses of the System, only for Project Water made available at the Connection Point (which payment will include the costs of operating and maintaining the Project). SAWS will have no obligation to pay for any debt issued by Abengoa VR, and any such debt will be non-recourse to SAWS. At the time of the execution of the Agreement in 2014, SAWS originally anticipated that Project Water (the costs of which were to be paid directly to Abengoa VR), together with Project operations and maintenance (as a direct pass through under the Agreement) and Project electricity (paid directly by SAWS to the utility providers) would initially cost approximately \$2,200 per acre foot (with the actual cost of Project Water estimated at \$1,852 to \$1,959 per acre foot and the balance attributable to Project operation and maintenance expenses and electricity), resulting in an annual charge to the SAWS system of approximately \$110 million (which amount does not take into account potential revenue increases resultant from Project Water being available to SAWS for sale).

On November 19, 2015, the City Council approved a series of increases to the water supply fee to finance the acquisition of new water supplies, including the Project. SAWS currently projects that, absent any increase in System revenues attributable to the availability of Project Water for sale, its payment obligation under the Agreement will result in a rate increase of approximately 14% to the average monthly SAWS residential bill by 2020 (which increase does not include other projected rate increases anticipated to occur by such time). Any such fee will only be imposed by SAWS so that revenues are not generated and received until needed. Accordingly, SAWS will not impose this approved fee to pay costs of the Project until payment for Project Water is imminent. See "SAWS STATISTICAL SECTION AND MANAGEMENT DISCUSSION – Monthly Water, Sewer, and Water Supply Fee Rates" herein.

The execution of the Agreement represented a significant diversification of the City's water source, as SAWS projects that Project Water, if delivered at the maximum amount (which is the expectation of both SAWS and Abengoa VR), will account for approximately 20% of the System's current annual usage.

On November 25, 2015, national and international media reported Abengoa SA, the parent company of Abengoa VR ("Abengoa Parent") commenced pre-insolvency proceedings in Spain, indicating the beginning of an approximately four-month period during which Abengoa Parent negotiated with its creditors in an effort to reach an accord to guarantee Abengoa Parent's continued financial viability. On February 3, 2016, Abengoa Parent presented its viability plan to its main creditors, who were to agree to a restructuring plan prior to March 28, 2016 for Abengoa

Parent to avoid filing for insolvency. On March 28, 2016, Abengoa Parent reported that it had obtained backing from 75 percent of its creditors for a seven-month standstill agreement, which it filed with the court in Seville, Spain as it sought more time to restructure its debt, thus avoiding filing for insolvency. In addition, it was reported on March 29, 2016 that Abengoa Parent and several of its affiliated entities (specifically excluding Abengoa VR) filed for Chapter 15 recognition protection in the United States Bankruptcy Court in Wilmington, Delaware while it continued discussions with banks and bondholders on its restructuring plan. The Chapter 15 filing has no direct impact on SAWS' rights and obligations.

In early 2016, SAWS became aware that Abengoa was soliciting proposals to sell up to 80% of the equity interest in Abengoa VR. Under the terms of the Agreement, SAWS has the right to consent to any assignment or change of control of Abengoa VR in SAWS' sole and absolute discretion. On March 22, 2016, SAWS received notice that Garney P3 LLC ("Garney", who is wholly owned by Garney Companies, Inc. and referred to herein as "Garney Company", who is wholly owned by Garney Holding Company, and referred to herein as "Garney Parent"; Garney, Garney Company and Garney Parent are collectively referred to herein as the "Garney Parties") had reached agreement with Abengoa Parent, Abengoa Water USA LLC ("Abengoa Water") and Abengoa VR (Abengoa Parent, Abengoa Water and Abengoa VR collectively referred to herein as the "Abengoa Parties"), for the sale and purchase of an 80% equity interest in Abengoa VR (such agreement, the "Equity Purchase Agreement"; such transferred interest in Abengoa VR, the "Transferred Project Company Interest"). The transaction memorialized pursuant to the Equity Purchase Agreement closed on June 10, 2016, at which time Garney acquired the Transferred Project Company Interest. Accordingly, Garney possessed an 80% equity stake in and all control rights of Abengoa VR. Abengoa Parent affiliate, Abengoa Water, retains its silent 20% equity interest in Abengoa VR. As a result, Abengoa affiliates no longer have any active participating role in the Project.

On May 17, 2016, SAWS exercised its contractual right to fix the capital and "Raw Groundwater Unit Price" under the Agreement based on the methodology provided for therein. This action reduced the price of the Project Water component of SAWS annual payment requirement from the possible maximum amount of \$1,959 per acre foot to \$1,606 per acre foot, which will remain fixed for the entire 30 year term (and any extension of that term) of the Agreement. This action results in savings to SAWS of more than \$17 million per year and more than \$529 million over the maximum that could have been charged under the 30 year term of the Agreement.

On May 18, 2016, the Board approved an Amendment to the Agreement (the "First 2016 Amendment") which includes approval of the transfer to Garney of the Transferred Project Company Interest and other miscellaneous and conforming amendments to the Agreement, approved other related agreements, including a Project Real Property Conveyance Agreement between SAWS and the Central Texas Regional Water Supply Corporation, and authorized the President and Chief Executive Officer of SAWS, upon determining that all necessary prerequisites have occurred, to undertake all necessary actions and execute the First 2016 Amendment (which occurred contemporaneously with the closing under the Equity Purchase Agreement). The SAWS President and Chief Executive Officer exercised this authority on June 10, 2016, at which time the First Amendment became effective.

On December 18, 2015, Metropolitan Water Company, L.P. ("Met Water") filed a lawsuit in Travis County District Court, 201st Judicial District, styled Metropolitan Water Company, L.P. v. Blue Water Systems, LP; Blue Water Regional Supply Project, LP; Blue Water Vista Ridge LLC; Abengoa Vista Ridge LLC; and Wilmington Trust National Association, Cause No. D-1-GN-15-005774. In this lawsuit, Met Water alleges various Blue Water entities breached certain agreements with Met Water and failed to pay Met Water money owed under said agreements. Met Water also alleges that an assignment of leases to Blue Water Vista Ridge, LLC was entered into based upon a fraudulent inducement. Met Water sought rescission of the agreements with the Blue Water Vista Ridge, LLC-affiliated entities, including the assignment of leases, and/or money damages. The leases that are the subject of the assignment in dispute give Abengoa VR the right to produce the Project Water to be sold to SAWS under the Agreement. On May 11, 2016, the litigating parties filed a Notice of Non-Suit with Prejudice, effectively dismissing all claims that could have adversely affected performance of the Agreement.

On September 16, 2016, the Board of Directors of Abengoa VR changed the company name to Vista Ridge LLC.

On November 1, 2016, the Board approved a second amendment to the Agreement (the "Second 2016 Amendment") to accommodate the declaration of financial closure under the Agreement. Once again, the Board authorized the SAWS President and Chief Executive Officer to approve the effectiveness of the Second 2016 Amendment upon prior confirmation of satisfaction of necessary prerequisites. The Second 2016 Amendment was made effective on November 2, 2016 concurrent with a declaration of financial closure under the Agreement, as amended by the First 2016 Amendment and the Second 2016 Amendment. The Second 2016 Amendment also contemplated finalization of infrastructure related to the Connection Point and selection of an operating service provider to operate the Project during the "operational phase" of the Project. Neither the First 2016 Amendment nor the Second 2016 Amendment altered the Agreement's structure or provisions in a manner that differs from its description provided above.

On December 2, 2016, Blue Water Systems, LP and Blue Water Vista Ridge, LLC (collectively, "Blue Water") filed a lawsuit in Travis County District Court, 353rd Judicial District, styled *Blue Water Systems, LP and Blue Water Vista Ridge, LLC v. Metropolitan Water Company, L.P. and Met Water Vista Ridge, L.P.*, Cause No. D-1-GN-16-005866. In this lawsuit, Blue Water alleged the Met Water entities failed to perform certain obligations under a Post-Closing Agreement between Blue Water and the Met Water entities related to execution of Non-Disturbance Agreement ("NDA") affecting the Project. Met Water alleged the form of the NDA was overbroad and inconsistent with their obligations, and that Blue Water failed to pay them certain sums due under the Post Closing Agreement, along with other claims unrelated to the Project. Both parties filed motions for summary judgment. On July 11, 2017, the Judge denied both parties motions for summary judgment related to the Project. Unless the matter is settled by mutual agreement, the case will proceed to trial on the merits.

In February 2017, Garney reached an agreement to sell a 29% equity stake in Vista Ridge LLC to Ridgewood Infrastructure. As this sale did not result in a change of control within Vista Ridge LLC (Garney now owns a 51% equity stake in Vista Ridge LLC, Ridgewood Infrastructure owns 29%, and Abengoa owns 20%), SAWS approval was not required as a condition to its effectiveness. SAWS maintains approval rights for any sale that results in a change of controlling interest in Vista Ridge LLC, as well as the selection of an operating service provider under, the Agreement.

On April 4, 2017, the Board approved a third Amendment to the Agreement (the "Third Amendment") which included refinements to the Agreement's performance and operation protocols, tank configuration at the Project's Connection Point in northern Bexar County and an

amendment to timing of real estate acquisition for the Project. The Third Amendment did not materially modify the Agreement's structure or provisions in a manner that materially differs from its description provided above.

As of March 2018, Vista Ridge LLC and the Central Texas Regional Water Supply Corporation are in the process of construction of the Project, including drilling the Project wells in Burleson County and construction of the transmission pipeline in all counties the pipeline crosses leading to Bexar County, for which approximately 42 miles of pipe has been laid. SAWS began the process for design and construction of the SAWS' facilities in Bexar County necessary to integrate the Project Water into the SAWS' distribution system, including developing pipeline alignments and obtaining rights of entry from landowners. The Design Build Contract (the "Design Build Contract") for the integration work was awarded on September 13, 2017 to Kiewit Infrastructure South Co. ("Kiewit"). On December 21, 2017, SAWS exercised its right to terminate the Design Build Contract, as the initial guaranteed maximum price for the integration work proposed by Kiewit exceeded the SAWS initial budget estimates. As a result, SAWS is proceeding with the integration project using the traditional design-bid-build methodology, with the designer from the Design-Build Team, Tetra Tech, Inc., servicing as the design engineering for the integration project and Black and Veatch Corporation transitioning its role from an owner's representative under the design-build delivery to the program manager for the integration project.

The Vista Ridge pipeline route parallels the I-35 corridor, one of the highest growth regions in the country. Communities throughout the region have increasing water needs to sustain both growing populations and flourishing economies. The System may wholesale up to 15,000 acre-feet per year from the Vista Ridge pipeline (or its other existing water supply projects), developing regional partnerships, providing communities a diversified water supply, and potentially reducing costs to System ratepayers.

#### MEDINA VALLEY

The Medina Valley consists of a 950 square mile drainage area upstream of the confluence of Medio Creek, Potranco Creek, and the Medina River. The surface runoff from about two-thirds of the Medina Valley is upstream of Medina Lake. For purposes of water resource protection and minimizing customer costs, the former DSP adopted a non-degradation policy in support of TCEQ's public water supply stream quality designations.

SAWS owns and leases approximately 10,000 acre-feet per year of municipal surface water rights in the Medina Valley. These "run-of-river" rights have minimum downstream flow restrictions that prohibit diversions when streamflow gets below 20 cubic feet per second ("cfs").

The Bexar-Medina-Atascosa Counties Water Control and Improvement District No. 1 ("BMA") is authorized to impound up to 254,000 acre-feet of water in Medina Lake and annually divert approximately 66,000 acre-feet per year (20,000 acre-feet per year for municipal and industrial purposes and 46,000 acre-feet per year for agricultural irrigation). The most current agreement between SAWS (as the successor in interest to the DSP) and BMA was executed in 2007, for the lease of approximately 20,000 acre-feet per year of municipal/industrial water, at a cost of \$69 per acre-foot. According to the Water Supply Agreement ("WSA"), this raw water cost increased at the end of 2012 to the GBRA Basin-Wide Rate, which increased to \$145 per acre-foot in October 2017. Under the WSA, SAWS is required to use the water purchased for municipal purposes within its service areas or, upon prior approval of BMA, may resell to third parties outside of its service areas for any lawful purpose. Third party sales of water diverted by SAWS outside of the San Antonio River Basin require the approval of the TCEQ. This surface water right has no minimum downstream flow restrictions.

Water from the Medina River can be diverted to a surface water treatment plant (the "Plant") located southwest of the City. The Plant is located on a 39-acre site approximately one and one quarter mile from the Medina River. The Plant is capable of treating 15.0 MGD expandable in modular form to an ultimate treatment capacity of 27.0 MGD. Generally, when downstream flow conditions are above 20 cfs, SAWS uses its run-of-river rights to divert and treat at the Plant. When downstream flow conditions are below 20 cfs, SAWS (as the successor in interest to the DSP) uses its WSA with BMA to divert and treat at the Plant.

During the height of the most recent drought, Medina Lake's capacity was greatly diminished, leading to poor water quality. As a result, the Plant was temporarily idled from April 2013 through August 2015. As a result of heavy rainfall during the summer of 2015, lake levels increased to a peak of nearly 80% of capacity. SAWS restarted the Plant on September 1, 2015 and treated approximately 500 acre-feet of Medina Valley water. Water quality concerns persisted, and SAWS elected to again temporarily idle the Plant in October 2015. Due to the sufficiency of SAWS' alternative sources of supply, the Plant remained idled throughout 2016 and to date in 2018. Additional investments in the treatment process may be required in order to eliminate these water quality concerns in the future. Current available water supplies are expected to be sufficient to meet System customers' demand in the foreseeable future without utilizing Medina's supplies. The book value of the Plant as of December 31, 2016 was \$13.0 million. SAWS is continuing to depreciate the Plant and does not currently believe the Plant has been permanently impaired.

#### EXPANDED BRACKISH GROUNDWATER DESALINATION

In 2013, SAWS commissioned a concept study to explore an expanded BGD project. The findings of this concept study identified an alternative supply of water that was priced similar to projects already being considered.

This project would potentially be a phased approach to deliver a firm yield of approximately 50,000 acre-feet per year from wellfields in Wilson County. If expanded BGD is pursued, timing and yield will be dependent on the System's current BGD project, implementation of the Agreement for Project Water (see "THE SAN ANTONIO WATER SYSTEM – Water Transmission and Purchase Agreement for Carrizo and Simsboro Aquifer Water" herein), and projected needs through the 2030s. This future project will continue to be researched and analyzed to determine its full viability as a long term option for the System.

#### OCEAN DESALINATION

Until it becomes economically feasible to desalinate seawater, manage the resulting brine in an environmentally responsible way, and pump the treated water inland to the City, SAWS intends to continue its focus on brackish groundwater desalination in close proximity to Bexar County for the foreseeable future. However, SAWS has not ruled out seawater desalination.

#### WESTERN INTEGRATION PIPELINE

The 2012 Water Management Plan addressed the operating challenge of co-locating the Brackish Groundwater Desalination Program, Local Carrizo, Expanded Carrizo Production, and ASR projects at a single site (H2Oaks Center in southern Bexar County) by recommending the expedited construction of the Western Integration Pipeline to bring water to the western half of the City.

Construction was divided into two phases. Phase I construction commenced in 2014 and became operational in September 2016. Phase I construction consists of 28 miles of pipeline, a high service pump station, and a ground storage tank and distribution pumps capable of delivering up to 50 million gallons per day of water from the H2Oaks Center to the System's distribution system.

With all permits received, Phase II is scheduled to begin construction in 2018 and is expected to be online in 2021. Phase II consists of 17 miles of pipeline, the remaining portion of the high service pump station, and a second ground storage tank and additional high service pumps to increase the total production capacity of water from the H2Oaks Center to 75 million gallons per day.

#### CONSERVATION

*General.* SAWS recognizes that the effort to promote conservation is a cost-efficient approach at minimizing the increase in demand for water caused by population growth. Beginning in 1994, SAWS implemented progressive water conservation programs aimed at reducing the total amount of water used. These programs target both indoor and outdoor residential, commercial and industrial uses.

The City's long-standing commitment and investment in water conservation and infrastructure improvements has yielded its largest water supply. SAWS' total per capita water consumption has decreased significantly from 225 gallons per capita per day ("GPCD") in 1982 to 117 GPCD in 2016 (a year in which more rainfall than average was received), which has resulted in approximately 3.2 million acre-feet of cumulative savings. Using today's larger population, a total per capita of 225 GPCD would require an additional 214,000 acre-feet of water per year. SAWS has successfully cultivated an ethic of conservation, invested in infrastructure over the past 35 years and effectively reduced GPCD by approximately 50 percent, all while SAWS' service area population has grown by approximately 150%.

As part of the 2017 Water Management Plan, water conservation continues to be a strategy for long-term water supply. By 2070, conservation investments are projected to result in approximately 4.3 million acre-feet of cumulative water savings since 2017, and would replace the need for approximately 132,000 acre-feet per year of new water projects.

Over the last five years, several initiatives have contributed to SAWS' progress in extending the City's water supplies through conservation:

- Over 2 million square feet of water-intensive grass has been replaced with low water-use plants or permeable patios through WaterSaver Landscape Coupon programs.
- Regional Carrizo Water Project was brought on line in 2013, providing more than 10,000 acre-feet of water in both 2015 and 2016 from the Carrizo Aquifer in Gonzales County, Texas to the City.
- In January 2017, SAWS held the grand opening of the H2Oaks Desalination Plant and Water Center, Phase I of which is capable of producing 12 million gallons of drinking water daily from desalination operations.
- WaterSaver Irrigation Consultations providing home irrigation and landscape education visits have reduced household usage by 140 million gallons per year.
- The GardenStyleSA.com website and e-newsletter providing timely City-focused low water use landscape information to reduce outdoor watering.
- SAWS' ASR at H2Oaks has reached a record storage volume of 143,000 acre-feet, representing over a half-year of SAWS potable demand.
- SAWS has partnered with the University of Texas at Austin-based Pecan Street to develop an integrated conservation platform to manage programs and facilitate communications with customers.
- The public-private partnership with Vista Ridge LLC for up to 50,000 acre-feet per year of groundwater from Burleson County, Texas by 2020 is recognized globally as a benchmark agreement in water projects.

The System's 2017 Water Management Plan strives for a reduction of residential consumption to 55 GPCD by 2070 and a total consumption (to include commercial, industrial and non-revenue water) to 88 GPCD by 2070.

Strategies to Save Water. Conservation results are achieved through a combination of education and outreach, reasonable regulation and financial incentives. Education is provided through workshops and events offered directly by staff and through partnerships with expert volunteers. Over 100,000 people receive face to face education on how to save water through these efforts each year.

Regulations that save water are negotiated with impacted stakeholder groups to determine where it is logical to set a conservation standard for a particular activity. An example is regulations that set standards to ensure that swimming pools are designed to operate as efficiently as possible. Other regulations set efficiency standards for landscape and irrigation, power washing, decorative fountains, and car wash operations.

Financial incentives include a tiered rate structure, free conservation supplies, rebates for efficiency upgrades and coupons that offset material costs. Each incentive is designed to achieve a change in how water is used for a particular activity. The incentives are evaluated to assess the cost per gallon of water saved to ensure that they acquire water savings at a rate lower than the cost of new water. The new focus on peak water savings has resulted in procedures that place a higher financial incentive on programs that result in landscape irrigation reductions than on programs that reduce the year-round baseline use of water.

Residential Conservation Programs. Residential conservation programs encourage customers to save water and ensure that their landscape and irrigation practices are efficient. A variety of education and rebate incentive programs are available to help ratepayers understand how following best practices can save water and money. Customers learn about these programs through the System's website, public events, direct mail inserts in bills, paid advertisements, and educational materials in popular local periodicals. The System's most effective residential programs for water use reduction include the following:

<u>Conservation Consultations</u> provide the System's ratepayers with a free analysis of their in-ground irrigation system and landscape care needs. Trained conservation consultants visit homes to review each component of irrigation systems to determine maintenance needs to make suggestions for improving efficiency. Customers are invited to participate in the review process to get the maximum benefit from the site visit. A report that outlines any necessary maintenance repairs, suggestions for design improvements and how much water the system uses is provided to customers. The consultation visit includes suggestions and rebate incentive amounts available for making suggested design improvements. Customers are advised of ways to further reduce outdoor consumption by adjusting irrigation scheduling and by considering other landscape options.

<u>Conservation Coupons</u> provide instant incentive savings to customers who wish to make changes in their landscape or irrigation system. The coupons offset the upfront costs associated with transforming portions of their traditional landscape to attractive bedding areas comprised of hardy, drought-tolerant plants. The incentives require customers to replace grass with lower water use options in the same space. Coupon packages are offered several times per year and reflect seasonal plant offerings available in locally owned plant nurseries. Some coupons also offset the material costs of replacing grass by installing a patio.

<u>Irrigation Design Rebates</u> are designed to make an irrigation system more efficient or remove it altogether and receive a rebate to help cover the cost. During a conservation consultation, trained consultants work with local irrigators to help identify design flaws in a customer's irrigation system that, if changed, can result in water savings, healthier landscapes, and rebates.

<u>Plumbers to People</u> provides leak repairs and retrofits to qualified low-income homeowner customers. The System, in cooperation with the City's Department of Human Services, qualifies applicants based on the current Federal Assistance Guidelines. Only leaks that result in a loss of potable water are eligible for repair under the program. Water conservation is achieved by quickly repairing leaks that would otherwise continue due to the cost of repairs. When applicable, special analysis is prepared within low-income housing areas where high water bills and older housing stock indicate the possibility of leaks or high flow fixtures. Identified households are sent letters offering a conservation assessment. Contracted plumbers provide services that include replacement of high flow fixtures and repair of minor potable water leaks.

<u>Garden Style San Antonio website (www.GardenStyleSA.com)</u> is a one stop resource for inspiring designs, information on drought-hardy plants, and regional expert advice to help SAWS customers transform their landscapes into a water-saving showpiece. Launched in May 2014, the site currently has 167,000 users annually.

<u>GardenStyleSA e-Newsletter</u> is a weekly free newsletter provided to 14,000 individuals who want expert advice on how to take care of their landscape. It includes timely lawn irrigation advice that is based on current weather conditions. Local horticulture experts provide weekly articles on seasonal landscape care featuring plants that thrive in the City. Incentive programs and local educational events are promoted. A gardening expert (the Garden Geek) responds to regularly submitted questions.

Commercial Conservation Programs. Commercial customers account for 10 percent of the System's customer base, but represent 40 percent of the System's annual water sales; therefore, there is great potential for both water and monetary savings through the System's commercial conservation programs. The System has been working closely with commercial customers for the past 20 years to help them conserve water, maintain profitability, and become a water wise corporate partner. Water audits and case-by-case custom rebates for retrofits are also available. Every year, the System presents conservation awards to recognize businesses, organizations, and/or individuals that voluntarily initiated water conservation practices. The System's most effective programs for commercial and industrial water use reduction include the following:

<u>Irrigation Design Rebates</u> provide an incentive for commercial properties to upgrade older, water wasting irrigation equipment with newer options that apply water more efficiently. Rebates are available to zone irrigation areas by plant material, to convert spray irrigation to drip and to cap areas that do not require irrigation.

<u>Commercial Custom Rebate Program</u> allows commercial water users of all sizes to apply on a case-by-case basis for rebates to install water conserving equipment. The rebate pays for part of the costs of equipment changes based on the water projected to be saved over a ten-year period. The program requires a pre-audit, a pre-inspection, and on-going verification of water savings and is mutually beneficial between commercial customers and SAWS. The rebate is enticing for the business as it allows water saving projects to become economically feasible while at the same time maintain the company's market competiveness. Additionally, after the technology is installed, the business will see a decrease in overhead cost as they are using less water for the same amount of product. For SAWS, the rebate provides an investment in permanent water savings. The water saved can be used to service other customers and alleviate the pressure to pump from other water sources.

<u>Cooling Tower Consultations</u> help businesses manage their cooling towers as efficiently as possible. This program provides for free consultations on all cooling towers within the System's service area. A cooling tower review provides the customer with detailed advice on their specific operation, as well as recommendations for achieving water and energy savings through increased cycles of concentration, capture of blowdown water for reuse in other applications, or installation of other water conserving equipment.

<u>Landscape & Irrigation Consultations</u> allow conservation staff to work with irrigation and landscape professionals and with building managers to put best management practices in place as businesses are finding that irrigation consumption can account for a significant amount of their total water usage. These visits include a review of the overall site plan, the landscape maintenance plan, irrigation system quality, and irrigation scheduling. Customers are left with information on retrofits to improve efficiencies and irrigation scheduling advice. As part of the site analysis, custom rebates may be approved to encourage irrigation upgrades.

Certified WaterSaver Car Wash Program. In 1997, the Southwest Car Wash Association ("SCWA") partnered with SAWS to create the first certified car wash program, which was rejuvenated in 2007. This partnership helped to develop new standards for both existing and proposed car wash facilities within the San Antonio area, resulting in significant water savings. With direct input and cooperation from the car wash industry, the SAWS WaterSaver Car Wash Program has continued to evolve. Today's WaterSaver Car Wash Program results in real water savings, protects water quality, provides recognition and financial incentives for program participants, and works with local nonprofits seeking to earn money for worthwhile projects.

#### WATER QUALITY AND QUANTITY

The System's Resource Protection and Compliance Department is responsible for the System's efforts in protecting the quality of the Edwards Aquifer and, in cooperation with the System's Water Resources Department, conducting technical evaluations of how to increase its yield. The TCEQ has adopted rules relating to the activities of landowners in the recharge and drainage zones of the Edwards Aquifer. The City has adopted ordinances applicable within its City limits that limit or regulate activities, which could be harmful to water quality and has, through its Unified Development Code, regulated certain development within the City's ETJ (five miles from city limits).

Research on the Edwards Aquifer is conducted as part of the Edwards Aquifer Optimization program. This is a comprehensive program that identifies and evaluates technical options to increase available yield from the Edwards Aquifer and to attempt to use the aquifer's storage capacity more efficiently. The goal of these studies is to gain a better understanding of the hydrogeologic framework, chemical and hydraulic characteristics, and ground water flowpaths of the freshwater-saline water interface of the Edwards Aquifer. The United States Geological Survey (the "USGS") conducted a study of the San Marcos Springs hydrogeology and water balance known as the San Marcos Springs Recharge – Investigative Study. This effort encompasses scientific investigative work to refine the hydrogeologic setting, determine the hydraulic properties and groundwater flow gradient, and define local sources and flowpaths providing flow from San Marcos Springs. This study provides data for evaluation of the local versus regional sourcing of springflow, the effectiveness of current management strategies, and the need for revised management policies to maintain San Marcos Springs flow. The final Report has completed USGS editorial review and is now available on the USGS website.

#### SEWER MANAGEMENT PROGRAM

In March 2007, SAWS was orally notified by Region 6 of the United States Environmental Protection Agency (the "EPA") of alleged failures to comply with the Clean Water Act due to the occurrence of SSOs. The EPA subsequently referred the matter to the United States Department of Justice (the "DOJ") for enforcement action. SAWS engaged in settlement negotiations with the EPA and the DOJ to resolve the allegations. On June 4, 2013, the Board approved a Consent Decree between SAWS and the United States of America and the State of Texas to resolve this enforcement action. SAWS signed the Consent Decree on June 5, 2013 and the Consent Decree was subsequently executed by the United States of America and the State. On September 13, 2013, after consideration of the comments received, the United States of America filed its Motion for entry of the Consent Decree, requesting the Court to approve the Consent Decree by signing and entering it. The Consent Decree was signed and entered by the Court on October 15, 2013. During the 10 to 12 year term of the Consent Decree, SAWS estimated the cost to perform the operating and maintenance requirements of the Consent Decree to be approximately \$250 million. SAWS initially estimated that capital investments of approximately \$850 million would be required over the Consent Decree term. During the last several years, through flow monitoring during significant rainfall events, physical inspection and televising, SAWS has accumulated additional information relative to the performance of its collection system. Based upon this additional information, as well as inflationary costs increases, SAWS currently estimates that capital expenditures associated with the requirements of the Consent Decree could range from \$1.2 billion to \$1.3 billion. As with any estimate, the actual amounts incurred could differ materially.

Through December 31, 2017, capital expenditures related to the Consent Decree total \$304 million. Since entry into the Consent Decree, SAWS has performed its obligations under the terms of the Consent Decree and management believes SAWS is in material compliance with such terms, conditions and requirements. Since 2010, SAWS has seen a significant reduction in SSOs, from 538 in 2010 to 193 in 2017.

SAWS operates the Mitchell Lake Site Wastewater Treatment Facility ("Mitchell Lake") pursuant to a Texas Pollutant Discharge Elimination Permit issued by the TCEQ under a delegation of authority from the EPA (the "Permit"). In October 2015, during the presentation of SAWS' annual report, the EPA orally notified SAWS that SAWS violated the effluent discharge limitations of that Permit as a result of discharges occurring during significant rainfall events. The EPA stated that it would likely issue a "Notice of Violation" to SAWS for these alleged violations. On August 18, 2016, SAWS received an Administrative Order from EPA that alleges that SAWS violated the Permit by failing to meet effluent limits as required by the Permit. Mitchell Lake is not a standard brick and mortar wastewater treatment facility. Instead, Mitchell Lake is a unique and environmentally sensitive natural facility that has become a wildlife refuge and an active destination attraction within San Antonio. The Mitchell Lake surface area covers approximately 600 acres and provides an essential habitat where migrating birds can rest and feed. Discharges from Mitchell Lake only occur after significant rainfall events. The intermittent nature of the discharges after rainfall makes traditional treatment options impractical. Upon receiving the Administrative Order, SAWS began working with consulting experts and conducted preliminary feasibility evaluations of two potential solutions: (a) reconstructing the existing dam and spillway and (b) constructing extensive treatment wetlands below Mitchell Lake. While these preliminary evaluations have provided promising results, pilot studies will be necessary to confirm the effectiveness of these options, selected the location for the pilot treatment wetlands, and on January 9, 2018, SAWS purchased a 283 acre tract of land that is anticipated to be necessary for the implementation of the downstream wetlands. SAWS will also continue to explore other treatment and operational

alternatives and work with the EPA and TCEQ to develop an appropriate plan that ensures compliance with the Permit. At this time, SAWS does not know what actions may ultimately be required or the costs associated with those actions.

#### RECENT WEATHER EXTREMES AND MANAGEMENT EFFORTS

The San Antonio region experienced five years of significant drought that began in late 2010 and which was declared over in late 2015. As a result of this extended drought, the region was in various stages of EAA Critical Periods and drought restrictions of the City's Aquifer Management Plan. As described under "THE SAN ANTONIO WATER SYSTEM – Edwards Aquifer Management; City's Edwards Aquifer Management Plan", and for the duration of these stages of drought management, the SAWS Edwards Aquifer pumping allocation is reduced by specified percentages and SAWS customers are limited to one-day-per week landscape watering with an irrigation system or sprinkler. As a result of these drought conditions, SAWS had its permitted allotments of Edwards Aquifer rights cut back by 22.41%, 28.92%, and 34.90% for the three years ended December 31, 2012, 2013, and 2014, respectively. In response to the then-ongoing drought, during early 2013, the System formulated a Drought Management Team which consisted of members from multiple disciplines within SAWS whose purpose was to formulate strategies for dealing with the ongoing operational and financial impacts of the drought.

As previously mentioned, during 2015, San Antonio received more than 44 inches of rainfall which is well in excess of the annual average of approximately 32 inches. The significant rainfall totals allowed for replenishment of area lakes and aquifers which resulted in the EAA lifting its pumping restrictions effective November 9, 2015. While the significantly above average precipitation amounts did result in 2015 operating revenues coming in approximately \$32 million less than budget, cost savings achieved throughout 2015 offset the impact of this revenue shortfall almost entirely.

San Antonio received another 44 inches of rainfall in 2016. Total rainfall in 2017 was slightly over 27 inches, 15% below normal rainfall and nearly 40% less than rainfall received in 2015 and 2016. Revenues in 2017 were favorable to budget due to a rate increase implemented in 2017, customer growth and increased water usage.

#### HURRICANE HARVEY

On August 26, 2017, Hurricane Harvey, characterized as a Category 4 hurricane at its peak, made landfall on the Texas coast and continued a slow path toward the greater Houston, Texas area. Over the course of the next several days, the storm's high winds and rainfall produced massive flooding, extensive property damage, and claimed the lives of individuals in and around Houston.

As the storm approached the Texas coast, some meteorological models indicated that the path of Hurricane Harvey would result in its moving through the San Antonio area. As a result of the ultimate track of Hurricane Harvey, however, the City and the System experienced minimal operational impacts from the storm. Total rainfall from Hurricane Harvey measured at the City's official monitoring station was approximately two inches; although certain of the System's service areas likely experienced more than two inches of rainfall. Significant precautionary measures were taken in advance of and during the initial stages of Hurricane Harvey, however, due to the relatively low level of precipitation and wind, no significant operational issues were experienced.

#### **DEBT AND OTHER FINANCIAL INFORMATION**

#### COMBINED SYSTEM REVENUE DEBT SERVICE REQUIREMENTS

<u>FYE</u> (December 31)	SAWS Curren	nt Debt Service <sup>(1)</sup>	<u>T</u>	he Bonds		or and Junior Lien Debt
,	Senior Lien Obligations <sup>(2)</sup>	Junior Lien Obligations <sup>(3)</sup>	Principal	Interest <sup>(4)</sup>	Senior Lien Obligations <sup>(2)</sup>	Junior Lien Obligations <sup>(3)(4)</sup>
2018	\$56,742,665	\$126,959,907	\$ -	\$4,956,252	\$56,742,665	\$131,916,158
2019	51,587,111	128,258,568	2,220,000	10,318,050	51,587,111	140,796,618
2020	61,176,729	119,403,147	2,330,000	10,204,300	61,176,729	131,937,447
2021	62,053,088	119,441,858	2,450,000	10,084,800	62,053,088	131,976,658
2022	63,715,521	117,593,901	2,575,000	9,959,175	63,715,521	130,128,076
2023	64,505,819	111,464,702	2,710,000	9,827,050	64,505,819	124,001,752
2024	64,707,035	112,624,825	2,845,000	9,688,175	64,707,035	125,158,000
2025	64,703,123	110,681,774	2,990,000	9,542,300	64,703,123	123,214,074
2026	65,877,490	108,624,617	3,145,000	9,388,925	65,877,490	121,158,542
2027	81,037,705	95,705,770	3,310,000	9,227,550	81,037,705	108,243,320
2028	81,440,435	93,480,631	3,475,000	9,057,925	81,440,435	106,013,556
2029	34,094,834	107,952,291	6,475,000	8,809,175	34,094,834	123,236,466
2030	34,084,960	103,820,470	6,770,000	8,511,900	34,084,960	119,102,370
2031	34,080,164	103,783,471	7,085,000	8,199,375	34,080,164	119,067,846
2032	34,062,003	102,443,002	7,455,000	7,835,875	34,062,003	117,733,877
2033	25,753,378	110,489,838	7,830,000	7,453,750	25,753,378	125,773,588
2034	55,555,812	113,545,868	8,230,000	7,052,250	55,555,812	128,828,118
2035	25,690,328	110,858,413	8,655,000	6,630,125	25,690,328	126,143,538
2036	25,674,086	107,382,974	9,105,000	6,186,125	25,674,086	122,674,099
2037	25,662,255	107,458,413	9,575,000	5,719,125	25,662,255	122,752,538
2038	25,647,879	96,954,378	9,940,000	5,231,250	25,647,879	112,125,628
2039	25,633,944	97,029,040	7,875,000	4,785,875	25,633,944	109,689,915
2040	19,422,460	81,889,378	8,280,000	4,382,000	19,422,460	94,551,378
2041	13,872,113	41,009,074	8,705,000	3,957,375	13,872,113	53,671,449
2042	10,098,688	40,144,444	9,150,000	3,511,000	10,098,688	52,805,444
2043	-	39,409,520	9,620,000	3,041,750	-	52,071,270
2044	-	27,192,604	10,115,000	2,548,375	-	39,855,979
2045	-	17,699,964	10,630,000	2,029,750	-	30,359,714
2046	-	10,180,070	11,175,000	1,484,625	-	22,839,695
2047	-	-	11,750,000	911,500	-	12,661,500
2048	-	-	12,355,000	308,875	-	12,663,875
	\$1,106,879,626	\$2,663,482,910	\$208,825,000	\$200,844,577	\$1,106,879,626	\$3,073,152,486

<sup>(1)</sup> Excludes tax-exempt commercial paper of the System. Also excludes those Refunded Obligations that were originally issued as Junior Lien Obligations.

Takes into account refundable tax credit anticipated to be received from the United States Department of the Treasury (the "Subsidy Payment") as a result of certain Senior Lien Obligations. Subsidy Payment so and service payments on subject outstanding Senior Lien Obligations. Though used for such purpose, such amounts are not pledged to the payment of any Senior Lien Obligations. Subsidy Payment service payments on subject outstanding Senior Lien Obligations. Though used for such purpose, such amounts are not pledged to the payment of any Senior Lien Obligations. Subsidy Payment service payments on a service payment of any Senior Lien Obligations in Carlot of the England Carlot of the Senior Lien Obligations on the Budget and carlot of 2011 (commonly referred to as "Sequestration"), and extensions thereof pursuant to the Bipartisan Budget Act of 2013 signed into law by the President on December 26, 2013, will not have a material impact on the financial condition of the System or its ability to pay regularly scheduled debt service on its outstanding obligations when and in the amounts due and owing. See "SECURITY FOR THE BONDS – Refundable Tax Credit Bonds" herein. Subsidy payments reduced by 6.6% per annum through final maturity of the related Senior Lien Obligations to account for Feducestration.

For purposes of illustration, interest on the San Antonio Water System Variable Rate Junior Lien Revenue and Refunding Bonds, Series 2013F (No Reserve Fund) is calculated at the actual rate of 2.00% through October 31, 2021 and an assumed rate of 2.25% thereafter and San Antonio Water System Variable Rate Junior Lien Revenue and Refunding Bonds, Series 2014B is calculated at the actual rate of 2.00% through October 31, 2021 and an assumed rate of 2.25% thereafter and San Antonio Water System Variable Rate Junior Lien Revenue and Refunding Bonds, Series 2014B is calculated at the actual rate of 2.00% through October 31, 2021 and an assumed rate of 2.25% thereafter and San Antonio Water System Variable Rate Junior Lien Revenue and Refunding Bonds, Series 2014B is calculated at the actual rate of 2.00% through October 31, 2021 and an assumed rate of 2.25% thereafter and San Antonio Water System Variable Rate Junior Lien Revenue and Refunding Bonds, Series 2014B is calculated at the actual rate of 2.00% through October 31, 2021 and an assumed rate of 2.25% thereafter and San Antonio Water System Variable Rate Junior Lien Revenue and Refunding Bonds, Series 2014B is calculated at the actual rate of 2.00% through October 31, 2021 and an assumed rate of 2.25% thereafter and San Antonio Water System Variable Rate Junior Lien Revenue and Refunding Bonds, Series 2014B is calculated at the actual rate of 2.00% through October 31, 2021 and an assumed rate of 2.25% thereafter and San Antonio Water System Variable Rate Junior Lien Revenue and Refunding Bonds, Series 2014B is calculated at the actual rate of 2.00% through October 31, 2021 and an assumed rate of 2.25% thereafter and San Antonio Water System Variable Rate Junior Lien Revenue and Refunding Bonds, Series 2014B is calculated at the actual rate of 2.00% through October 31, 2021 and an assumed rate of 2.25% thereafter and San Antonio Water System Variable Rate Junior Lien Revenue and Refunding Bonds, Series 2014B is calculated at the actual rate of 2.25% thereafter

<sup>(4)</sup> Interest on the Bonds based on actual rates.

#### INTEREST RATE HEDGE TRANSACTION

To hedge against changes in interest expense associated with the Subordinate Lien Obligations designated as the "City of San Antonio, Texas Water System Subordinate Lien Revenue and Refunding Bonds, Series 2003-A and 2003-B" (the "2003 Subordinate Lien Obligations"), which were issued in a weekly interest reset mode, the City has entered into an agreement with JPMorgan Chase Bank, N.A., as the successor in interest to Bear Stearns Financial Products Inc. Under the agreement, the City must pay any excess monthly (and the counterparty must pay any deficit monthly) of 4.18% per annum over the Municipal Swap Index published by The Securities Industry and Financial Markets Association applied to a specified notional amount that reduces annually through the date of stated termination. The City's obligations under the agreement, both scheduled payments and termination payments (subject to the policy's terms and condition, including policy limits upon termination), are insured by MBIA Insurance Corporation ("MBIA"); the counterparty's obligations are not insured or guaranteed. In February 2009, MBIA ceded its U.S. public finance book of business (which includes the aforementioned hedge insurance policy) to subsidiary MBIA Insurance Corp. of Illinois, which has been renamed National Public Finance Guarantee Corp. The City and the counterparty may each terminate the agreement if the other party (or in some cases, its insurer) commits an event of default (including under other specified transactions and indebtedness) or certain acts of insolvency, or may not legally perform its obligations under the agreement, or merges or otherwise combines with or transfers substantially all of its assets to a materially less creditworthy entity. In that case, neither party may terminate the agreement without the consent of MBIA. The counterparty may also terminate the agreement if (i) MBIA defaults on the hedge insurance policy, (ii) MBIA fails to maintain an "A3" rating from Moody's Investors Service, Inc. ("Moody's") and an "A-" rating from S&P Global Ratings ("S&P") (the counterparty's ability to exercise the right to terminate upon the occurrence of either of (i) or (ii) requires also that an event of default occurs and is continuing with respect to the City or a termination event occurs and is continuing with respect to the City), or (iii) the ratings assigned to the Senior Lien Obligations are reduced below "A1" by Moody's or "A+" by S&P and the claims paying ability of MBIA are reduced below "A2" by Moody's or below "A" by S&P. Under certain circumstances, MBIA may exercise the parties' termination rights. If either party terminates the agreement, the City must pay to the counterparty (or the counterparty must pay to the City) the mean or median average of amounts quoted by leading dealers to be paid to or by the counterparty to enter into an economically equivalent agreement with the counterparty, regardless of whether the City or the counterparty was the defaulting party.

The City's obligations under the agreement are secured by a lien on the Net Revenues of the System on a parity with the lien securing the 2003 Subordinate Lien Obligations, except that the lien securing any uninsured portion of the City's termination obligations is subordinate to that lien. Any amounts received by the City under the agreement will be revenues of the System. They will not be available to pay the 2003 Subordinate Lien Obligations unless Net Revenues remain after paying debt service due on the Senior Lien Obligations and the Junior Lien Obligations. The counterparty's indexed obligations under the agreement are expected to correlate closely to the City's interest obligations on the 2003 Subordinate Lien Obligations and Commercial Paper Notes so long as the credit of the credit enhancer and liquidity bank and the tax-exempt status on the 2003 Subordinate Lien Obligations and Commercial Paper Notes are maintained. If the counterparty's obligations do not correlate closely, or if the counterparty defaults in payment under the agreement, the City would be exposed to possible increases in the rate of interest on the 2003 Subordinate Lien Obligations and Commercial Paper Notes.

The System still considers the swap agreement to be a valuable variable rate management tool within its debt portfolio. Accordingly, the System negotiated amendments to the swap agreement, effective June 16, 2009, with JPMorgan Chase Bank, N.A. and MBIA to amend the swap agreement to allow the remaining 2003 Subordinate Lien Obligations outstanding to be redeemed with Commercial Paper Notes (Series B Notes), while maintaining the swap agreement as an existing obligation to all parties. These amendments provide for the conditional release of MBIA's swap insurance policy upon the occurrence of certain future events. The System redeemed the remaining 2003 Subordinate Lien Obligations on June 24, 2009 with Commercial Paper Notes. See "COMMERCIAL PAPER NOTE PROGRAM" herein. No such 2003 Subordinate Lien Obligations are currently outstanding; \$80,995,000 in Commercial Paper Notes (Series B Notes) used to redeem 2003 Subordinate Lien Obligations are currently outstanding.

If the swap agreement is terminated, the City could be obligated to make a substantial payment to the counterparty, depending on market conditions. As of April 30, 2018, the termination payment that the City would be liable for if the swap agreement were terminated on such date would be \$11.9 million (unaudited and unverified). Prospective investors should be aware that the value of the termination payments varies day to day and that such valuation herein provided represents an unaudited and unverified estimate provided to SAWS by JPMorgan Chase Bank, N.A., as the swap counterparty. For more information concerning the swap agreement, see "APPENDIX B – SAN ANTONIO WATER SYSTEM ANNUAL FINANCIAL REPORT", Note G. The City may also enter into other interest rate hedging transactions payable from System revenues in the future, with comparable risks, although no such transactions are currently contemplated.

#### PENSION FUNDS

The System's retirement program includes benefits provided by Texas Municipal Retirement System ("TMRS"), a State-wide multi-employer public retirement plan, and the San Antonio Water System Retirement Plan ("SAWSRP"), which serves as a supplement to TMRS. SAWSRP is a single-employer plan administered by the Principal Financial Group. SAWSRP has a defined benefit component covering employees hired prior to June 1, 2014 and a defined contribution component covering employees hired on or after June 1, 2014. The System makes annual contributions to TMRS and the defined benefit component of the SAWSRP equal to the actuarially determined contribution amounts. The System makes contributions to separate retirement accounts for eligible employees participating in the defined contribution component of the SAWSRP in accordance with the provisions of the plan, which currently require a System contribution equal to four percent of eligible employees' compensation.

The System is also the plan sponsor of the District Special Project Retirement Income Pension Trust Fund ("Retirement Income Plan") which is a single-employer defined benefit pension plan that covers eligible former employees of the former BexarMet. In 2008, the Retirement Income Plan was frozen for both future benefit accruals and new entrants to the plan. Annual contributions to the Retirement Income Plan are based on the actuarially determined contribution amounts.

As discussed in the System's most recent audited financial statements, the cumulative net pension liability for these three plans totaled \$72.1 million as of the valuations dated either December 31, 2016 or January 1, 2017. This represents a funded ratio of 83.0%. These plans' liability amounts are based upon assumed discount rates of 6.50% for the "SAWSRP" and "Retirement Income Plan" and 6.75% for the "TMRS".

For further information with respect to the System's Pension liabilities, please refer to Note J and the Required Supplemental Information of the System's Annual Financial Report for the year ended December 31, 2017. (See "APPENDIX B - SAN ANTONIO WATER SYSTEM ANNUAL FINANCIAL REPORT".)

#### OTHER POSTEMPLOYMENT BENEFITS ("OPEB")

The System provides certain postretirement medical and life insurance benefits to qualified employees, their spouses, and other dependents through a single-employer defined benefit plan administered by the System. The authority to establish and amend the OPEB provisions is vested in the System's Board.

By State law, any employee that retires under either the TMRS or SAWSRP is eligible, at the time of retirement, to obtain health insurance benefits similar to those offered to active SAWS employees. Contributions made by retirees for health insurance benefits vary based on retirement date, years of service and the health care options selected. Retirees may also purchase coverage for their spouse at group rates partially subsidized by SAWS. Beginning January 1, 2015, retirees age 65 or older participate in a fully-insured Medicare Advantage healthcare plan sponsored by the System.

Based on the latest actuarial valuation dated January 1, 2017, the unfunded actuarial accrued liability for this plan was \$10.9 million and the annual required contribution was \$12.4 million. Prior to 2012, the System funded all obligations arising under these plans on a pay-as-you-go basis. In March 2012, SAWS established an OPEB Trust for the exclusive purpose of providing benefits to eligible retirees and their dependents. During 2017, the System made contributions to the OPEB Trust of \$7.5 million in addition to funding the pay-as-you-go costs of \$7.0 million. Going forward, the System expects to make annual contributions to the OPEB Trust in accordance with a plan that results in reducing the unfunded actuarial accrued liability over a period of time.

In June 2015, the GASB issued Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions (OPEB), which replaced GASB Statements No. 45 and 57. Some of the key provisions of GASB Statement No. 75 include:

- The difference between the actuarial present value of projected benefit payments to be provided to current active and inactive employees that is attributed to those employees' past periods of service (total OPEB liability) less the OPEB plan's net position at the measurement date is to be reported on the employer's statement of net position as either a net OPEB asset or liability.
- To the extent that the OPEB plan's investments are projected to be sufficient to make projected benefit payments, the expected long-term rate of return on OPEB plan investments is to be used as the discount rate applied to projected benefit payments. If the OPEB plan's investments are projected to be insufficient to fund all future benefit payments, the discount rate applied to the unfunded portion is based on the index rate for 20-year, tax-exempt general obligation bonds with an average rating of AA/Aa2 or higher.
- The majority of the changes in the net OPEB asset or liability are to be recognized immediately as OPEB expense. Some changes are to
  be reported as deferred inflows and/or deferred outflows of resources and amortized to OPEB expense over prescribed periods of time,
  based on the nature of the deferred item.

GASB Statement No. 75 is effective for fiscal years beginning after June 15, 2017 and was adopted by the System for the calendar year ending December 31, 2018. The System's recorded Net OPEB Obligation at December 31, 2017 is \$68.9 million. A preliminary estimate of the Net OPEB Liability at December 31, 2017, as calculated in accordance with GASB Statement No. 75, is \$90.8 million. Once the final Net OPEB Liability at December 31, 2017 is determined, a prior period adjustment will be required to restate the System's recorded liability at December 31, 2017 along with a charge to Unrestricted Net Position in the Statement of Position.

For further information with respect to the System's OPEB liabilities, please refer to Note K and the Required Supplemental Information of the System's Annual Financial Report for the year ended December 31, 2017. (See "APPENDIX B - SAN ANTONIO WATER SYSTEM ANNUAL FINANCIAL REPORT".)

#### CAPITAL IMPROVEMENT PROGRAM

The following is a proposed five-year CIP for the System. It is the intention of the System to fund the program with long-term bonds, tax-exempt commercial paper, impact fees, and excess System revenues. The System contemplates the following summary of capital improvement projects during calendar year 2018:

- \$11.0 million is budgeted for the wastewater treatment program to repair/replace/upgrade treatment facilities and provide capacity for future growth;
- \$5.4 million is budgeted for the wastewater collection program to fix deteriorated components of the collection system, and provide capacity for future growth;
- \$180.0 million is budgeted to replace sewer and water mains;
- \$46.1 million is budgeted for the governmental replacement and relocation programs;
- \$84.1 million is budgeted to construct new or fix deteriorated components of the production facilities; and
- \$37.1 million is budgeted for water transmission projects for new sources of water.

The capital improvement projections in the following table were prepared by the System staff.

## Capital Improvement Projections\* Fiscal Year Ended December 31.

			riscai i cai Eliu	eu December 51,		
	2018	2019	2020	2021	2022	Total
Water Supply	\$ 44,590,528	\$ 63,919,240	\$ 31,048,923	\$ 11,526,414	\$ 10,207,472	\$ 161,292,577
Water Delivery	159,169,901	141,671,613	130,912,433	134,459,025	153,456,288	719,669,260
Wastewater	187,634,904	211,875,397	217,564,079	301,950,457	209,873,633	1,128,898,470
Chilled Water				<u> </u>	<u> </u>	
Total Annual						
Requirements	\$ 391,395,333	\$ 417,466,250	\$ 379,525,435	\$ 447,935,896	\$ 373,537,393	\$2,009,860,307

<sup>\*</sup> Preliminary, subject to change.

#### PROJECT FUNDING APPROACH

The following table was prepared by the System staff based upon information and assumptions it deems reasonable, and shows the projected financing sources to meet the projected capital needs.

## **Projected Funding Sources\***

			Fiscal Year End	ed December 31,		
	2018	2019	2020	2021	2022	Total
Revenues	\$ 87,685,143	\$ 121,740,333	\$ 146,853,155	\$ 149,325,763	\$ 127,672,342	\$ 633,276,736
Impact Fees	35,000,000	53,060,000	75,000,000	25,000,000	30,000,000	218,060,000
Debt Proceeds	268,710,190	242,665,917	157,672,280	273,610,133	215,865,051	1,158,523,572
Total	\$ 391,395,333	\$ 417,466,250	\$ 379,525,435	\$ 447,935,896	\$ 373,537,393	\$2,009,860,308

<sup>\*</sup> Preliminary, subject to change.

#### FINANCIAL POLICIES

Basis of Accounting. The financial statements are prepared using the accrual basis of accounting. Under this method, revenues are recorded when earned and expenses are recorded at the time liabilities are incurred.

**Debt Service Fund Balance.** The System maintains the parity lien Debt Service Fund and the Reserve Fund, as applicable, in accordance with the ordinances authorizing the currently outstanding Senior Lien Obligations and Junior Lien Obligations, respectively.

**Budgetary Procedures.** The System prepares and presents, 60 days prior to the beginning of each fiscal year, an annual budget prepared on an accrual basis to serve as a tool in controlling and administering the management and operation of the System. The annual budget reflects an estimate of Gross Revenues and an estimate of the disposition of these revenues in accordance with the flow of funds required by Ordinance No. 75686. The annual budget is submitted to City Council for review and consultation. Encumbrances are not formally recorded in the accounting system but are monitored and disclosed if significant amounts are outstanding at year end. Outstanding encumbrances lapse at year end and must be reappropriated in the following year.

#### INVESTMENT INFORMATION

Available investable funds of the System, acting on behalf of the City, are invested as authorized and required by the Texas Public Funds Investment Act, Chapter 2256, Texas Government Code, as amended (the "Investment Act") and in accordance with an Investment Policy approved by the Board of the System. The Investment Act requires that the System establish an investment policy to ensure that City funds are invested only in accordance with State law. The most recent update to the investment policy was adopted on December 5, 2017. The System's investments are managed by its Senior Vice President/Chief Financial Officer, Treasurer, and the Manager-Treasury, who, in accordance with the Investment Policy, reports investment activity to the Board.

Legal Investments. Under Texas law, the City is authorized to invest in (1) obligations, including letters of credit, of the United States or its agencies and instrumentalities, (2) direct obligations of the State of Texas or its agencies and instrumentalities, (3) collateralized mortgage obligations directly issued by a federal agency or instrumentality of the United States, the underlying security for which is guaranteed by an agency or instrumentality of the United States, (4) other obligations, the principal and interest of which are unconditionally guaranteed or insured by, or backed by the full faith and credit of the State of Texas or the United States or their respective agencies and instrumentalities, including obligations that are fully guaranteed or insured by the Federal Deposit Insurance Corporation or by the explicit full faith and credit of the United States, (5) obligations of states, agencies, counties, cities, and other political subdivisions of any state rated as to investment quality by a nationally recognized investment rating firm not less than "A" or its equivalent, (6) (a) certificates of deposit and share certificates issued by a depository institution that has its main office or branch office in the State of Texas, that are guaranteed or insured by the Federal Deposit Insurance Corporation or the National Credit Union Share Insurance Fund or their respective successors, or are secured as to principal by obligations described in clauses (1) through (5) and clause (13) or in any other manner and amount provided by law for System deposits, and in addition (b) the System is authorized, subject to certain conditions, to invest in certificates of deposit with a depository institution that has its main office or branch office in the State of Texas and

that participates in the Certificate of Deposit Account Registry Service® network ("CDARS®") and as further provided by Texas law, (7) fully collateralized repurchase agreements that have a defined termination date, are fully secured by a combination of cash and obligations described in clause (1) and require the security being purchased by the City or cash held by the City to be pledged to the City, held in the City's name and deposited at the time the investment is made with the City or with a third party selected and approved by the City, and are placed through a primary government securities dealer or a financial institution doing business in the State of Texas, (8) bankers' acceptances with the remaining term of 270 days or less from the date of issuance, if the short-term obligations of the accepting bank or its parent are rated at least "A-1" or "P-1" or the equivalent by at least one nationally recognized credit rating agency, (9) commercial paper with the remaining term of 270 days or less from the date of issuance that is rated at least "A-1" or "P-1" or the equivalent by at least (a) two nationally recognized credit rating agencies or (b) one nationally recognized credit rating agency if the paper is fully secured by an irrevocable letter of credit issued by a U.S. or state bank, (10) no-load money market mutual funds registered with and regulated by the United States Securities and Exchange Commission (the "SEC") that comply with federal SEC Rule 2a-7, (11) no-load mutual fund registered with the SEC that: have an average weighted maturity of less than two years and have a duration of one year or more and are invested exclusively in obligations described in this paragraph or have a duration of less than one year and the investment portfolio is limited to investment grade securities, excluding asset-backed securities, (12) public funds investment pools that have an advisory board which includes participants in the pool and are continuously rated as to investment quality by at least one nationally recognized investment rating firm of not less than "AAA" or "AAA-m" or its equivalent, (13) interest-bearing banking deposits that are guaranteed or insured by the Federal Deposit Insurance Corporation or its successor or the National Credit Union Share Insurance Fund or its successor, and (14) bonds issued, assumed or guaranteed by the State of Israel. Texas law also permits the City to invest bond proceeds in a guaranteed investment contract subject to the limitations set forth in the Investment Act.

Entities such as the City may enter into securities lending programs if (i) the securities loaned under the program are 100% collateralized including accrued income, a loan made under the program allows for termination at any time and a loan made under the program is either secured by (a) obligations that are described in clauses (1) through (5) and clause (14) above, (b) pledged irrevocable letters of credit issued by a state or national bank that is continuously rated by a nationally recognized investment rating firm at not less than "A" or its equivalent or (c) cash invested in obligations described in clauses (1) through (5) and clause (14) above, clause (9) above and clauses (10) and (11) above, or an authorized investment pool; (ii) securities held as collateral under a loan are pledged to such investing entity or a third party designated by such investing entity; (iii) a loan made under the program is placed through either a primary government securities dealer or a financial institution doing business in the State of Texas; and (iv) the agreement to lend securities has a term of one year or less.

The System may invest in such obligations directly or through government investment pools that invest solely in such obligations provided that the pool are rated no lower than "AAA" or "AAA-m" or an equivalent by at least one nationally recognized rating service. The System is specifically prohibited from investing in (1) obligations whose payment represents the coupon payments on the outstanding principal balance of the underlying mortgage-backed security collateral and pays no principal; (2) obligations whose payment represents the principal stream of cash flow from the underlying mortgage-backed security and bears no interest; (3) collateralized mortgage obligations that have a stated final maturity of greater than 10 years; and (4) collateralized mortgage obligations the interest rate of which is determined by an index that adjusts opposite to the changes in a market index.

Investment Policies. Under Texas law, the System is required to invest its funds in accordance with written investment policies that primarily emphasize safety of principal and liquidity; that address investment diversification, yield, maturity, and the quality and capability of investment management; that includes a list of authorized investments for System funds, maximum allowable stated maturity of any individual investment, the maximum average dollar-weighted maturity allowed for pool fund groups, and the methods to monitor the market price of investments acquired with public funds and the requirement for settlement of all transactions, except investment pool funds and mutual funds, on a delivery versus payment basis and procedures to monitor rating changes in investments acquired with public funds and the liquidation of such investments. All System funds must be invested consistent with a formally adopted "Investment Strategy Statement" that specifically addresses each fund's investment. Each Investment Strategy Statement will describe its objectives concerning: (1) suitability of investment type; (2) preservation and safety of principal; (3) liquidity; (4) marketability of each investment; (5) diversification of the portfolio; and (6) yield.

Under Texas law, System investments must be made "with judgment and care, under prevailing circumstances, that a person of prudence, discretion, and intelligence would exercise in the management of the person's own affairs, not for speculation, but for investment, considering the probable safety of capital and the probable income to be derived". At least quarterly the investment officers of the System must submit to the Board an investment report detailing (1) the investment position of the System; (2) that all investment officers jointly prepared and signed the report; (3) the beginning market value, the fully accrued interest, and the ending value of each pooled fund group; (4) the book value and market value of each separately listed asset at the end of the reporting period; (5) the maturity date of each separately invested asset; (6) the account or fund or pooled fund group for which each individual investment was acquired; and (7) the compliance of the investment portfolio as it relates to (a) adopted investment strategy statements and (b) State law. No person may invest System funds without express written authority from the Board.

Additional Provisions. Under Texas law, the System is additionally required to (1) annually review its adopted policies and strategies; (2) adopt an order or resolution stating that it has reviewed its investment policy and investment strategies and records any changes made to either its investment policy or investment strategy in the said order or resolution; (3) require any investment officers with personal business relationships or relative with firms seeking to sell securities to the entity to disclose the relationship and file a statement with the Texas Ethics Commission and the Board; (4) require the registered principal of firms seeking to sell securities to the System to (a) receive and review the System's investment policy; (b) acknowledge that reasonable controls and procedures have been implemented to preclude imprudent investment activities; and (c) deliver a written statement attesting to these requirements; (5) perform an annual audit of the management controls on investments and adherence to the System's investment policy; (6) provide specific investment training for the Chief Financial Officer and investment officers; (7) restrict reverse repurchase agreements to not more than 90 days and restrict the investments of reverse repurchase agreement funds to no greater than the term of the reverse repurchase agreement; (8) restrict the investment in mutual funds in the aggregate to no more than 15% of the System's monthly average fund balance, excluding bond proceeds and reserves and other funds held for debt service and to no more than 15% of the entity's monthly average fund balance, excluding bond proceeds and reserves and other funds held for debt service; and (9) require local government investment inves

pools to conform to the new disclosure, rating, net asset value, yield calculation, and advisory board requirements; and (10) at least annually review, revise, and adopt a list of qualified brokers that are authorized to engage in the investment transactions with the System.

*Current Investments*. At February 28, 2018, investable System funds were 86.29% invested in obligations of the United States, or its agencies and instrumentalities, 5.79% invested in money market funds and 6.79% invested in investment pools, with the balance in demand/savings accounts and cash on hand. The investments and maturity terms are consistent with State law, and SAWS' investment policy, which objectives are to preserve principal, limit risk, maintain diversification and liquidity, and to maximize interest earnings.

The market value of such investments (as determined by SAWS by reference to published quotations, dealer bids, and comparable information) was approximately 99.64% of their book value, with 75.48% of the System's investments maturing in less than one year. No funds of SAWS are invested in derivative securities; i.e., securities whose rate of return is determined by reference to some other instrument, index, or commodity.

As of February 28, 2018, the System funds were invested in the following categories (data presented is unaudited):

		Carrying	
	Percentages	Amount <sup>(1)</sup>	Market Value
Money Market Deposits	5.79%	\$ 54,986,702	\$ 54,986,702
U.S. Treasury Notes	19.18%	182,070,483	181,329,660
U.S. Agency Notes	67.11%	637,106,793	634,423,054
Investment Pools	6.79%	64,486,686	64,486,686
Demand and Savings	1.12%	10,661,961	10,661,961
Cash on Hand	0.00%	35,870	35,870
Total	100.00%	\$ 949,348,495	\$ 945,923,933

<sup>(1)</sup> At amortized cost.

#### SAWS STATISTICAL SECTION AND MANAGEMENT DISCUSSION

The following Statistical Section (including certain historical financial information presented in this Official Statement in table format was derived from SAWS' internal financial records and the presentation format itself was not audited) is included in SAWS' Annual Financial Report for the year ended December 31, 2017, which is available in its entirety at www.saws.org/who\_we\_are/Financial\_Reports/CAFR. SAWS follows GASB Statement No. 34, which requires the preparation of a Management's Discussion and Analysis ("MD&A") in connection with the annual financial report of SAWS. Reference is hereby made to APPENDIX B for the MD&A pertaining to the SAWS fiscal year ended December 31, 2017. Certain interim financial reports are made available periodically by SAWS to the general public and are accessible at http://www.saws.org.

The operating results of the System reflect the results of past operations and are not necessarily indicative of results of operations for any future period. Future operations will be affected by factors relating to changes in rates, operating costs, water, wastewater, and other industry regulation, environmental regulation, economic growth of the community, population, weather, and other matters the nature and effect of which cannot at present be determined. See "FORWARD-LOOKING STATEMENTS" herein.

San Antonio Water System Schedule 1 - Net Position (accrual basis of accounting) (amounts in thousands)

	2017	2016	2015 <sup>(a)</sup>	2014	2013	2012	2011	2010	2009	2008
Net Position: Net investment in										
capital assets Restricted for	\$2,217,283	\$2,106,957	\$1,939,292	\$1,730,265	\$1,661,644	\$1,602,507	\$1,496,132	\$1,451,222	\$1,431,578	\$1,381,460
operating reserve Restricted for debt	54,143	52,279	45,801	43,385	40,656	38,389	35,227	33,955	34,649	32,257
service Restricted for debt	59,719	60,396	56,775	47,123	39,710	34,254	34,862	31,222	27,511	25,790
service reserve Restricted for	56,364	56,016	62,716	66,665	62,560	58,681	54,696	50,688	41,479	11,222
construction	188,227	150,198	168,968	140,937	101,212	83,968	98,455	98,555	89,888	85,191
Unrestricted	278,542	187,503	126,352	137,207	118,285	116,179	120,363	113,419	153,503	189,929
Total Net Position	\$2,854,278	\$2,613,349	\$2,399,904	\$2,165,582	\$ 2,024,067	\$ 1,933,978	\$ 1,839,735	\$ 1,779,061	\$ 1,778,608	\$ 1,725,849

<sup>(</sup>a) Increase in amounts from 2014 to 2015 is partially due to the merger of SAWS and SAWS District Special Project effective January 1, 2015.

San Antonio Water System Schedule 2 - Change in Net Position (accrual basis of accounting) (amounts in thousands)

	2017	2016	2015 <sup>(a)</sup>	2014	2013	2012	2011	2010	2009	2008
Operating Revenues										
Water delivery	\$202,264	\$ 190,913	\$ 168,338	\$ 127,708	\$ 119,767	\$ 121,078	\$ 125,188	\$ 106,864	\$ 105,204	\$ 111,379
Water Supply	202,143	185,037	163,759	150,079	134,367	136,704	130,755	117,402	113,783	123,167
Wastewater	250,977	234,966	213,833	210,704	195,584	168,368	150,520	132,408	133,641	127,400
Chilled water & steam	11,368	11,541	11,102	11,152	12,621	12,378	11,631	12,223	12,714	12,675
	666,752	622,457	557,032	499,643	462,339	438,528	418,094	368,897	365,342	374,621
Operating expenses before		,	,	,				,		*
depreciation:										
Salaries and fringe benefits	148,058	142,315	133,681	115,049	125,210	125,295	127,816	121,523	115,177	103,556
Contractual services	168,350	170,845	163,768	127,685	107,194	100,165	66,900	82,708	89,112	89,894
Materials and supplies	23,159	21,959	23,490	20,930	23,355	23,966	24,868	20,320	22,768	22,438
Other charges	11,150	12,702	8,129	12,355	20,423	21,790	21,756	36,883	24,398	20,735
Less: Costs capitalized to	11,150	12,702	0,12)	12,333	20,423	21,770	21,730	30,003	24,370	20,733
Construction in Progress	(32,275)	(32,426)	(37,822)	(30,964)	(31,834)	(33,640)	(32,282)	(34,945)	(35,643)	(31,137)
Internal Service Fund – net	(32,273)	(32,420)	(37,022)	(30,704)	(31,034)	(33,040)	(32,282)	(34,743)	(33,043)	(31,137)
(gain)/loss										
Operating expense before	-	-	-	-	-	-	-	-	-	-
depreciation	318,442	315,395	291,246	245,055	244,348	237,576	209,058	226,489	215,812	205,486
Depreciation	152,072	142,856	141,259	123,111	111,375	103,034	98,374	107,761	86,535	83,494
*										
Total operating expenses	470,514	458,251	432,505	368,166	355,723	340,610	307,432	334,250	302,347	288,980
Operating Income	196,238	164,206	124,527	131,477	106,616	97,918	110,662	34,647	62,995	85,641
Non-operating revenues:										
Interest and miscellaneous	10,407	8,146	6,079	5,792	5,410	6,149	5,955	3,625	4,511	14,382
Non-operating expenses:										
Interest Expense	86,615	86,566	89,971	78,049	75,606	73,987	77,022	76,805	67,686	63,556
Amortization of debt insurance										
costs	1,385	4,716	3,831	2,914	4,112	3,835	2,346	2,081	1,465	1,521
Other finance charges (Gain)/Loss on sale of capital	2,697	2,121	2,041	2,726	2,361	2,934	2,881	2,936	2,508	1,418
assets	(951)	(3,087)	(4,674)	(23)	(1,075)	(430)	(773)	(392)	104	(4,014)
Payments to City of San										
Antonio	17,276	14,228	12,683	13,089	11,528	11,161	10,926	9,565	9,740	10,448
Payments to other entities	108	109	106	114	130	122	124	124	119	119
Total non-operating expense	107,130	104,653	103,958	96,869	92,662	91,609	92,526	91,119	81,622	73,048
Special Items										
Increases (decreases) in net										
position, before capital										
contributions	99,515	67,699	26,648	40,400	19,364	12,458	24,091	(52,847)	(14,116)	26,975
Capital contributions										
Plant Contributions	60,643	73,889	71,967	49,081	32,891	44,787	23,263	27,162	42,190	91,827
Capital Recovery Fees	72,846	67,991	64,056	51,973	37,289	36,761	35,872	25,038	23,636	36,842
Grant Revenue	7,925	3,866	-	61	545	237	345	1,100	1,049	276
Total contributions	141,414	145,746	136,023	101,115	70,725	81,785	59,480	53,300	66,875	128,945
Change in net position	\$240,929	\$213,445	\$162,671	\$141,515	\$ 90,089	\$ 94,243	\$ 83,571	\$ 453	\$ 52,759	\$ 155,920

<sup>(</sup>a) Increase in amounts from 2014 to 2015 is partially due to the merger of SAWS and SAWS District Special Project effective January 1, 2015.

San Antonio Water System Schedule 3 – Net Position in System (accrual basis of accounting) (amounts in thousands)

	2017	2016	2015 <sup>(a)</sup>	2014	2013	2012	2011	2010	2009	2008
Assets:										
Capital Assets, net of accumulated										
depreciation	\$5,051,777	\$4,886,091	\$4,647,786	\$4,089,478	\$3,964,000	\$3,771,228	\$3,553,065	\$3,362,867	\$3,174,264	\$2,967,190
Cash and Investments	924,958	928,593	853,417	819,232	689,483	517,876	528,761	575,629	576,652	478,919
Other Assets	87,530	80,976	81,889	79,478	75,998	71,241	63,658	75,578	74,823	71,110
Total Assets	6,064,265	5,895,660	5,583,092	4,988,188	4,729,481	4,360,345	4,145,484	4,014,074	3,825,739	3,517,219
Deferred Outflows of Resources										
Deferred Charge on Bond Refunding	48,055	54,317	30,103	29,086	30,943	30,561	2,494	-	-	-
Deferred outflows-pension	33,428	28,115	16,083	-	-	-	-	-	-	-
Accumulated Decrease in Fair Value of										
Hedging Derivatives	11,857	12,965	16,394	15,520	8,372	19,746	18,380	5,575		
Total Deferred Outflows of Resources	93,340	95,397	62,580	44,606	39,315	50,307	20,874	5,575	-	-
Liabilities:										
Revenue Bonds Payable (net)	2,735,739	2,840,282	2,730,363	2,507,419	2,348,834	2,083,545	1,898,839	1,832,523	1,743,689	1,408,182
Commercial Paper Notes	278,060	241,610	224,005	138,550	186,655	170,745	214,930	244,650	173,650	261,115
Other Liabilities	287,200	293,023	284,617	221,243	209,240	222,384	212,854	163,415	129,792	122,073
Total Liabilities	3,300,999	3,374,915	3,238,985	2,867,212	2,744,729	2,476,674	2,326,623	2,240,588	2,047,131	1,791,370
Deferred Inflows of Resources										
Deferred inflows - pension	2,328	2,793	6,783	-	-	-	-	-	-	
Net Position in System	\$2,854,278	\$2,613,349	\$2,399,904	\$2,165,582	\$2,024,067	\$1,933,978	\$1,839,735	\$1,779,061	\$1,778,608	\$1,725,849
Percentage Net Position in System	46.4%	43.6%	42.5%	43.0%	42.4%	43.8%	44.2%	44.3%	46.5%	49.1%

<sup>(</sup>a) Increase in amounts from 2014 to 2015 is partially due to the merger of SAWS and SAWS District Special Project effective January 1, 2015.

#### San Antonio Water System

# Schedule 4 - Water Production, Water Usage, and Wastewater Treated (gallons in millions) Unaudited

Water Sewer Gallons of Gallons of Gallons of Average Gallons of Water Water Water Percent Wastewater Base Usage Base Usage Fiscal Year Production(a) Unbilled Unbilled Treated(b) Rate(c) Rate(d) Rate(e) Rate(f) Usage 2017 78,646 65,641 13,004 16.54% 50,945 \$11.82 \$22.09 \$13.04 \$15.29 63,394 76,857 12,923 16.81% 49,282 10.90 2016 21.18 14.48 12.35 2015<sup>(g)</sup> 76,227 62,896 13,331 17.49% 48,563 7.75 19.73 12.75 14.04 2014 68,265 57,261 11,004 16.12% 50,689 7.49 18.98 11.99 13.20 11,283 2013 66,391 55,108 16.99% 50,076 7.31 17.81 11.54 12.71 2012 66,596 55,320 11.276 16.93% 49,055 7.31 17.95 9.92 10.91 7.10 2011 70,699 59,133 11,566 16.36% 49,918 15.72 8.73 9.60 2010 61,272 52,578 8,694 14.19% 48,151 7.10 16.02 8.73 9.60 7,354 11.74% 2009 55,295 51,987 8.58 62,649 18.73 7.76 6.77 2008 68,250 58,828 9,422 13.81% 50,347 6.56 18.61 7.37 8.15

**Total Direct Rate** 

<sup>(</sup>a) Pumpage is total potable water production less Aquifer Storage and Recovery recharge.

<sup>(</sup>b) Represents amounts billed to customers. Residential Class customers are billed based on water usage during a consecutive three month billing period from November through March. All other customer classes are billed for wastewater treatment based on actual water usage during each monthly billing period.

<sup>(</sup>c) Rate shown is for 5/8" meters. See Schedule 8 through 16 for the rate information.

<sup>(</sup>d) Represents standard (non-seasonal) usage charge for monthly residential water usage of 7,092 gallons per month. Includes water supply and EAA fees.

<sup>(</sup>e) Minimum service availability charge (includes charge for first 1,496 gallons). Includes the State-imposed TCEQ fee.

<sup>(</sup>f) Represents usage charge for a residential customer based on winter average water consumption of 5,668 gallons per month.

<sup>(</sup>g) Increase in water produced and used from 2014 to 2015 is partially due to the merger of SAWS and SAWS District Special Project effective January 1, 2015.

San Antonio Water System **Schedule 5 - Sales by Source** (accrual basis of accounting) (amounts in thousands) Unaudited

	2017	2016	2015(a)	2014	2013	2012	2011	2010	2009	2008
Water Sales:										
Residential Class	\$113,070	\$100,982	\$95,068	\$74,062	\$71,536	\$72,620	\$79,332	\$66,410	\$65,333	\$68,516
General Class	60,977	63,781	56,041	37,878	35,099	35,504	33,571	32,326	32,943	32,330
Wholesale Class	801	767	432	3,233	1,640	1,255	234	136	204	179
Irrigation Class	21,915	20,239	13,113	11,011	10,893	11,164	11,722	12,909	12,176	16,124
Total Water	196,763	185,769	164,654	126,184	119,168	120,543	124,859	111,781	110,656	117,149
Water Supply Fees										
Residential Class	85,809	73,518	60,067	48,270	43,121	44,163	51,696	45,312	45,909	49,042
General Class	47,129	42,748	44,746	39,355	32,393	32,537	31,586	29,764	30,403	30,140
Wholesale Class	874	865	588	7,196	3,227	2,294	202	158	178	160
Irrigation Class	16,571	15,437	14,491	12,551	12,057	12,058	13,029	7,154	6,288	8,016
Total Water Supply Fees	150,383	132,568	119,892	107,372	90,798	91,052	96,513	82,388	82,778	87,358
EAA Pass-through fees(b)										
Residential Class	13,108	14,110	10,915	9,654	9,905	10,841	4,767	5,423	3,605	5,893
General Class	8,865	9,606	7,380	6,874	6,991	7,352	2,930	3,648	2,387	3,622
Wholesale Class	123	157	114	1,271	659	509	18	19	2,367	19
Irrigation Class	1.434	1,639	1,136	1,061	1,134	1,242	540	765	494	963
Total Pass-through fees	23,530	25,512	19,545	18,860	18,689	19,944	8,255	9,855	6,500	10,497
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Conservation Fees:										
Residential Class	2,727	2,189	2,246	1,956	2,454	2,986	3,682	2,814	2,962	3,663
General Class	8,345	8,453	7,004	6,498	6,606	7,040	6,702	4,461	4,008	3,938
Total Conservation	11,072	10,642	9,250	8,454	9,060	10,026	10,384	7,275	6,970	7,601
Wastewater Sales:										
Residential Class	142,530	134,860	124,992	125,051	116,775	98,674	88,702	79,118	81,202	75,752
General Class	88,551	80,696	71,267	68,371	62,300	54,175	48,271	41,768	41,343	40,034
Wholesale Class	9,936	8,729	8,064	7,848	7,599	6,761	6,105	5,044	5,225	5,281
Surcharge	6,056	6,292	5,401	5,450	5,438	5,134	4,815	4,861	4,648	4,614
Total Wastewater	247,073	230,577	209,724	206,720	192,112	164,744	147,893	130,791	132,418	125,681
TCEQ Pass-through fees <sup>(c)</sup>										
Water customers										
Water customers	1,420	1,460	1,412	1,169	1,086	1,064	1,178	964	_	_
Wastewater customers	1,120	1,100	1,112	1,107	1,000	1,001	1,170	701		
	435	448	429	433	347	411	464	280	-	
	1,855	1,908	1,841	1,602	1,433	1,475	1,642	1,244	_	_
Recycled Water Sales	5,651	5,691	5,097	5,086	5,161	5,074	5,068	3,955	4,393	4,287
Stormwater Fees	5,209	4,967	4,797	4,420	5,058	4,558	4,158	3,745	3,358	3,037
Chilled Water & Steam(d)	11,368	11,548	11,184	11,251	12,719	12,485	11,715	12,337	12,714	12,758
Miscellaneous Fees and Charges	17,709	17,634	16,769	13,860	12,787	12,427	10,418	8,989	9,266	9,541
Provision for Uncollectible Accounts	(3,860)	(4,359)	(5,721)	(4,166)	(4,646)	(3,800)	(2,811)	(3,463)	(3,711)	(3,288)
Total Operating Revenue	\$666,752	\$622,457	\$557,032	\$499,643	\$462,339	\$438,528	\$418,094	\$368,897	\$365,342	\$374,621

Increase in water related revenues from 2014 to 2015 is partially due to the merger of SAWS and SAWS District Special Project effective January 1, 2015.

EAA pass-through fees are designed to recoup fees charged by the EAA. The fee is charged based on water usage. Any previous over or under recovery of fees is considered in determining the fees to be charged each year.

TCEQ pass-through fees are designed to recoup fees charged by the TCEQ. Fee is a per customer charge.

Steam service was discontinued in June 2014. (a) (b)

<sup>(</sup>c) (d)

San Antonio Water System Schedule 6 - Sales in Gallons (gallons billed, in millions) Unaudited

	2017	2016	2015 <sup>(a)</sup>	2014	2013	2012	2011	2010	2009	2008
Water Sales:(b)										
Residential Class	36,566	35,360	35,769	29,310	29,206	30,070	34,153	28,932	30,667	33,025
General Class	24,731	24,074	23,212	20,870	20,614	20,393	20,986	19,465	20,309	20,297
Wholesale Class	344	393	354	3,861	1,943	1,412	128	101	119	108
Irrigation Class	4,000	4,107	3,561	3,220	3,345	3,445	3,866	4,080	4,200	5,398
Total Water	65,641	63,934	62,896	57,261	55,108	55,320	59,133	52,578	55,295	58,828
Wastewater Sales:										
Residential Class	26,809	26,462	26,048	27,896	27,617	26,572	27,371	26,746	29,825	28,148
General Class	21,654	20,503	20,281	20,502	20,100	20,066	20,134	20,002	20,338	20,352
Wholesale Class	2,482	2,317	2,234	2,291	2,359	2,417	2,413	1,404	1,824	1,847
Total Wastewater	50,945	49,282	48,563	50,689	50,076	49,055	49,918	48,152	51,987	50,347
Conservation -										
Residential Class <sup>(c)(d)(e)</sup>	9,572	6,611	2,284	2,296	2,520	3,026	4,106	2,935	3,469	3,948
Recycled Water Sales	18,949	18,436	18,421	18,323	18,359	18,129	18,990	14,968	16,321	16,559

<sup>(</sup>a) Increase in water usage from 2014 to 2015 is primarily due to the merger of SAWS and SAWS District Special Project effective January 1, 2015.

San Antonio Water System Schedule 7 - Number of Customer Connections (average number billed) Unaudited

	2017	2016	2015 <sup>(a)</sup>	2014	2013	2012	2011	2010	2009	2008
Water Sales:(b)										
Residential Class	465,241	457,485	450,725	347,789	343,667	339,204	335,280	331,853	327,610	323,754
General Class	28,518	29,155	28,366	23,777	23,713	23,582	23,369	23,225	23,242	23,104
Wholesale Class	9	9	9	7	8	8	7	7	7	7
Total Water	493,768	486,649	479,100	371,573	367,388	362,794	358,656	355,085	350,859	346,865
Irrigation Class <sup>(c)</sup>	10,260	9,291	9,829	8,966	8,821	8,633	8,479	8,350	8,202	7,940
Wastewater Sales:										
Residential Class	416,996	409,988	402,409	395,574	390,256	383,553	378,380	373,755	368,948	361,966
General Class	25,544	25,352	25,175	25,079	25,021	24,824	24,550	24,407	24,285	23,999
Wholesale Class	12	12	12	12	12	12	12	12	12	13
Total Wastewater	442,552	435,352	427,596	420,665	415,289	408,389	402,942	398,174	393,245	385,978
Conservation -										
Residential Class <sup>(d)(e)</sup>	159,994	83,991	18,539	20,716	20,867	23,804	33,708	21,791	26,665	29,973
Recycled Water Sales	112	107	109	102	97	92	80	81	86	76

<sup>(</sup>a) Increase in water usage from 2014 to 2015 is primarily due to the merger of SAWS and SAWS District Special Project effective January 1, 2015.

<sup>(</sup>b) Water Supply and EAA fees are billed based on the gallons billed for water sales.

<sup>(</sup>c) Gallons billed for conservation are included in the gallons billed for water sales.

<sup>(</sup>d) As part of a rate restructuring which took place on January 1, 2016, a portion of all monthly residential water sales in excess of 7,482 gallons is allowed to fund conservation related programs. Prior to 2016, this allocation was limited to monthly sales in excess of 17,205 gallons.

<sup>(</sup>e) Effective January 1, 2017, for District Special Project customers began paying for water service under the SAWS rate structure. As a result, a portion of the revenues from those customers was included in the revenue allocated to conservation. The increase in the gallons subject to the conservation allocation from 2016 to 2017 reflects this change.

<sup>(</sup>b) Water Supply and EAA fees are billed to water customers with water usage.

<sup>(</sup>c) Represents the number of customers included in Residential, General, and Wholesale Classes which also have irrigation meters.

<sup>(</sup>d) As part of a rate restructuring which took place on January 1, 2016, a portion of all monthly residential water sales in excess of 7,482 gallons is allowed to fund conservation related programs. Prior to 2016, this allocation was limited to monthly sales in excess of 17,205 gallons.

<sup>(</sup>e) Effective January 1, 2017, for District Special Project customers began paying for water service under the SAWS rate structure. As a result, a portion of the revenues from those customers was included in the revenue allocated to conservation. The increase in the gallons subject to the conservation allocation from 2016 to 2017 reflects this change.

San Antonio Water System Schedule 8 - Residential Class Rates (Inside City Limits)

•	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Water	aina.									
Service Availability Charge by meter 5/8"	\$11.64	\$10.72	\$7.57	\$7.31	\$7.14	\$7.14	\$6.91	\$6.91	\$6.77	\$6.56
3/4"	15.41	14.19	10.63	10.26	10.01	10.01	9.68	9.68	8.59	8.32
1"	22.90	21.09	16.72	16.14	15.75	15.75	15.23	15.23	12.49	12.10
1-1/2"	41.63	38.33	31.94	30.83	30.09	30.09	29.10	29.10	22.25	21.56
2"	64.08	59.01	50.18	48.44	47.28	47.28	45.73	45.73	33.95	32.90
3" 4"	116.53	107.30	92.80	89.58	87.44	87.44	84.56	84.56	61.27	59.37
6"	191.42 378.67	176.26 348.68	153.67 305.86	148.33 295.23	144.78 288.17	144.78 288.17	140.02 278.69	140.02 278.69	100.30 197.89	97.19 191.75
8"	603.37	555.59	488.47	471.50	460.22	460.22	445.09	445.09	314.96	305.19
10"	865.51	796.97	701.52	677.14	660.95	660.95	639.22	639.22	451.57	437.57
12"	1,614.51	1,486.66	1,310.24	1,264.71	1,234.47	1,234.47	1,193.88	1,193.88	841.86	815.76
Reduction applied if usage is less than 2,993 gallons:	(2.32)	(2.14)								
Usage (per 100 gallons)										
First 2,992 Gallons	0.0672	0.0619								
Next 1,497 Gallons	0.1176	0.1083								
Next 1,496 Gallons	0.1511	0.1391								
Next 1,496 Gallons	0.1847	0.1701								
Next 2,992 Gallons Next 4,489 Gallons	0.2183 0.2520	0.2010 0.2320								
Next 5,237 Gallons	0.3023	0.2320								
Over 20,199 Gallons	0.4366	0.4020								
Standard:										
First 5,985 gallons			0.1006	0.0971	0.0948	0.0948	0.0917	0.0917		
Next 6,732 gallons			0.1457	0.1406	0.1372	0.1372	0.1327	0.1327		
Next 4,488 gallons			0.2053	0.1982	0.1935	0.1935	0.1871	0.1871		
Over 17,205 gallons			0.3596	0.3471	0.3388	0.3388	0.3277	0.3277		
Seasonal:(a)										
First 5,985 gallons			0.1006	0.0971	0.0948	0.0948	0.0917	0.0917		
Next 6,732 gallons Next 4,488 gallons			0.1584 0.2355	0.1529 0.2273	0.1492	0.1492	0.1443 0.2146	0.1443 0.2146		
Over 17,205 gallons			0.4880	0.2273	0.2219 0.4597	0.2219 0.4597	0.4446	0.2146		
Standard:										
First 7,481 gallons									0.0906	0.0878
Next 5,236 gallons									0.1309	0.1268
Next 4,488 gallons									0.2058	0.1994
Over 17,205 gallons									0.3288	0.3186
Seasonal:(a)										
First 7,481 gallons									0.0906	0.0878
Next 5,236 gallons									0.1423	0.1379
Next 4,488 gallons Over 17,205 gallons									0.2217 0.4246	0.2148 0.4114
, 0									0.12.10	0
Sewer Service Availability Charge by meter	size <sup>(b)</sup>									
5/8"	\$12.98	\$12.29	\$12.69	\$11.93	\$11.49	\$9.86	\$8.68	\$8.68	\$7.76	\$7.37
3/4"	14.28	13.52	12.69	11.93	11.49	9.86	8.68	8.68	7.76	7.37
1"	16.22	15.36	12.69	11.93	11.49	9.86	8.68	8.68	7.76	7.37
1-1/2"	22.71	21.51	12.69	11.93	11.49	9.86	8.68	8.68	7.76	7.37
2" 3"	32.45	30.73	12.69	11.93	11.49	9.86	8.68	8.68	7.76	7.37
3" 4"	64.89 97.34	61.45 92.18	12.69 12.69	11.93 11.93	11.49 11.49	9.86 9.86	8.68 8.68	8.68 8.68	7.76 7.76	7.37 7.37
6"	162.23	153.63	12.69	11.93	11.49	9.86	8.68	8.68	7.76	7.37
8"	259.56	245.80	12.69	11.93	11.49	9.86	8.68	8.68	7.76	7.37
10"	389.36	368.71	12.69	11.93	11.49	9.86	8.68	8.68	7.76	7.37
12"	519.14	491.61	12.69	11.93	11.49	9.86	8.68	8.68	7.76	7.37
Usage per 100 gallons(c)										
1,497 gallons – 2,992 gallons	\$0.2774	\$0.2627								
Over 2,992 gallons	\$0.4162	\$0.3941	00.00.0	00000	#0.5°:-	00.511.	<b>#0.2202</b>	00.5555	00.50==	00.10=1
All gallons in excess of 1,496			\$0.3365	\$0.3163	\$0.3047	\$0.2615	\$0.2302	\$0.2302	\$0.2057	\$0.1953

 <sup>(</sup>a) Seasonal rate is applied to all billings beginning May 1 and ending on or about September 30 of each year. At all other times, the Standard rate was applied.
 (b) Includes the first 1,496 gallons.
 (c) Residential sewer charges are computed on the basis of average winter usage for 90 days during three consecutive billing periods beginning after November 15 and ending on or before March 15 of each year.

San Antonio Water System Schedule 9 - Residential Class Rates (Outside City Limits)

-	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Water	201/	2010	2013	4017	2013	4014	2011	2010	2007	2000
Service Availability Charge by meter s	size:									
5/8"	\$15.14	\$13.94	\$9.86	\$9.52	\$9.29	\$9.29	\$8.98	\$8.98	\$8.78	\$8.51
3/4"	20.03	18.44	13.82	13.34	13.02	13.02	12.59	12.59	11.16	10.81
1"	29.78	27.42	21.72	20.97	20.47	20.47	19.80	19.80	16.23	15.73
1-1/2"	54.12	49.83	41.52	40.08	39.12	39.12	37.83	37.83	28.92	28.02
2"	83.30	76.70	65.26	62.99	61.48	61.48	59.46	59.46	44.14	42.77
3" 4"	151.49	139.49	120.66	116.47	113.68	113.68	109.94	109.94	79.65	77.18
6"	248.84	229.13	199.78	192.84	188.23	188.23	182.04	182.04 362.30	130.39 257.24	126.35
8"	492.27 784.37	453.29 722.26	397.62 635.03	383.80 612.96	374.62 598.30	374.62 598.30	362.30 578.63	578.63	409.45	249.26 396.75
10"	1,125.16	1,036.06	911.98	880.29	859.24	859.24	830.99	830.99	587.03	568.83
12"	2,098.87	1,932.66	1,703.33	1,644.14	1,604.82	1,604.82	1,552.05	1,552.05	1,094.42	1,060.48
Reduction applied if usage is less than 2,993 gallons:	(3.03)	(2.79)								
_	,	, ,								
Usage (per 100 gallons) First 2,992 Gallons	0.0873	\$0.0804								
Next 1,497 Gallons	0.0873	0.1407								
Next 1,496 Gallons	0.1965	0.1809								
Next 1,496 Gallons	0.2401	0.2211								
Next 2,992 Gallons	0.2838	0.2613								
Next 4,489 Gallons	0.3275	0.3016								
Next 5,237 Gallons Over 20,199 Gallons	0.3930 0.5677	0.3619 0.5227								
,	0.5077	0.5227								
Standard:			0.1210	0.1264	0.1224	0.1224	0.1102	0.1102		
First 5,985 gallons Next 6,732 gallons			0.1310 0.1894	0.1264 0.1828	0.1234 0.1784	0.1234 0.1784	0.1193 0.1725	0.1193 0.1725		
Next 4,488 gallons			0.1694	0.1828	0.1784	0.1784	0.1723	0.1723		
Over 17,205 gallons			0.4675	0.4513	0.4405	0.4405	0.4260	0.4260		
_			0.1075	0.1515	0.1105	0.1105	0.1200	0.1200		
Seasonal:(a)			0.1210	0.1064	0.1004	0.1004	0.1102	0.1102		
First 5,985 gallons			0.1310	0.1264	0.1234	0.1234	0.1193	0.1193		
Next 6,732 gallons			0.2060	0.1988	0.1940	0.1940	0.1876	0.1876		
Next 4,488 gallons Over 17,205 gallons			0.3062 0.6341	0.2956 0.6121	0.2885 0.5975	0.2885 0.5975	0.2790 0.5779	0.2790 0.5779		
Standard:										
First 7,481 gallons									0.1176	0.1140
Next 5,236 gallons									0.1702	0.1649
Next 4,488 gallons									0.2674	0.2591
Over 17,205 gallons									0.4274	0.4141
Seasonal:(a)										
First 7,481 gallons									0.1176	0.1140
Next 5,236 gallons									0.1850	0.1793
Next 4,488 gallons Over 17,205 gallons									0.2882 0.5519	0.2793 0.5348
Sewer										
Service Availability Charge by meter s										
5/8"	\$15.58	\$14.75	\$15.25	\$14.33	\$13.81	\$11.85	\$10.43	\$10.43	\$9.32	\$8.85
3/4"	17.14	16.23	15.25	14.33	13.81	11.85	10.43	10.43	9.32	8.85
1"	19.47	18.44	15.25	14.33	13.81	11.85	10.43	10.43	9.32	8.85
1-1/2"	27.26	25.81	15.25	14.33	13.81	11.85	10.43	10.43	9.32	8.85
2" 3"	38.95 77.87	36.88 73.74	15.25 15.25	14.33 14.33	13.81 13.81	11.85	10.43 10.43	10.43 10.43	9.32	8.85 8.85
4"	116.81	110.62	15.25	14.33	13.81	11.85 11.85	10.43	10.43	9.32 9.32	8.85
6"	194.68	184.36	15.25	14.33	13.81	11.85	10.43	10.43	9.32	8.85
8"	311.49	294.97	15.25	14.33	13.81	11.85	10.43	10.43	9.32	8.85
10"	467.23	442.45	15.25	14.33	13.81	11.85	10.43	10.43	9.32	8.85
12"	622.97	589.93	15.25	14.33	13.81	11.85	10.43	10.43	9.32	8.85
Usage per 100 gallons(c)										
1,497 gallons - 2,992 gallons	0.3330	0.3153	0.4038	0.3795	0.3656	0.3138	0.2762	0.2762	0.2468	0.2343
Over 2,992 Gallons	0.4994	0.4729	0.4038	0.3795	0.3656	0.3138	0.2762	0.2762	0.2468	0.2343

<sup>(</sup>a) Seasonal rate is applied to all billings beginning May 1 and ending on or about September 30 of each year. At all other times, the Standard rate was applied.
(b) Includes the first 1,496 gallons.
(c) Per 100 gallons. Residential sewer usage charges are computed on the basis of average winter usage for 90 days during three consecutive billings periods beginning after November 15 and ending on or before March 15 of each year.

San Antonio Water System Schedule 10 - General Class Rates (Inside City Limits)

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Water										
Service Availability Charge by 1	meter size:									
5/8"	\$12.58	\$11.58	\$10.53	\$10.16	\$9.92	\$9.92	\$9.59	\$9.59	\$9.81	\$9.51
3/4"	17.97	16.55	15.05	14.53	14.18	14.18	13.71	13.71	13.16	12.75
1"	28.74	26.46	24.08	23.24	22.68	22.68	21.93	21.93	19.21	18.61
1-1/2"	55.65	51.24	46.65	45.03	43.95	43.95	42.50	42.50	35.03	33.94
2"	87.88	80.92	73.74	71.18	69.48	69.48	67.20	67.20	52.83	51.19
3"	163.19	150.27	136.96	132.20	129.04	129.04	124.80	124.80	106.92	103.60
4"	270.74	249.30	227.28	219.38	214.13	214.13	207.09	207.09	176.40	170.93
6"	539.61	496.88	453.06	437.32	426.86	426.86	412.82	412.82	350.03	339.18
8"	862.31	794.02	723.99	698.83	682.12	682.12	659.69	659.69	543.20	526.36
10"	1,238.74	1,140.64	1,040.08	1,003.94	979.93	979.93	947.71	947.71	755.89	732.45
12"	2,314.31	2,131.04	1,943.21	1,875.69	1,830.83	1,830.83	1,770.63	1,770.63	1,191.85	1,154.89
Usage (per 100 gallons)										
Base <sup>(a)</sup>	0.1644	0.1514	0.1218	0.1176	0.1148	0.1148	0.1110	0.1110		
100-125% of base	0.1892	0.1742	0.1457	0.1406	0.1372	0.1372	0.1327	0.1327		
125-150% of base	0.2467	0.2272	0.2042	0.1971	0.1924	0.1924	0.1861	0.1861		
Over 175% of base	0.2879	0.2651	0.2991	0.2887	0.2818	0.2818	0.2725	0.2725		
Usage (per 100 gallons)										
Below base <sup>(a)</sup>									0.1086	0.1052
100-125% of base									0.1257	0.1218
125-150% of base									0.1633	0.1582
150-200% of base									0.2138	0.2072
Over 200% of base									0.3160	0.3062
Sewer										
Service Availability Charge by l	Meter Size(c)									
5/8"	\$12.98	\$12.29	\$12.69	\$11.93	\$11.49	\$9.86	\$8.68	\$8.68	\$7.76	\$7.37
3/4"	14.28	13.52	12.69	11.93	11.49	9.86	8.68	8.68	7.76	7.37
1"	16.22	15.36	12.69	11.93	11.49	9.86	8.68	8.68	7.76	7.37
1-1/2"	22.71	21.51	12.69	11.93	11.49	9.86	8.68	8.68	7.76	7.37
2"	32.45	30.73	12.69	11.93	11.49	9.86	8.68	8.68	7.76	7.37
3"	64.89	61.45	12.69	11.93	11.49	9.86	8.68	8.68	7.76	7.37
4"	97.34	92.18	12.69	11.93	11.49	9.86	8.68	8.68	7.76	7.37
6"	162.23	153.63	12.69	11.93	11.49	9.86	8.68	8.68	7.76	7.37
8"	259.56	245.80	12.69	11.93	11.49	9.86	8.68	8.68	7.76	7.37
10"	389.36	368.71	12.69	11.93	11.49	9.86	8.68	8.68	7.76	7.37
12"	519.14	491.61	12.69	11.93	11.49	9.86	8.68	8.68	7.76	7.37
Usage (per 100 gallons)										
All gallons in excess of										
1,496	0.3717	0.3520	0.3365	0.3163	0.3047	0.2615	0.2302	0.2302	0.2057	0.1953

<sup>(</sup>a) Base is defined as 90% of the previous year's average annual usage.
(b) Base is defined as 100% of the previous year's average annual usage.
(c) Per 100 gallons. Includes the first 1,496 gallons.

San Antonio Water System Schedule 11 - General Class Rates (Outside City Limits)

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Water										
Service Availability Charge by 1	neter size:									
5/8"	\$15.38	\$14.16	\$13.69	\$13.21	\$12.89	\$12.89	\$12.47	\$12.47	\$11.83	\$11.46
3/4"	21.90	20.17	19.56	18.88	18.43	18.43	17.82	17.82	15.72	15.23
1"	34.91	32.15	31.29	30.20	29.48	29.48	28.51	28.51	22.94	22.23
1-1/2"	67.43	62.09	60.65	58.54	57.14	57.14	55.26	55.26	41.69	40.40
2"	106.41	97.98	95.87	92.54	90.33	90.33	87.36	87.36	63.01	61.06
3"	197.45	181.81	178.06	171.87	167.76	167.76	162.24	162.24	125.31	121.42
4"	327.45	301.52	295.46	285.19	278.37	278.37	269.22	269.22	206.48	200.08
6"	652.52	600.85	588.98	568.51	554.91	554.91	536.66	536.66	409.39	396.70
8"	1,042.61	960.05	941.20	908.49	886.76	886.76	857.60	857.60	637.69	617.92
10"	1,497.69	1,379.09	1,352.11	1,305.13	1,273.92	1,273.92	1,232.03	1,232.03	891.35	863.71
12"	2,797.97	2,576.40	2,526.17	2,438.39	2,380.08	2,380.08	2,301.82	2,301.82	1,444.41	1,399.62
Usage (per 100 gallons)										
Base <sup>(a)</sup>	0.2138	0.1969	0.1584	0.1529	0.1492	0.1492	0.1443	0.1443		
100-125% of base	0.2460	0.2265	0.1893	0.1827	0.1783	0.1783	0.1724	0.1724		
125-150% of base	0.3208	0.2954	0.2654	0.2562	0.2501	0.2501	0.2419	0.2419		
Over 175% of base	0.3742	0.3446	0.3887	0.3752	0.3662	0.3662	0.3542	0.3542		
Usage (per 100 gallons)										
Below base <sup>(a)</sup>									0.1410	0.1366
100-125% of base									0.1635	0.1584
125-150% of base									0.2121	0.2055
150-200% of base									0.2778	0.2692
Over 200% of base									0.4109	0.3982
Sewer										
Service Availability Charge by l	Meter Size(c)									
5/8"	\$15.58	\$14.75	\$15.25	\$14.33	\$13.81	\$11.85	\$10.43	\$10.43	\$9.32	\$8.85
3/4"	17.14	16.23	15.25	14.33	13.81	11.85	10.43	10.43	9.32	8.85
1"	19.47	18.44	15.25	14.33	13.81	11.85	10.43	10.43	9.32	8.85
1-1/2"	27.26	25.81	15.25	14.33	13.81	11.85	10.43	10.43	9.32	8.85
2"	38.95	36.88	15.25	14.33	13.81	11.85	10.43	10.43	9.32	8.85
3"	77.87	73.74	15.25	14.33	13.81	11.85	10.43	10.43	9.32	8.85
4"	116.81	110.62	15.25	14.33	13.81	11.85	10.43	10.43	9.32	8.85
6"	194.68	184.36	15.25	14.33	13.81	11.85	10.43	10.43	9.32	8.85
8"	311.49	294.97	15.25	14.33	13.81	11.85	10.43	10.43	9.32	8.85
10"	467.23	442.45	15.25	14.33	13.81	11.85	10.43	10.43	9.32	8.85
12"	622.97	589.93	15.25	14.33	13.81	11.85	10.43	10.43	9.32	8.85
Usage (per 100 gallons)										
All gallons in excess of										
1,496	0.4461	0.4224	0.4038	0.3795	0.3656	0.3138	0.2762	0.2762	0.2468	0.2343

<sup>(</sup>a) Base is defined as 90% of the previous year's average annual usage.
(b) Base is defined as 100% of the previous year's average annual usage.
(c) Per 100 gallons. Includes the first 1,496 gallons.

San Antonio Water System Schedule 12 - Wholesale Class Rates

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Water										
Service Availability Charge by r	neter size:									
6"	489.24	450.50	397.62	383.80	374.62	374.62	362.30	362.30	257.24	249.26
8"	781.36	719.48	635.03	612.96	598.30	598.30	578.63	578.63	409.45	396.75
10"	1,122.14	1,033.28	911.98	880.29	859.24	859.24	830.99	830.99	587.03	568.83
12"	2,095.85	1,929.88	1,703.33	1,644.14	1,604.82	1,604.82	1,552.05	1,552.05	1,094.42	1,060.48
Usage (per 100 gallons)										
Base <sup>(b)</sup>	0.1906	0.1755								
Over base	0.5719	0.5266								
Usage (per 100 gallons)										
Base <sup>(a)</sup>			0.1098	0.1060	0.1035	0.1035	0.1001	0.1001		
100-125% of base			0.1650	0.1593	0.1555	0.1555	0.1504	0.1504		
125-175% of base			0.2383	0.2300	0.2245	0.2245	0.2171	0.2171		
Over 175% of base			0.3369	0.3252	0.3174	0.3174	0.3070	0.3070		
Usage (per 100 gallons)										
Below base <sup>(b)</sup>									0.1025	0.0993
100-125% of base									0.1279	0.1239
125-150% of base									0.1760	0.1705
150-200% of base									0.2346	0.2273
Over 200% of base									0.3075	0.2980
Sewer										
Service Availability Charge	303.94	287.82	149.02	140.06	134.93	115.82	101.95	101.95	91.11	86.50
Usage (per 100 gallons)	0.3966	0.3756	0.3641	0.3422	0.3297	0.2830	0.2491	0.2491	0.2226	0.2113

<sup>(</sup>a) Base is defined as 100% of the previous average annual usage or (effective June 18, 2015) as agreed to by the wholesale customer and approved by the SAWS Board.(b) Base was defined as 90% of the previous average annual usage.

San Antonio Water System Schedule 13 - Irrigation Class Rates

-	-0.5-		***		***	***		***	***	
Incide City Limits	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Inside City Limits Service Availability Charge by mete	r size									
5/8"	\$12.58	\$11.58	\$10.53	\$10.16	\$9.92	\$9.92	\$9.59	\$9.59	\$9.81	\$9.51
3/4"	17.97	16.55	15.05	14.53	14.18	14.18	13.71	13.71	13.16	12.75
1"	28.74	26.46	24.08	23.24	22.68	22.68	21.93	21.93	19.21	18.61
1-1/2"	55.65	51.24	46.65	45.03	43.95	43.95	42.50	42.50	35.03	33.94
2"	87.88	80.92	73.74	71.18	69.48	69.48	67.20	67.20	52.83	51.19
3"	163.19	150.27	136.96	132.20	129.04	129.04	124.80	124.80	106.92	103.60
4" 6"	270.74	249.30	227.28	219.38	214.13	214.13	207.09	207.09	176.40	170.93
8"	539.61 862.31	496.88 794.02	453.06 723.99	437.32 698.83	426.86 682.12	426.86 682.12	412.82 659.69	412.82 659.69	350.03 543.20	339.18 526.36
10"	1,238.74	1,140.64	1,040.08	1,003.94	979.93	979.93	947.71	947.71	755.89	732.45
12"	2,314.31	2,131.04	1,943.21	1,875.69	1,830.83	1,830.83	1,770.63	1,770.63	1,191.85	1,154.89
II ( 100										
Usage (per 100 gallons) First 8,229 gallons	0.2989	0.2752								
Next 9,725 gallons	0.2383	0.2752								
Next 144,362 gallons	0.5379	0.4953								
Over 163,316 gallons	0.6873	0.6329								
Standard:										
First 6,732 gallons			0.1713	0.1653	0.1613	0.1613	0.1560	0.1560		
Next 10,473 gallons			0.2053	0.1982	0.1935	0.1935	0.1871	0.1871		
Over 17,205 gallons			0.3596	0.3471	0.3388	0.3388	0.3277	0.3277		
Seasonal: <sup>(a)</sup>			0.1712	0.1652	0.1712	0.1612	0.15(0	0.15(0		
First 6,732 gallons Next 10,473 gallons			0.1713 0.2384	0.1653 0.2301	0.1613 0.2246	0.1613 0.2246	0.1560 0.2172	0.1560 0.2172		
Over 17,205 gallons			0.4936	0.2301	0.4650	0.4650	0.4497	0.4497		
, 2										
First 12,717 gallons									0.1526	0.1479
Next 4,488 gallons									0.2290	0.2219
Over 17,205 gallons									0.3160	0.3062
<b>Outside City Limits</b>										
Service Availability Charge by										
5/8"	15.38	14.16	13.69	13.21	12.89	12.89	12.47	12.47	11.83	11.46
3/4" 1"	21.90 34.91	20.17 32.15	19.56 31.29	18.88 30.20	18.43 29.48	18.43 29.48	17.82 28.51	17.82 28.51	15.72 22.94	15.23 22.23
1-1/2"	67.43	62.09	60.65	58.54	57.14	57.14	55.26	55.26	41.69	40.40
2"	106.41	97.98	95.87	92.54	90.33	90.33	87.36	87.36	63.01	61.06
3"	197.45	181.81	178.06	171.87	167.76	167.76	162.24	162.24	125.31	121.42
4"	327.45	301.52	295.46	285.19	278.37	278.37	269.22	269.22	206.48	200.08
6"	652.52	600.85	588.98	568.51	554.91	554.91	536.66	536.66	409.39	396.70
8" 10"	1,042.61	960.05	941.20	908.49	886.76	886.76	857.60	857.60	637.69	617.92
12"	1,497.69 2,797.97	1,379.09 2,576.40	1,352.11 2,526.17	1,305.13 2,438.39	1,273.92 2,380.08	1,273.92 2,380.08	1,232.03 2,301.82	1,232.03 2,301.82	891.35 1,444.41	863.71 1,399.62
	2,77777	2,0 7 01 10	2,020117	2, .50.59	2,500.00	2,500.00	2,501102	2,501.02	1,	1,000.02
Usage (per 100 gallons)	0.000-	0.25==								
First 8,229 gallons Next 9,725 gallons	0.3885	0.3577								
Next 144,362 gallons	0.5439 0.6993	0.5008 0.6439								
Over 163,316 gallons	0.8935	0.8227								
Standard:			0.2225	0.2140	0.2007	0.2007	0.2020	0.2020		
First 6,732 gallons Next 10,473 gallons			0.2225 0.2670	0.2148 0.2577	0.2097 0.2515	0.2097 0.2515	0.2028 0.2432	0.2028 0.2432		
Over 17,205 gallons			0.4675	0.4513	0.2313	0.2313	0.4260	0.4260		
			2.1075				2200	2200		
Seasonal:(a)										
First 6,732 gallons			0.2225	0.2148	0.2097	0.2097	0.2028	0.2028		
Next 10,473 gallons Over 17,205 gallons			0.3100 0.6416	0.2992 0.6193	0.2920 0.6045	0.2920 0.6045	0.2824 0.5846	0.2824 0.5846		
0.01 17,200 ganons			0.0410	0.0173	0.0043	0.0043	0.5040	0.3040		
First 12,717 gallons									0.1982	0.1921
Next 4,488 gallons									0.2976	0.2884
Over 17,205 gallons									0.4109	0.3982

<sup>(</sup>a) Seasonal rate was applied to all billings beginning May 1 and ended on or about September 30 of each year. At all other times, the Standard rate was applied.

#### San Antonio Water System **Schedule 14 - Other Fees**

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
	=v1/	2010	2010	#V17	2010	#V1#	2011	2010	=007	2000
Water Supply Fees <sup>(a)</sup> :										
Usage (per 100 gallons)										
Residential Class	¢0.0054	£0.000 <b>2</b>								
First 2,992 gallons	\$0.0954	\$0.0892 0.1561								
Next 1,497 gallons Next 1,496 gallons	0.1669 0.2145	0.1361								
Next 1,496 gallons	0.2143	0.2007								
Next 2,992 gallons	0.2023	0.2900								
Next 4,489 gallons	0.3577	0.3346								
Next 5,237 gallons	0.4292	0.4015								
Over 20,199 gallons	0.6198	0.5798								
First 5,985 gallons			\$0.1285	\$0.1223	\$0.1080	\$0.1054	\$0.1023	\$0.1023		
Next 6,732 gallons			0.1858	0.1768	0.1562	0.1524	0.1480	0.1480		
Next 4,488 gallons			0.2622	0.2495	0.2204	0.2150	0.2087	0.2087		
Over 17,205 gallons			0.4589	0.4366	0.3857	0.3763	0.3653	0.3653		
All Usage									\$0.1529	\$0.1487
General Class										
Base <sup>(b)</sup>	0.1799	0.1683	0.1976	0.1880	0.1661	0.1620	0.1573	0.1573	0.1529	0.1487
100-125% of base	0.2070	0.1936	0.1976	0.1880	0.1661	0.1620	0.1573	0.1573	0.1529	0.1487
125-175% of base	0.2699	0.2525	0.1976	0.1880	0.1661	0.1620	0.1573	0.1573	0.1529	0.1487
Over 175% of base	0.3149	0.2946	0.1976	0.1880	0.1661	0.1620	0.1573	0.1573	0.1529	0.1487
Wholesale Class										
Base <sup>(c)</sup>	0.2344	0.2193	0.1976	0.1880	0.1661	0.1620	0.1573	0.1573	0.1529	0.1487
Over base	0.7033	0.6579	0.1976	0.1880	0.1661	0.1620	0.1573	0.1573	0.1529	0.1487
Irrigation Class										
First 8,229 gallons	0.2354	0.2202								
Next 9,725 gallons	0.3296	0.3083								
Next 144,362 gallons	0.4238	0.3964								
Over 162,316 gallons	0.5416	0.5066								
First 6,732 gallons			0.1976	0.1880	0.1661	0.1620	0.1573	0.1573		
Next 10,473 gallons			0.2622	0.2495	0.2204	0.2150	0.2087	0.2087		
Over 17,205 gallons			0.4976	0.4735	0.4183	0.4081	0.3962	0.3962		
All Usage									0.1529	0.1487
EAA Fee <sup>(d)</sup>	0.03612	0.04259	0.03311	0.03295	0.03425	0.03901	0.01407	0.01841	0.01222	0.01769
State-Imposed TCEQ Fees(e)										
Water Connection Fee	0.18	0.18	0.18	0.18	0.17	0.17	0.19	0.19	-	-
Wastewater Connection	0.06	0.06	0.06	0.06	0.06	0.06	0.05	0.05	-	-
Fee										

<sup>(</sup>a) Applies to all billed potable water.
(b) Base is defined as 100% of the previous average annual usage.
(c) Base is defined as 100% of the previous average annual usage or (effective June 18, 2015) as agreed to by the wholesale customer and approved by the Board.
(d) Per 100 gallons. Applies to all billed potable water. Purpose of fee is to recover fees paid to EAA for permitted water rights. Annual rate takes into account any cumulative deficit or surplus in the recovery, number of EAA water rights, and projected water sales (in gallons) for the year.

(e) Purpose is to recover fees paid to TCEQ. Each fee is assessed monthly to all Residential, General, and Wholesale accounts as well as each apartment account based on the number of units. Annual rate takes into account any cumulative deficit or surplus in the recovery.

San Antonio Water System **Schedule 15 - Recycled Water Rates** 

-										
	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Edwards Exchange Customers(a)										
Service Availability Charge by meter										
5/8"	\$11.24	\$10.42	\$9.51	\$9.26	\$9.04	\$9.04	\$8.74	\$8.74	\$8.74	\$8.74
3/4"	14.63	13.56	12.37	12.05	11.76	11.76	11.37	11.37	11.37	11.37
1"	19.06	17.66	16.11	15.69	15.31	15.31	14.81	14.81	14.81	14.81
1-1/2"	30.29	28.07	25.61	24.95	24.35	24.35	23.55	23.55	23.55	23.55
2"	44.29	41.05	37.45	36.48	35.61	35.61	34.44	34.44	34.44	34.44
3"	117.79	109.17	99.61	97.03	94.71	94.71	91.60	91.60	91.60	91.60
4"	175.09	162.27	148.06	144.22	140.77	140.77	136.14	136.14	136.14	136.14
6"	334.00	309.55	282.44	275.12	268.54	268.54	259.71	259.71	259.71	259.71
8"	503.46	466.60	425.73	414.70	404.78	404.78	391.47	391.47	391.47	391.47
10"	690.35	639.81	583.77	568.64	555.04	555.04	536.79	536.79	536.79	536.79
12"	851.78	789.42	720.77	701.61	684.83	684.83	662.31	662.31	662.31	662.31
Usage (per 100 gallons)										
Standard:										
Transferred amount	0.0296	0.0274	0.0250	0.0244	0.0238	0.0238	0.0230	0.0230	0.0230	0.0230
In excess of transferred										
amount	0.1109	0.1028	0.0938	0.0914	0.0892	0.0892	0.0863	0.0863	0.0863	0.0863
Seasonal:(b)										
Transferred amount	0.0296	0.0274	0.0250	0.0244	0.0238	0.0238	0.0230	0.0230	0.0230	0.0230
In excess of transferred	0.1170	0.1002	0.0007	0.0071	0.0049	0.0049	0.0017	0.0017	0.0017	0.0017
amount	0.1179	0.1093	0.0997	0.0971	0.0948	0.0948	0.0917	0.0917	0.0917	0.0917
Non-exchange Customers	<b>:</b>									
Service Availability Charge by met		10.42	eo 51	00.26	60.04	00.04	00.74	00.74	00.74	<b>60.74</b>
5/8"	11.24	10.42	\$9.51	\$9.26	\$9.04	\$9.04	\$8.74	\$8.74	\$8.74	\$8.74
3/4"	14.63	13.56	12.37	12.05	11.76	11.76	11.37	11.37	11.37	11.37
1"	19.06	17.66	16.11	15.69	15.31	15.31	14.81	14.81	14.81	14.81
1-1/2"	30.29	28.07	25.61	24.95	24.35	24.35	23.55	23.55	23.55	23.55
2"	44.29	41.05	37.45	36.48	35.61	35.61	34.44	34.44	34.44	34.44
3"	117.79	109.17	99.61	97.03	94.71	94.71	91.60	91.60	91.60	91.60
4"	175.09	162.27	148.06	144.22	140.77	140.77	136.14	136.14	136.14	136.14
6"	334.00	309.55	282.44	275.12	268.54	268.54	259.71	259.71	259.71	259.71
8"	503.46	466.60	425.73	414.70	404.78	404.78	391.47	391.47	391.47	391.47
10"	690.35	639.81	583.77	568.64	555.04	555.04	536.79	536.79	536.79	536.79
12"	851.78	789.42	720.27	701.61	684.83	684.83	662.31	662.31	662.31	662.31
Usage (per 100 gallons)										
Standard:										
First 748,000 gallons	0.1187	0.1100	0.1004	0.0978	0.0955	0.0955	0.0924	0.0924	0.0924	0.0924
Over 748,000 gallons	0.1213	0.1124	0.1026	0.0999	0.0975	0.0975	0.0943	0.0943	0.0943	0.0943
Seasonal:(b)										
First 748,000 gallons	0.1276	0.1183	0.1079	0.1051	0.1026	0.1026	0.0992	0.0992	0.0992	0.0992
Over 748,000 gallons	0.1288	0.1194	0.1089	0.1061	0.1036	0.1036	0.1002	0.1002	0.1002	0.1002

<sup>(</sup>a) Customers that have transferred Edwards Aquifer water rights to the System in exchange for recycled water.
(b) Prior to 2012, rate was applied to all billings beginning July 1 and ending on or about October 31 of each year. At all other times, the Standard rate was utilized. Beginning in 2012, rate is applied to all billings beginning May 1 and ending on or about September 30 of each year. At all other times, the Standard rate is utilized.

## San Antonio Water System Schedule 16 - Impact Fees

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Water										
Flow – All Areas	\$1,182.00	\$1,182.00	\$1,182.00	\$1,182.00	\$1,247.00	\$1,247.00	\$1,247.00	\$1,098.00	\$1,098.00	\$1,098.00
System Development:										
Low Elevation Service Area	619.00	619.00	619.00	619.00	579.00	579.00	579.00	668.00	668.00	668.00
Middle Elevation Service Area	799.00	799.00	799.00	799.00	774.00	774.00	774.00	591.00	591.00	591.00
High Elevation Service Area	883.00	883.00	883.00	883.00	966.00	966.00	966.00	1,356.00	1,356.00	1,356.00
Wastewater										
Treatment:										
Dos Rios/Leon Creek Service Area	786.00	786.00	786.00	786.00	552.00	552.00	552.00			
Medio Creek	1,429.00	1,429.00	1,429.00	1,429.00	1,379.00	1,379.00	1,379.00			
Upper and Lower Service Area								453.00	453.00	453.00
Far West-Medio Service Areas								901.00	901.00	901.00
Collection:										
Medio Creek	838.00	838.00	838.00	838.00	582.00	582.00	582.00			
Upper Medina	1,565.00	1,565.00	1,565.00	1,565.00	1,053.00	1,053.00	1,053.00			
Lower Medina	475.00	475.00	475.00	475.00	594.00	594.00	594.00			
Upper Collection	2,520.00	2,520.00	2,520.00	2,520.00	1,795.00	1,795.00	1,795.00			
Middle Collection	1,469.00	1,469.00	1,469.00	1,469.00	1,142.00	1,142.00	1,142.00			
Lower Collection	719.00	719.00	719.00	719.00	552.00	552.00	552.00			
Lower Service Area								413.00	413.00	413.00
Upper Service Area								691.00	691.00	691.00
Far West – Medio Service Area								394.00	394.00	394.00
Far West – Potranco, Big Sous, & Lucas Service Area								772.00	772.00	772.00
Water Supply – All Areas <sup>(a)</sup>	2,796.00	2,796.00	2,796.00	1,590.00	1,297.00	1,297.00	1,297.00	1,242.00	1,242.00	1,242.00

<sup>(</sup>a) 2015 rate effective June 1, 2015.

Impact fees are assessed per equivalent dwelling unit.

Meter Size		EQUIVALENT DWELLING UNITS											
5/8"	1	1	1	1	1	1	1	1	1	1			
3/4"	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5			
1"	2	2	2	2	2	2	2	2	2	2			
1-1/2"	5	5	5	5	5	5	5	5	5	5			
2"	14	14	14	14	14	14	14	14	14	14			
3"	30	30	30	30	30	30	30	30	30	30			
4"	50	50	50	50	50	50	50	50	50	50			
6"	105	105	105	105	105	105	105	105	105	105			
8"	135	135	135	135	135	135	135	135	135	135			
10"	190	190	190	190	190	190	190	190	190	190			
12"	360	360	360	360	360	360	360	360	360	360			

Customer	Principal Business	Usage <sup>(a)</sup> (million gallons)	%	Total Revenue <sup>(b)</sup> (in thousands)	%
Fiscal Year Ended December 31, 2017:					
CITY OF SAN ANTONIO H.E. BUTT GROCERY COMPANY SAN ANTONIO HOUSING AUTHORITY BEXAR COUNTY NORTHSIDE INDEPENDENT SCHOOL DISTRICT UNIVERSITY OF TEXAS AT SAN ANTONIO NORTHEAST INDEPENDENT SCHOOL DISTRICT METHODIST HEALTH CARE SYSTEM MARRIOTT HOTELS EAST CENTRAL SPECIAL UTILITY DISTRICT Subtotal (10 largest)	Municipal Entity Grocery Public Housing County Government School System University School System Hospital System Hotels Retail Water Utility	546 602 448 415 303 247 250 234 204 252	0.8 0.9 0.7 0.6 0.5 0.4 0.4 0.3	\$3,534 2,832 2,109 1,866 1,775 1,699 1,378 1,330 1,263 1,207	0.9 0.7 0.6 0.5 0.5 0.4 0.4 0.3 0.3
Balance from Other Customers		62,140	94.7	364,175	95.0
Total		65,641	100.00	\$ 383,168	100.00
Fiscal Year Ended December 31, 2008:					
CITY OF SAN ANTONIO SAN ANTONIO HOUSING AUTHORITY H.E. BUTT GROCERY COMPANY NORTHSIDE INDEPENDENT SCHOOL DISTRICT BEXAR COUNTY CPS ENERGY SAN ANTONIO INDEPENDENT SCHOOL DISTRICT NORTHEAST INDEPENDENT SCHOOL DISTRICT MAXIM INTEGRATED PRODUCT, INC. UNIVERSITY OF TEXAS AT SAN ANTONIO Subtotal (10 largest)	Municipal Entity Public Housing Grocery School System County Government Public Power Utility School System School System Electronics University	800 558 461 353 301 295 181 187 259 207	1.2 0.9 0.8 0.6 0.5 0.3 0.3 0.4 0.4	\$ 3,215 1,802 1,498 1,427 920 872 778 731 724 639	1.5 0.8 0.7 0.6 0.4 0.4 0.3 0.3 0.3 0.3
, ,		,		7-	
Balance from Other Customers		55,226	93.9	209,963	94.3
Total		58,828	100.00	\$ 222,605	100.00

<sup>(</sup>a) Potable water only.(b) Includes Water Delivery, Water Supply, EAA fees, Conservation fees, and TCEQ water fees.

### San Antonio Water System Schedule 18 - Ten Largest Customers - Wastewater Current Year and Nine Years Ago

Customer	Principal Business	Usage (million gallons)	%	Total Revenue (in thousands)	%
Fiscal Year Ended December 31, 2017:					
H.E. BUTT GROCERY COMPANY SAN ANTONIO HOUSING AUTHORITY BEXAR COUNTY CITY OF SAN ANTONIO TOYOTA NORTHSIDE INDEPENDENT SCHOOL DISTRICT TOWERJAZZ TEXAS INC. FRITO LAY, INC. UNIVERSITY OF TEXAS AT SAN ANTONIO MARRIOTT HOTELS	Grocery Public Housing County Government Municipal Entity Automobile Manufacturer School System Electronics Food Manufacturer University Hotels	517 447 353 218 233 183 212 62 174 142	1.1 0.9 0.7 0.4 0.5 0.4 0.1 0.4	\$ 2,077 1,744 1,430 990 867 826 791 698 658 599	1.2 0.7 0.6 0.4 0.4 0.3 0.3 0.3
Subtotal (10 largest)	noteis	2,541	5.2	11,510	4.8
Balance from Other Customers		45,922	94.8	226,062	95.2
Total		48,463	100.00	\$ 237,572	100.00
Fiscal Year Ended December 31, 2008:					
H.E. BUTT GROCERY COMPANY SAN ANTONIO HOUSING AUTHORITY BEXAR COUNTY CITY OF SAN ANTONIO MAXIM INTEGRATED PRODUCT, INC. OAK FARMS DAIRY TOYOTA L & H PACKING COMPANY AMERICAN OPPORTUNITY FOR HOUSING FRITO LAY, INC.	Grocery Public Housing County Government Municipal Entity Electronics Dairy Producer Vehicle Manufacturer Beef Processor Housing Services Food Manufacturer	382 537 244 255 229 65 179 121 156 56	0.8 1.1 0.5 0.5 0.5 0.1 0.4 0.2 0.3	\$ 1,534 1,056 543 529 448 443 374 369 305	1.2 0.8 0.4 0.4 0.4 0.3 0.3 0.2
Subtotal (10 largest)		2,24	4.4	5,906	4.7
Balance from Other Customers		48,123	95.6	119,775	95.3
Total		50,347	100.00	\$ 125,681	100.00

Excludes Wholesale Wastewater usage and revenues.

Customer	Principal Business	Total Revenue (in thousands)	%
Fiscal Year Ended December 31, 2017:			
Lackland Air Force Base	Military	\$ 2,505	25.2
Joint Base San Antonio - Ft. Sam Houston	Military	1,848	18.6
Leon Valley	Municipal Government	1,497	15.1
Alamo Heights	Municipal Government	1,256	12.6
Bexar County Water Control District No. 10	County Government	712	7.2
Kirby	Municipal Government	583	5.9
Balcones Heights	Municipal Government	579	5.8
Olmos Park	Municipal Government	428	4.3
Lackland Annex	Military	259	2.6
Airforce Village	Residential Community	108	1.1
Subtotal (10 largest)		9,776	98.4
Balance from Other Customers		159	1.6
Total		\$ 9,936	100.00
Fiscal Year Ended December 31, 2008:			
Leon Valley	Municipal Government	\$ 948	18.0
Alamo Heights	Municipal Government	845	16.0
Lackland Air Force Base	Military	726	13.7
Ft. Sam Houston	Military	622	11.8
Bexar County Water Control District No. 10	County Government	526	10.0
Balcones Heights	Municipal Government	330	6.2
Kirby	Municipal Government	320	6.1
Terrell Hills	Municipal Government	299	5.7
Olmos Park	Municipal Government	292	5.5
Lackland Annex/Medina Base	Military	207	3.9
Subtotal (10 largest)		5,115	96.9
Balance from Other Customers		166	3.1
		\$ 5,281	100.00

San Antonio Water System Schedule 20 - Ratios of Total Outstanding Debt by Type (\$ in thousands, except debt per customer) Unaudited

**Total Debt Outstanding by Type** 

		Revenue Bonds(1	b)	_						
Year	Principal Outstanding	Unamortized Premium & Discount	Net Revenue Bonds Payable	Commercial Paper Notes <sup>(a)</sup>	Other Debt <sup>(b)</sup>	Total Debt Outstanding	Gross Revenues <sup>(c)</sup>	Ratio of Total Debt to Gross Revenue	Customer Connection <sup>(d)</sup>	Debt Per Customer Connection
2017	\$2,537,520	\$198,219	\$2,735,739	\$278,060	\$ -	\$3,013,799	\$677,159	4.45	941,566	\$3,201
2016	2,630,350	209,932	2,840,282	241,610	-	3,081,892	630,603	4.89	926,165	3,328
2015	2,600,096	130,267	2,730,363	135,305	88,700	2,954,368	563,111	5.25	912,430	3,238
2014	2,398,555	108,864	2,507,419	138,550	-	2,645,969	505,435	5.24	798,177	3,315
2013	2,240,915	107,919	2,348,834	186,655	-	2,535,489	467,749	5.42	784,209	3,233
2012	1,987,810	95,735	2,083,545	170,745	-	2,254,290	444,677	4.85	777,374	2,777
2011	1,894,230	4,609	1,898,839	214,930	-	2,113,769	424,049	4.97	765,400	2,756
2010	1,844,985	(8,126)	1,836,859	244,650	-	2,081,509	372,522	5.61	756,642	2,762
2009	1,759,700	(11,073)	1,748,627	173,650	-	1,922,277	369,853	5.23	747,220	2,587
2008	1,427,525	(8,395)	1,419,130	261,115	119	1,680,364	389,003	4.34	738,728	2,286

<sup>(</sup>a) Details regarding outstanding revenue bonds and commercial paper notes can be found in the notes to the financial statements.

 <sup>(</sup>b) Includes notes payable and capital leases payable.
 (c) Gross revenues are defined as operating revenues plus nonoperating revenues.

<sup>(</sup>d) Customer connections represent the combined number of billed accounts for water and wastewater services at fiscal year-end. Increase in connections from 2014 to 2015 is primarily due to the merger of SAWS and SAWS District Special Project effective January 1, 2015.

San Antonio Water System Schedule 21 - Pledged Revenue Coverage (\$ in thousands) Unaudited

			Net	Revenue Bond Debt Service(a)				Maximum Annual Debt Service Requirements			rements
<u>Year</u>	Gross <u>Revenues<sup>(b)</sup></u>	Operating Expenses (c)	Available <u>Revenue</u>	<u>Principal</u>	Interest <sup>(d)</sup>	<u>Total</u>	Coverage	Total <u>Debt<sup>(e)</sup></u>	<u>Coverage</u>	Senior Lien <u>Debt<sup>(e)</sup></u>	Coverage <sup>(f)</sup>
2017	\$668,998	\$318,442	\$350,556	\$82,840	\$102,236	\$185,076	1.89	\$185,076	1.89	\$81,440	4.30
2016	622,947	315,395	307,552	78,570	98,158	176,728	1.74	185,149	1.66	84,009	3.66
2015	555,712	291,246	264,466	71,355	101,064	172,419	1.53	178,516	1.48	114,320	2.31
2014	498,334	245,055	253,279	57,850	91,704	149,554	1.69	160,510	1.58	117,126	2.16
2013	460,776	244,348	216,428	47,315	86,058	133,373	1.62	152,496	1.42	117,126	1.85
2012	437,253	237,576	199,677	44,780	80,320	125,100	1.60	138,420	1.44	122,816	1.63
2011	417,077	209,058	208,019	39,730	79,534	119,264	1.74	132,226	1.57	112,715	1.85
2010	367,847	226,489	141,358	38,590	77,098	115,688	1.22	127,264	1.11	108,947	1.30
2009	366,753	215,812	150,941	34,900	71,824	106,724	1.41	121,367	1.24	101,917	1.48
2008	384,228	205,486	178,742	27,630	67,810	95,440	1.87	98,840	1.81	86,140	2.08

<sup>(</sup>a) Represents current year debt service payments. Details regarding outstanding debt can be found in the notes to the financial statements. All bonded debt is secured by revenue and is included in these totals.

<sup>(</sup>b) Gross Revenues are defined as operating revenues plus nonoperating revenues less revenues from the City Public Service contract, interest on Project Funds and federal subsidy on Build America Bonds.

<sup>(</sup>c) Operating Expenses reflect operating expenses before depreciation as shown on the Statement of Revenues, Expenses, and Changes in Net Position.

<sup>(</sup>d) Interest reported net of the U.S. federal interest subsidy on the Series 2009B and 2010B Build America Bonds.

<sup>(</sup>e) Debt service requirements consist of principal and interest payments net of the U.S. federal interest subsidy on the Series 2009B and 2010B Build America Bonds.

<sup>(</sup>f) SAWS bond ordinances require the maintenance of a debt coverage ratio of at least 1.25x the maximum annual debt service on outstanding Senior Lien Obligations in order to issue additional bonds.

**Schedule 22 - Demographic and Economic Statistics** Last Ten Calendar Years Unaudited

		Median	Personal Income <sup>(a)</sup> ( <i>thousands</i>	Per Capital	School	Building Permits- Dwelling		Unemployment
Year	Population <sup>(a)</sup>	Age <sup>(a)</sup>	of dollars)	Personal Income <sup>(a)</sup>	Enrollment <sup>(a)</sup>	Units <sup>(b)</sup>	Employment(c)	Rate <sup>(c)</sup>
2017	1,517,866	33.5	\$36,308,882	\$23,921	401,867	12,509	1,136,835	3.0%
2016	1,469,824	33.1	34,905,380	23,748	403,558	12,241	1,101,524	3.6%
2015	1,436,697	33.2	32,790,329	22,823	401,771	7,824	1,073,329	3.5%
2014	1,416,291	33.0	31,581,326	22,414	407,047	10,334	1,041,494	3.7%
2013	1,383,194	33.2	30,752,552	22,233	397,500	6,129	1,020,845	4.9%
2012	1,359,730	32.7	29,038,394	21,356	396,718	8,005	1,000,015	5.7%
2011	1,326,539	32.8	28,421,098	21,425	392,897	7,127	976,361	6.4%
2010	1,319,492	32.1	28,260,879	21,418	387,343	6,865	951,369	7.0%
2009	1,340,549	32.6	28,750,754	21,447	296,328	5,924	907,040	6.9%
2008	1,328,984	32.8	27,653,499	20,808	295,673	10,574	899,596	5.2%

 <sup>(</sup>a) Source: Information Technology Department, City of San Antonio, Texas.
 (b) Source: Real Estate Center, Texas A&M University, Building Permits (single & multi-family), San Antonio – New Braunfels Metropolitan Statistical Area.
 (c) Source: Texas Workforce Commission, San Antonio – New Braunfels Metropolitan Statistical Area, Total Employment and Unemployment rate.

San Antonio Water System **Schedule 23 - Principal Employers Current Year and Nine Years Ago** Unaudited

		2017			2008	
Employer	Employees	Rank	Percentage of Total City Employment <sup>(a)</sup>	Employees	Rank	Percentage of Total City Employment <sup>(b)</sup>
Joint Base San Antonio (JBSA) - Lackland, Fort Sam						
& Randolph <sup>(c)</sup>	75,972	1	7.46%	59,826	1,3,6	7.19%
HEB Food Stores	22,000	2	2.16%	19,249	2	2.31%
USAA	17,163	3	1.69%	14,443	4	1.73%
Northside Independent School District	13,969	4	1.37%	12,810	5	1.54%
City of San Antonio	12,231	5	1.20%	9,830	7	1.18%
North East Independent School District	9,292	6	0.91%	8,360	8	1.00%
Methodist Health Care System	8,960	7	0.88%	7,496	10	0.90%
San Antonio Independent School District	7,374	8	0.72%	9,000	9	0.96%
Baptist Health Systems	6,432	9	0.63%			
Wells Fargo	5,010	10	0.49%			
Total	178,403	-	17.51%	141,041	-	16.81%

Table provided courtesy of City of San Antonio Finance Department.

Source: Economic Development Division, City of San Antonio, Texas, Book of Lists 2017, and Department of Defense personnel statistics.

(a) Percent based on an Employment Estimate of 1,018,200 of non-farm jobs in the San Antonio-New Braunfels, Texas Metropolitan Statistical Area as of January 2017. Figure provided by the Texas Workforce Commission.

Percent based on an Employment Estimate of 832,800 of non-farm jobs in the San Antonio-New Braunfels, Texas Metropolitan Statistical Area as of January 2008 Figure provided by the Texas Workforce Commission.

In fiscal year 2012, Lackland, Fort Sam and Randolph military operations were consolidated into Joint Base San Antonio. In fiscal year 2008, the employee counts were 33,893, 15,200, and 10,733, respectively.

San Antonio Water System Schedule 24 - Number of Employees by Functional Group Unaudited

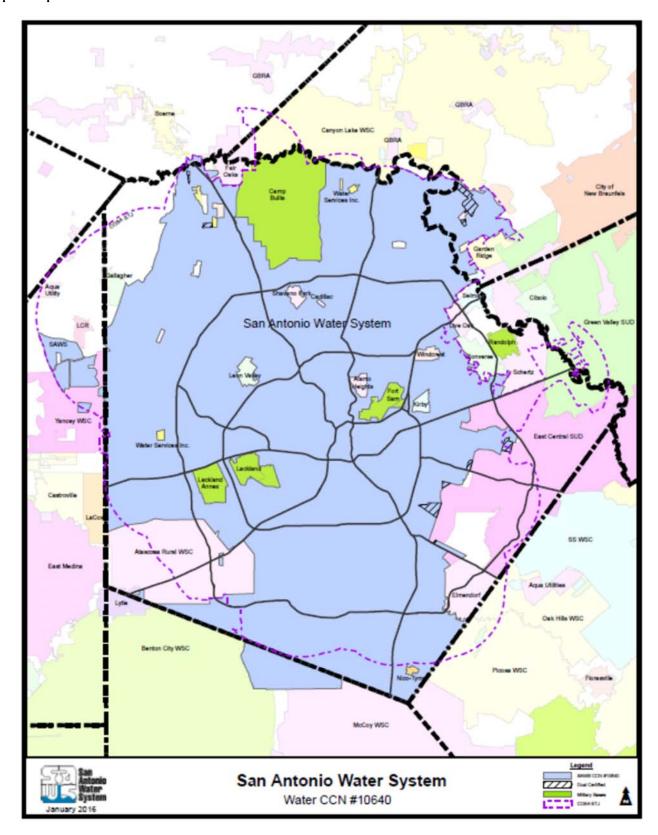
		Fiscal Year								
	2017	2016	2015	2014	2013	2012 <sup>(a)</sup>	2011	2010	2009	2008
Functional Group										
President/CEO	8	7	10	13	14	16	11	12	13	12
Production & Treatment Operations	299	302	138	131	292	363	353	358	368	341
Distribution & Collection Operations	561	540	485	446	455	482	416	430	435	403
Operation Services	112	112	346	257	116	166	189	178	180	177
Sewer System Improvements	33	33	31	31	28	_	_	-	_	-
Public Affairs	51	24	28	26	24	32	32	32	32	19
Customer Service	231	229	233	235	229	222	215	206	210	212
Engineering & Construction	177	166	191	221	202	225	201	189	201	193
Water Resources	19	40	42	138	158	62	62	54	63	55
Financial Services	64	65	67	62	64	52	67	69	58	56
Information Services	89	92	72	65	64	57	57	54	58	56
Human Resources	42	45	42	35	44	27	50	49	48	46
Legal	37	37	39	39	42	44	16	16	30	25
Total Employees	1,723	1,692	1,724	1,699	1,732	1,748	1,669	1,647	1,696	1,595

<sup>(</sup>a) In 2012, SAWS assumed operational control of the former Bexar Metropolitan Water District (BexarMet). The employee figures shown above include the employees of the former BexarMet beginning in 2012. As the merger of the former BexarMet into SAWS was not completed until January 1, 2015, a number of these employees were allocated to the special purpose entity formulated to maintain this entity until completion of the merger. The number of employees allocated to this special purpose entity during the years 2012, 2013, and 2014 were 70, 207, and 204, respectively.

San Antonio Water System Schedule 25 – Capital Assets (amounts in thousands)

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Water Delivery <sup>(a)</sup>	\$2,760,533	\$2,664,891	\$2,489,921	\$1,998,502	\$1,882,369	\$1,806,882	\$1,680,136	\$1,621,171	\$1,548,754	\$1,472,040
Water Supply:									, ,	
Water Resources	1,047,530	1,036,861	740,434	708,825	628,445	585,055	556,979	546,491	429,129	353,988
Recycle	181,281	178,219	177,487	159,171	159,059	155,556	152,993	151,640	151,184	149,308
Conservation	561	559	558	511	465	436	444	441	335	221
Stormwater	314	321	354	302	277	211	179	187	183	161
Wastewater	2,796,525	2,702,938	2,551,854	2,390,077	2,202,056	1,968,415	1,858,386	1,761,832	1,704,933	1,639,280
Chilled Water and Steam	61,280	62,800	61,162	51,117	56,929	53,011	52,948	52,957	52,007	50,303
Working Capital	-	-	-	-	-	-	_	-	-	-
Construction in Progress	332,635	228,595	485,962	368,688	506,829	571,547	522,438	415,810	427,971	372,607
Total assets before	-									
accumulated depreciation	7,180,659	6,875,184	6,507,462	5,677,193	5,436,429	5,141,113	4,824,503	4,550,529	4,314,496	4,037,908
Accumulated Depreciation	2,128,882	1,989,093	1,859,676	1,587,715	1,472,429	1,369,885	1,271,438	1,187,662	1,140,232	1,070,718
Net Capital Assets	\$5,051,777	\$4,886,091	\$4,647,786	\$4,089,478	\$3,964,000	\$3,771,228	\$3,553,065	\$3,362,867	\$3,174,264	\$2,967,190

<sup>(</sup>a) Increase in Water Delivery capital assets from 2014 to 2015 is primarily due to the merger of SAWS and SAWS District Special Project effective January 1, 2015.



San Antonio Water System Schedule 26 – Operating and Capital Indicators – Water Unaudited

<u> </u>	2017	2016	2015 <sup>(f)</sup>	2014	2013	2012	2011	2010	2009	2008
Rainfall (Inches) Customers/Connections <sup>(a)</sup>	27.33	43.92	44.22	27.63	32.00	39.40	17.58	37.39	30.69	13.76
	496,543	488,705	482,821	373,920	367,408	365,099	360,281	356,546	352,059	348,834
Water Pumpage (Million Gallons) Annual Water Pumped ASR Recharge <sup>(b)</sup>	89,843	88,016	83,138	69,834	69,020	70,338	74,627	69,591	68,191	71,785
	11,198	11,159	6,911	1,569	2,629	3,742	3,928	8,320	5,542	3,535
ASR Production <sup>(b)</sup>	462	697	1,903	6,374	4,793	1,446	4,309	556	472	407
Annual Pumped for Usage	78,645	76,857	76,227	68,265	66,391	66,596	70,699	61,272	62,649	68,250
Average Daily	245.6	240.5	227.8	191.3	189.1	192.2	204.5	190,7	186.8	194.9
Maximum Daily	302.8	359.9	335.0	261.0	270.2	264.0	265.6	314.0	273.8	299.0
Metered Usage (Million Gallons)	65,641	63,934	62,896	57,261	55,108	55,320	59,133	52,578	55,295	58,828
Available Water Supply (Million Gallons) Permitted Edwards Aquifer rights <sup>(c)</sup> Non-Edwards supply <sup>(d)</sup>	92,632	93,289	94,144	83,126	82,902	84,822	84,640	85,035	81,923	71,738
	24,634	27,710	23,233	12,931	11,476	7,431	6,098	6,132	6,256	6,256
Stored in ASR <sup>(e)</sup> Total water available for production Number of Wells in Service	50,165	39,429	28,967	23,959	28,764	30,928	28,632	29,013	21,249	16,179
	167,431	160,428	146,344	121,086	122,484	123,080	119,393	120,077	109,320	94,766
	191	191	182	147	149	143	139	144	140	136
Overhead Storage Capacity (Million Gallons)	117.1	119.9	119.9	101.8	91.3	81.2	81.2	73.9	66.5	65.2
Total Storage Capacity (Million Gallons)	277.2	269.2	261.7	220.6	197.4	183.7	184.1	180.8	166.2	165.0
Miles of Water Main in Place	7,060	6,961	6,831	5,259	5,072	5,022	4,988	4,936	4,866	4,802
Water Main Breaks	1,843	1,194	2,363	2,018	1,863	2,128	3,397	1,475	3,212	2,594
Fire Hydrants in Place	40,872	39,988	38,460	28,753	28,323	27,914	27,566	27,115	26,599	25,955

<sup>(</sup>a) Number of customers at end of fiscal year.

<sup>(</sup>b) Gallons pumped for ASR recharge and ASR production are included in annual water pumped.

<sup>(</sup>c) Based on permitted rights authorized by the EAA as of December 31st. Under current EAA rules, authorized amounts are subject to reductions of 20% to 44% during drought conditions.

<sup>(</sup>d) Includes water available under contracts to purchase or produce water from the Trinity Aquifer, Carrizo Aquifer, Canyon Lake, Medina Lake, and Lake Dunlap. There are no legally imposed reductions in these supplies during drought; however, production of water from certain of these sources is physically limited during periods of drought.

<sup>(</sup>e) Represents cumulative net amount stored in ASR (Recharge - Net production).

<sup>(</sup>f) Increase in amounts from 2014 to 2015 reflect the merger of SAWS and SAWS District Special Project effective January 1, 2015.

San Antonio Water System Schedule 27 – Monthly Residential Service Charges for Ten Major Texas Cities – Water Unaudited

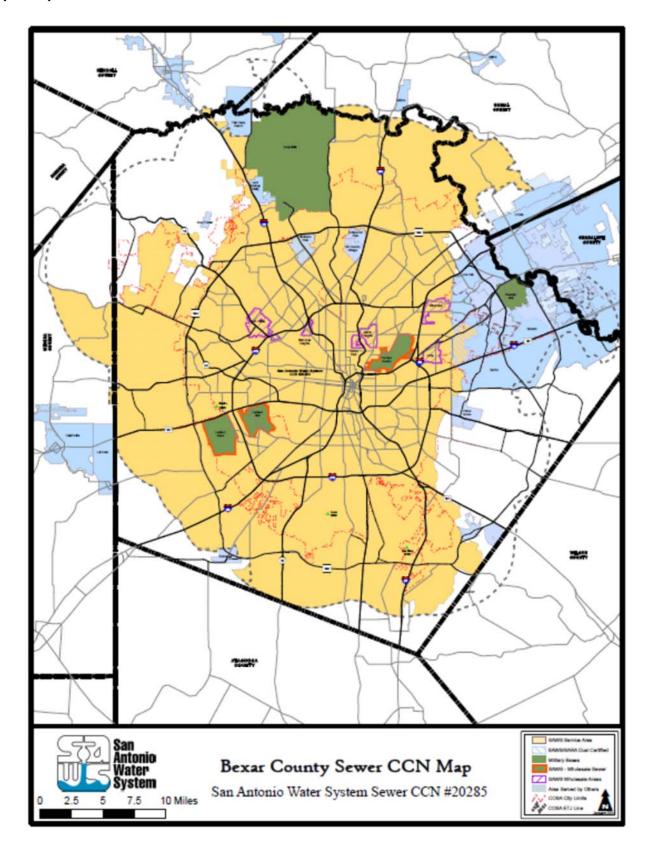
CITY	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Arlington										
6000 Gallons	\$24.20	\$24.20	\$22.40	\$21.12	\$19.49	\$19.49	\$19.49	\$19.47	\$18.99	\$18.91
9000 Gallons	\$32.57	\$32.57	\$29.78	\$27.96	\$25.55	\$25.55	\$25.55	\$25.53	\$24.84	\$24.70
Austin	Φ32.37	\$52.57	\$27.76	\$27.70	\$25.55	\$23.33	\$23.33	\$25.55	\$24.04	Φ24.70
6000 Gallons	\$38.35	\$38.35	\$37.37	\$37.21	\$29.74	\$26.16	\$26.16	\$20.34	\$19.18	\$17.93
9000 Gallons	\$70.30	\$70.30	\$66.88	\$62.60	\$51.74	\$35.40	\$35.40	\$28.68	\$27.04	\$25.22
Corpus Christi <sup>(a)</sup>	Ψ70.50	ψ70.50	ψου.σσ	ψ02.00	ψ31.71	ψ55.10	ψ33.10	Ψ20.00	Ψ27.01	Ψ23.22
6000 Gallons	\$42.37	\$42.37	\$34.76	\$34.76	\$32.25	\$30.55	\$28.97	\$27.76	\$25.54	\$25.34
9000 Gallons	\$66.29	\$66.29	\$55.78	\$55.78	\$51.79	\$48.76	\$45.67	\$43.30	\$39.10	\$38.62
Dallas	\$00.2°	000.27	<b>\$22.70</b>	000.70	Ψ01.77	Ψ.σ., σ	ψ.ισ.σ.	ψ 1.0.0 °	Ψ23.10	450.02
6000 Gallons	\$21.69	\$21.35	\$20.86	\$19.87	\$19.39	\$18.58	\$17.62	\$16.72	\$16.16	\$15.50
9000 Gallons	\$34.71	\$34.10	\$33.25	\$31.60	\$30.70	\$29.23	\$27.67	\$26.17	\$25.16	\$23.90
El Paso <sup>(b)</sup>	**, -	******	****	******	400.00	4	4=7.57	4-01-1	4-0	4
6000 Gallons	\$25.23	\$23.82	\$21.62	\$17.84	\$17.84	\$17.01	\$16.53	\$16.53	\$16.53	\$16.53
9000 Gallons	\$37.40	\$31.28	\$28.42	\$24.10	\$24.10	\$22.99	\$22.34	\$22.34	\$22.34	\$22.34
Fort Worth	*******	44-1-4	4-011-	<b>4</b> =	4=	4	<b>4</b>	V	<b>4</b>	4
6000 Gallons	\$29.39	\$28.60	\$26.62	\$24.82	\$23.32	\$23.32	\$22.33	\$22.25	\$21.75	\$20.45
9000 Gallons	\$41.14	\$40.77	\$38.49	\$36.05	\$34.55	\$34.55	\$33.08	\$32.92	\$32.42	\$30.52
Houston	•	• • • • •	****	*****	**	*-	*	**	*-	,
6000 Gallons	\$33.52	\$32.42	\$31.97	\$30.62	\$30.26	\$27.78	\$25.51	\$23.65	\$21.91	\$20.85
9000 Gallons	\$49.03	\$47.42	\$46.76	\$44.78	\$44.27	\$40.62	\$37.30	\$34.60	\$30.67	\$29.19
Lubbock										
6000 Gallons	\$44.56	\$44.56	\$45.18	\$43.86	\$45.00	\$45.00	\$40.02	\$40.02	\$34.02	\$23.41
9000 Gallons	\$58.84	\$58.84	\$63.72	\$56.79	\$57.00	\$57.00	\$48.03	\$48.03	\$43.99	\$30.67
Plano										
6000 Gallons	\$29.48	\$25.98	\$25.98	\$25.41	\$23.10	\$22.55	\$20.50	\$20.50	\$19.35	\$16.71
9000 Gallons	\$40.07	\$35.28	\$35.28	\$33.72	\$30.66	\$29.18	\$26.53	\$26.53	\$25.05	\$21.63
San Antonio (Standard)(b)										
6000 Gallons	\$28.65	\$27.09	\$23.50	\$22.65	\$21.54	\$21.67	\$19.59	\$19.85	\$22.11	\$21.81
9000 Gallons	\$44.37	\$41.96	\$34.43	\$33.16	\$31.37	\$31.53	\$28.44	\$28.83	\$30.40	\$30.03

Source: Based on rates posted on each respective city's website.

Note — Most charges are for a 5/8" meter; Arlington, Plano, and Lubbock charges are for a 3/4" meter.

(a) Includes Raw Water Pass Through Charge of \$0.992 per 1,000 gallons.

(b) Assumes Standard rates and includes Water Supply Fee.



San Antonio Water System Schedule 28 – Operating and Capital Indicators – Wastewater Unaudited

					Fiscal Y	/ear				
	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Customers/Connections <sup>(a)</sup>	445,023	437,460	429,609	424,257	416,801	412,275	405,119	400,096	395,161	389,894
Effluent Volumes For Major Facilities										
(million gallons per day)										
Dos Rios										
Permit Flow	125.00	125.00	125.00	125.00	125.00	125.00	125.00	125.00	125.00	125.00
Average Annual Flow	94.46	98.26	93.84	85.20	78.47	79.04	74.97	86.47	74.37	76.53
Maximum Monthly Average Flow	106.44	117.01	112.44	91.19	86.78	87.01	76.63	103.66	89.36	81.43
Leon Creek										
Permit Flow	46.00	46.00	46.00	46.00	46.00	46.00	46.00	46.00	46.00	46.00
Average Annual Flow (two outfalls)	35.52	38.59	35.04	28.98	37.68	38.62	35.07	38.83	34.99	34.71
Maximum Monthly Average Flow (two	38.61									
outfalls)		45.06	44.26	39.03	44.16	43.77	36.46	45.30	64.74	38.62
Medio Creek										
Permit Flow	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
Average Annual Flow	6.43	7.73	6.92	7.08	7.76	7.29	6.83	7.53	6.32	5.87
Maximum Monthly Average Flow	7.08	9.73	8.24	7.49	8.45	8.14	6.97	8.71	7.45	6.57
Total										
Permit Flow	187.00	187.00	187.00	187.00	187.00	187.00	187.00	187.00	187.00	187.00
Average Annual Flow	136.41	144.58	135.79	121.26	124.26	124.95	116.87	132.83	115.68	117.11
Maximum Monthly Average Flow	152.13	171.80	162.54	137.71	139.40	138.92	120.06	157.67	161.55	126.62
Amount Treated Annually (millions of gallons)	50,945	49,282	48,563	50,689	50,076	49,055	49,918	48,151	51,987	50,347
Amount Treated Peak Day (millions of gallons)	245	311	286	196	221	199	160	258	194	174
Miles of Sewer Main In Place	5,482	5,375	5,322	5,247	5,238	5,200	5,163	5,118	5,085	5,001
Number of Manholes in Place	107,247	105,346	103,874	100,017	99,037	98,136	97,280	96,200	95,541	94,027
Number of Lift Stations	151	155	153	156	155	159	159	158	164	162

<sup>(</sup>a) Number of customers at end of fiscal year.

San Antonio Water System Schedule 29 – Monthly Residential Service Charges for Ten Major Texas Cities – Wastewater Unaudited

CITY	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Arlington										
6000 Gallons	\$34.98	\$31.56	\$31.10	\$30.26	\$28.03	\$28.03	\$27.37	\$26.89	\$25.97	\$25.29
9000 Gallons	\$47.52	\$42.69	\$42.20	\$41.24	\$38.02	\$38.02	\$37.03	\$36.31	\$35.03	\$34.05
Austin					Ψ30.02	Ψ30.02	ψ57.05	Ψ50.51	Ψ55.05	ψ5 1.05
6000 Gallons	\$62.30	\$62.30	\$59.86	\$55.84	\$54.40	\$54.30	\$50.35	\$48.77	\$46.28	\$44.34
9000 Gallons	\$93.35	\$93.95	\$89.68	\$83.23	\$81.22	\$81.06	\$75.49	\$73.22	\$69.47	\$66.66
Corpus Christi					<b>401.22</b>	Ψ01.00	Ψ, σ, ι, ς	Ψ,5.22	Φ03	Ψ00.00
6000 Gallons	\$60.79	\$60.79	\$52.23	\$52.23	\$46.96	\$43.21	\$43.21	\$40.80	\$35.95	\$34.15
9000 Gallons	\$80.86	\$80.86	\$69.48	\$69.48	\$62.71	\$57.69	\$57.69	\$54.47	\$48.01	\$45.60
Dallas					40-11	427102	42,	40	4.0.0	4
6000 Gallons	\$37.06	\$36.56	\$35.78	\$34.15	\$33.80	\$33.00	\$31.70	\$29.99	\$29.33	\$28.63
9000 Gallons	\$53.20	\$52.49	\$51.38	\$49.00	\$48.50	\$47.40	\$45.50	\$43.01	\$42.11	\$41.20
El Paso					4.0.00	4	4	4 .2	4.2	4
6000 Gallons	\$21.14	\$19.73	\$17.79	\$16.48	\$16.48	\$15.68	\$15.22	\$15.22	\$15.22	\$15.22
9000 Gallons	\$28.23	\$26.35	\$23.77	\$22.01	\$22.01	\$20.93	\$20.31	\$20.31	\$20.31	\$20.31
Fort Worth					4	4	4-0101	4	4=0.0	4
6000 Gallons	\$35.53	\$34.49	\$30.60	\$27.96	\$27.96	\$26.84	\$26.27	\$26.27	\$25.67	\$25.67
9000 Gallons	\$50.05	\$48.49	\$43.16	\$39.39	\$39.39	\$37.70	\$36.86	\$36.86	\$36.26	\$36.26
Houston					,	*	*	,	*	****
6000 Gallons	\$41.23	\$39.87	\$39.31	\$37.65	\$37.20	\$34.15	\$31.38	\$29.09	\$24.84	\$22.67
9000 Gallons	\$65.68	\$63.51	\$62.62	\$59.97	\$59.25	\$54.40	\$49.98	\$46.34	\$36.69	\$33.95
Lubbock					400.00	42	4	4	42 0107	400.70
6000 Gallons	\$35.02	\$35.02	\$28.70	\$27.50	\$27.50	\$27.50	\$24.30	\$24.30	\$22.10	\$15.97
9000 Gallons	\$44.53	\$44.53	\$36.05	\$34.25	\$34.50	\$34.25	\$30.45	\$30.45	\$28.25	\$21.46
Plano					40	40	4	40000	4-0	4
6000 Gallons	\$41.57	\$39.23	\$37.40	\$34.40	\$33.54	\$33.54	\$33.54	\$33.54	\$33.54	\$27.95
9000 Gallons	\$58.13	\$54.86	\$52.31	\$47.51	\$46.32	\$46.32	\$46.32	\$46.32	\$46.32	\$38.60
San Antonio										
6000 Gallons	\$29.71	\$28.13	\$27.91	\$26.24	\$25.26	\$21.70	\$19.12	\$19.10	\$17.02	\$16.17
9000 Gallons	\$42.20	\$39.96	\$38.00	\$35.73	\$34.40	\$29.54	\$26.02	\$26.00	\$23.20	\$22.03

Source: Based on rates posted on each respective city's website.

#### MONTHLY WATER, SEWER, AND WATER SUPPLY FEE RATES

In November 2015, the Board and the City Council approved revisions to the System's rate structure. The revised rate structure is designed to further encourage water conservation by reducing residential rates for very low water use while raising rates for higher levels of water use. The revised rate structure went into effect on January 1, 2016.

The System has received rate adjustments each year since 2011. On November 19, 2015, City Council approved a rate adjustment to increase the average residential bill by 7.5% for 2016. After review of the 2017 System budget by the Board, as approved by City Council, the average residential bill was projected to increase by 6.8% in 2017.

The City Council also approved additional rate adjustments of up to 1.3%, 4.5%, and 9.9% of the average residential bill in years 2018 through 2020 respectively for water supply projects. On December 7, 2017, the City Council approved rate increases at 5.8% for 2018 and 4.7% for 2019.

## Residential Water Service (Effective for Consumption on or about January 1, 2018)

The Service Availability Charge (minimum bill) for all residential water service **INSIDE THE CITY LIMITS** of the City furnished through meters of the following sizes together with the Monthly Volume Charge measured per 100 gallons for water usage in every instance of service for each month or fraction thereof shall be as follows:

## MONTHLY SERVICE AVAILABILITY CHARGE

## MONTHLY VOLUME CHARGE

Meter Size	Service Availability Charge*	Usage Blocks, Gallons	Rate per 100 Gallons
		<u>Threshold</u>	
5/8"	\$ 12.77	2,992	\$ 0.0737
3/4"	16.90	4,489	0.1290
1"	25.12	5,985	0.1658
1-1/2"	45.67	7,481	0.2026
2"	70.30	10,473	0.2395
3"	127.83	14,962	0.2764
4"	209.99	20,199	0.3316
6"	415.41	Over 20,199	0.4790
8"	661.90		
10"	949.47		
12"	1,771.12		

<sup>\*</sup> Water Service Availability Charge shall be reduced by \$2.55 Inside City Limits, if usage does not exceed 2,992 gallons.

The Service Availability Charge (minimum bill) for all residential water service **OUTSIDE THE CITY LIMITS** of the City furnished through meters of the following sizes together with the Monthly Volume Charge measured per 100 gallons for water usage in every instance of service for each month or fraction thereof shall be as follows:

### MONTHLY SERVICE AVAILABILITY CHARGE

#### MONTHLY VOLUME CHARGE

Meter Size	Service Availability Charge*	Usage Blocks, Gallons	Rate per 100 Gallons
		<u>Threshold</u>	
5/8"	\$ 16.60	2,992	\$ 0.0958
3/4"	21.97	4,489	0.1676
1"	32.66	5,985	0.2156
1-1/2"	59.37	7,481	0.2634
2"	91.38	10,473	0.3113
3"	166.18	14,962	0.3593
4"	272.97	20,199	0.4311
6"	540.02	Over 20,199	0.6228
8"	860.45		
10"	1,234.30		
12"	2,302.46		

<sup>\*</sup> Water Service Availability Charge shall be reduced by \$3.32 Outside City Limits, if usage does not exceed 2,992 gallons.

## General Water Service (Effective for Consumption on or about January 1, 2018)

The Service Availability Charge (minimum bill) for all general water service **INSIDE THE CITY LIMITS** of the City furnished through meters of the following sizes together with the Monthly Volume Charge measured per 100 gallons for water usage in every instance of service for each month or fraction thereof shall be as follows:

## MONTHLY SERVICE AVAILABILITY CHARGE

## MONTHLY VOLUME CHARGE

Meter Size	Service Availability Charge	Usage Blocks, Gallons	Rate Per 100 Gallons
5/8"	\$ 13.80	Base*	\$ 0.1803
3/4"	19.71	>100-125% of Base	0.2076
1"	31.53	>125-175% of Base	0.2706
1-1/2"	61.05	>175% of Base	0.3158
2"	96.40		
3"	179.02		
4"	297.00		
6"	591.95	* The Base Use is defined as 1	100% of the Annual Average
8"	945.95	Consumption.	_
10"	1,358.90	-	
12"	2,538.80		

The Service Availability Charge (minimum bill) for all general water service **OUTSIDE THE CITY LIMITS** of the City furnished through meters of the following sizes together with the Monthly Volume Charge measured per 100 gallons for water usage in every instance of service for each month or fraction thereof shall be as follows:

## MONTHLY SERVICE AVAILABILITY CHARGE

## MONTHLY VOLUME CHARGE

Meter Size	Service Availability Charge		Usage Blocks, Gallons	Rate Per	r 100 Gallons
5/8"	\$ 16.87		Base*	\$	0.2345
3/4"	24.02		>100-125% of Base		0.2699
1"	38.30		>125-175% of Base		0.3519
1-1/2"	73.97		>175% of Base		0.4105
2"	116.73				
3"	216.60				
4"	359.21				
6"	715.81	*	The Base Use is defined as	100% of the	Annual Average
8"	1,143.74		Consumption.		
10"	1,642.97				
12"	3,069.37				

## Wholesale Water Service (Effective for Consumption on or about January 1, 2018)

Water service charges for all metered wholesale water connections shall be the sum of the appropriate Water Service Availability Charge and the application of the Water Monthly Volume Charges to metered water usage in every instance of service for each month or fraction thereof and are billed according to the schedule below.

## MONTHLY SERVICE AVAILABILITY CHARGE

## MONTHLY VOLUME CHARGE

Meter Size(1)	Service Availability Charge	Usage Blocks, Gallons	Rate Per 100 Gallons
6"	\$ 536.70	Base*	\$ 0.2091
8"	857.15	Over Base	0.6274
10"	1,230.99		
12"	2,299.15		

<sup>\*</sup> The Base Use is defined as 100% of the Annual Average Consumption.

## Irrigation Service Fee (Effective for Consumption on or about January 1, 2018)

The Service Availability Charge (minimum bill) for all irrigation water service **INSIDE THE CITY LIMITS** of the City furnished through meters of the following sizes together with the Monthly Volume Charge measured per 100 gallons for water usage in every instance of service for each month or fraction thereof shall be as follows:

## MONTHLY SERVICE AVAILABILITY CHARGE

#### MONTHLY VOLUME CHARGE

Meter Size 5/8"	Service Availability Charge	<u>Usage Blocks, Gallons</u> Threshold	Rate Per 100 Gallons
	\$ 13.80		
3/4"	19.71	8,229	\$ 0.3279
1"	31.53	17,954	0.4589
1-1/2"	61.05	162,316	0.5901
2"	96.40	Over 162,316	0.7540
3"	179.02		
4"	297.00		
6"	591.95		
8"	945.95		
10"	1,358.90		
12"	2,538.80		

The Service Availability Charge (minimum bill) for all irrigation water service **OUTSIDE THE CITY LIMITS** of San Antonio furnished through meters of the following sizes together with the Monthly Volume Charge measured per 100 gallons for water usage in every instance of service for each month or fraction thereof shall be as follows:

#### MONTHLY SERVICE AVAILABILITY CHARGE

#### MONTHLY VOLUME CHARGE

Meter Size	Service Availability Charge	Usage Blocks, Gallons	Rate Per 100 Gallons
5/8"	\$ 16.87	<u>Threshold</u>	
3/4"	24.02	8,229	\$ 0.4262
1"	38.30	17,954	0.5967
1-1/2"	73.97	162,316	0.7671
2"	116.73	Over 162,316	0.9802
3"	216.60		
4"	359.21		
6"	715.81		
8"	1,143.74		
10"	1,642.97		
12"	3,069.37		

<sup>(1)</sup> Wholesale water service will not be provided through a meter smaller than 6" in order to comply with fire flow requirements and the "Criteria for Water Supply and Distribution in the City of San Antonio and its Extraterritorial Jurisdiction".

## Recycled Water Service – Edwards Exchange Customers (Effective for Consumption on or about January 1, 2018)

The Monthly Service Availability Charge (minimum bill) for all recycled water service furnished through meters of the following sizes together with the Monthly Volume Charge measured per 100 gallons for water usage in every instance of service for each month or fraction thereof shall be as follows:

## MONTHLY SERVICE AVAILABILITY CHARGE

## MONTHLY VOLUME CHARGE

	Net		Rate Per 1	00 Gallons
Meter Size	Meter Charge	Usage Blocks	Standard*	Seasonal*
5/8"	\$ 12.12	Transferred Amount	\$ 0.0319	\$ 0.0319
3/4"	15.77	All in Excess of Transferred	0.1196	0.1271
1"	20.55	Amount		
1-1/2"	32.65			
2"	47.74			
3"	126.98	* The Volume Charge "Seaso	nal" Rate Per 10	00 Gallons shall be
4"	188.75	applied to all billings beginning	ng on or about Ma	ay 1 and ending after
6"	360.05	five complete billing months	s on or about Se	ptember 30 of each
8"	542.73	year. At all other times the	Volume Charge '	"Standard" Rate Per
10"	744.20	100 Gallons shall be utilized.	_	
12"	918.22			

## Recycled Water Service – Non-Edwards Exchange Customers (Effective for Consumption on or about January 1, 2018)

The Monthly Service Availability Charge (minimum bill) for all recycled water service furnished through meters of the following sizes together with the Monthly Volume Charge measured per 100 gallons for water usage in every instance of service for each month or fraction thereof shall be as follows:

## MONTHLY SERVICE AVAILABILITY CHARGE

## MONTHLY VOLUME CHARGE

	Net	Rate Per 100 Gallons
Meter Size	Meter Charge	Usage Blocks Standard* Seasonal*
5/8"	\$ 12.12	First 748,000 \$ 0.1280 \$ 0.1376
3/4"	15.77	Over 748,000 \$ 0.1308 \$ 0.1388
1"	20.55	
1-1/2"	32.65	
2"	47.74	
3"	126.98	* The Volume Charge "Seasonal" Rate Per 100 Gallons shall be
4"	188.75	applied to all billings beginning on or about May 1 and ending after
6"	360.00	five complete billing months on or about September 30 of each year.
8"	542.73	At all other times the Volume Charge "Standard" Rate Per 100
10"	744.20	Gallons shall be utilized.
12"	918.22	

## Water Supply Fee (Effective for Consumption on or about January 1, 2018)

The Water Supply Fee assessed on all potable water service for water usage in every instance of service for each month or fraction thereof shall be as follows:

Rate Class	<u>Usage Blocks, Gallons</u> <u>Threshold</u>	Fee to be Assessed (per 100 gallons)
Residential	2,992	\$ 0.0997
	4,489	0.1744
	5,985	0.2242
	7,481	0.2741
	10,473	0.3240
	14,962	0.3738
	20,199	0.4485
	Over 20,199	0.6477
General	Base*	0.1880
	125% of Base	0.2163
	175% of Base	0.2820
	Over 175% of Base	0.3291
Wholesale	Base**	0.2449
	Over Base	0.7349
Irrigation	8,229	0.2460
S	17,954	0.3444
	162,316	0.4429
	Over 162,316	0.5660

<sup>\*</sup> The Base Use for General Class is defined as 100% of the Annual Average Consumption.

<sup>\*\*</sup> The Base Use for Wholesale Class is defined as 100% of the Annual Average Consumption or as agreed to by the wholesale customer and approved by the SAWS Board of Trustees.

## Residential Sewer Service (Effective for Consumption on or about January 1, 2018)

Sewer service charges for all metered residential connections **INSIDE THE CITY LIMITS** of the City are computed on the basis of average water usage for 90 days during three consecutive billing periods beginning after November 15 and ending on or about March 15 of each year and are billed according to the rate schedules below.

## MONTHLY SERVICE AVAILABILITY CHARGE

## MONTHLY VOLUME CHARGE

Meter Size	Service Availability Charge*	Usage Blocks, Gallons	Rate Per 100 Gallons
5/8"	\$ 13.45	<b>Threshold</b>	
3/4"	14.79	1,496	\$0.0000
1"	16.80	2,992	0.2874
1-1/2"	23.53	Over 2,992	0.4312
2"	33.62		
3"	67.23		
4"	100.84		
6"	168.07		
8"	268.90		
10"	403.38		
12"	537.83		

<sup>\*</sup> Customers who do not have a winter record of water usage or an interim average will be billed for sewer service assuming 5,985 gallons monthly sewer usage. Customers without a SAWS water meter will be charged the Sewer Service Availability Charge based on a 5/8" meter size.

Sewer service charges for all metered residential connections **OUTSIDE THE CITY LIMITS** of the City are computed on the basis of average water usage for 90 days during three consecutive billing periods beginning after November 15 and ending on or about March 15 of each year and are billed according to the rate schedules below.

### MONTHLY SERVICE AVAILABILITY CHARGE

#### MONTHLY VOLUME CHARGE

Meter Size	Service Availability Charge*	Usage Blocks, Gallons	Rate Per 100 Gallons
5/8"	\$ 16.14	<b>Threshold</b>	
3/4"	17.76	1,496	\$0.0000
1"	20.17	2,992	0.3450
1-1/2"	28.24	Over 2,992	0.5174
2"	40.35		
3"	80.67		
4"	121.02		
6"	201.69		
8"	322.70		
10"	484.05		
12"	645.40		

\* Customers who do not have a winter record of water usage or an interim average will be billed for sewer service assuming 5,985 gallons monthly sewer usage. Customers without a SAWS water meter will be charged the Sewer Service Availability Charge based on a 5/8" meter size.

## General Class Sewer Service (Effective for Consumption on or about January 1, 2018)

## INSIDE CITY LIMITS ("ICL")

#### MONTHLY SERVICE AVAILABILITY CHARGE

#### MONTHLY VOLUME CHARGE

Meter Size	Service Availability Charge*	Usage Blocks, Gallons	Rate Per 100 Gallons
5/8"	\$ 13.45	Base**	
3/4"	14.79	1,496	\$0.0000
1"	16.80	Over 1,496	0.3851
1-1/2"	23.53		
2"	33.62		
3"	67.23		
4"	100.84		
6"	168.07		
8"	268.90		
10"	403.38		
12"	537.83		

- \* Customers without a SAWS water meter will be charged the Sewer Service Availability Charge based on a 2"
- \*\* The Base Use is defined as 100% of the Annual Average Consumption.

## OUTSIDE CITY LIMITS ("OCL")

#### MONTHLY SERVICE AVAILABILITY CHARGE

#### MONTHLY VOLUME CHARGE

Meter Size	Service Availability Charge*	Usage Blocks, Gallons	Rate Per 100 Gallons
5/8"	\$ 16.14	Base**	
3/4"	17.76	1,496	\$0.0000
1"	20.17	Over 1,496	0.4622
1-1/2"	28.24		
2"	40.35		
3"	80.67		
4"	121.02		
6"	201.69		
8"	322.70		
10"	484.05		
12"	645.40		

- \* Customers without a SAWS water meter will be charged the Sewer Service Availability Charge based on a 2" meter size.
- \*\* The Base Use is defined as 100% of the Annual Average Consumption.

## Wholesale Sewer Service (Effective for Consumption on or about January 1, 2018)

MONTHLY SERVICE AVAILABILITY CHARGE All Meter Sizes: \$314.88 MONTHLY VOLUME CHARGE All Usage: \$0.4109

## WATER SERVICE INTERCONNECT RATE (EFFECTIVE JANUARY 1, 2006)

On November 17, 2005, the City Council approved the establishment of a Water Service Interconnect Rate. Water purveyors and entities outside the System have and are anticipated to continue to request connections to the System to receive potable water services on a short-term, unscheduled basis. Through these connections, these purveyors then resell the water provided by the System to their customers.

In order to ensure equitable recovery of costs and mitigate usage of these interconnections on more than a short-term basis, a Water Service Interconnect Rate was established. The rate is structured to provide short-term temporary water service while encouraging long-term water service agreements. In addition, the rate ensures that water purveyors utilizing potable water through the interconnection with the System do not profit when reselling this water to their own customers. Water purveyors who connect to the System under the Water Service Interconnect Rate shall pay for all services related to connecting to the infrastructure of the System to include applicable capital and operating costs.

Under the Water Service Interconnect Rate, water purveyors are charged all of the following:

- 1. The highest bill calculated based on metered usage using the System's or the water purveyors current residential rate schedules;
- 2. The System's meter fee for standby service;
- 3. Additional standby charges of 10 times the meter fee for each month of usage, if usage occurs two consecutive months or more than three months during a calendar year; and
- 4. Time and material charges incurred to service the interconnect infrastructure.

## **IMPACT FEES (EFFECTIVE JUNE 9, 2014)**

On June 9, 2014, the City Council approved amendments to the System's Impact Fees Land Use Assumption Plan ("LUAP") and Impact Fees Capital Improvements Plan ("IFCIP") based on projections for the 10-year period of 2014-2023. Using these amended plans, at the same time the City Council approved amendments to the water supply, water flow, water system development, wastewater collection, and wastewater treatment impact fees for all areas served by the System. Chapter 395, Texas Local Government Code, as amended ("Chapter 395") requires that the LUAP and IFCIP must be updated at least every five (5) years. The previous impact fees for water delivery, water supply, and wastewater were approved by the City Council in 2011.

Chapter 395 requires that impact fees be calculated for an equivalent dwelling unit ("EDU") based upon a LUAP that projects new demand for a period not to exceed 10 years and IFCIP costs associated with providing service to that new demand. The amended LUAP for 2014-2023 projects 93,817 new water EDUs and 95,589 new wastewater EDUs. The pro-rata cost of existing and future capital improvements projects to serve the 2014-2023 growth is estimated to be \$731.2 million as set forth in the amended IFCIP.

Based on the 10-year LUAP and IFCIP numbers above, the maximum impact fees were calculated for each major category of fees; i.e., water supply, water flow, water system development, wastewater collection, and wastewater treatment for each related service area and approved as follows:

## SUMMARY OF MAXIMUM IMPACT FEES (Impact Fees are shown as per EDU)

Water Supply Impact Fee	\$	2,796
Water Delivery		
Flow	\$	1,182
System Development		
High Elevation	\$	619
Middle Elevation	\$	799
Low Elevation	\$	883
Wastewater		
Treatment		
Medio Creek	\$	1,429
Dos Rios/Leon Creek		786
Collection		
Medio Creek	\$	838
Upper Medina	\$	1,565
Lower Medina		475
Upper Collection		2,520
Middle Collection	\$	1,469
Lower Collection	\$	719

#### EDWARDS AQUIFER AUTHORITY PERMIT FEE: SAN ANTONIO WATER SYSTEM

City Ordinance provides for the establishment and assessment of a pass-through charge of the EAA Permit Fee to all System water customers. The purpose of the fee is to recover fees paid to the EAA for permitted water rights. The annual fee takes into account any cumulative deficit or surplus in the recovery, number of EAA water rights and projected water sales (in gallons) for the year.

	EAA Fee
Year	(per 100 gallons)
2009	0.01222
2010	0.01841
2011	0.01407
2012	0.01719
2012*	0.03901
2013	0.03425
2014	0.03295
2015	0.03311
2016	0.04259
2017	0.03612
2018	0.03533

<sup>\*</sup> Increased April 1, 2012 to include a \$50/acre-foot fee to support funding for the EAA HCP (see "THE SAN ANTONIO WATER SYSTEM - Edwards Aquifer Management Plan").

### TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) FEE

The TCEQ imposes certain fees on the System, which is applied to all residential, commercial, and wholesale accounts as well as each apartment account based on the number of units. The annual fee takes into account any cumulative deficit or surplus in the recovery.

TCEQ Pass-Through Fee				
Service Type (Monthly Fee)	Water Connection Fee	Wastewater Connection Fee		
2010	\$0.19	\$0.05		
2011	0.19	0.05		
2012	0.17	0.06		
2013	0.17	0.05		
2014	0.18	0.06		
2015	0.18	0.06		
2016	0.18	0.06		
2017	0.18	0.06		
2018	0.18	0.06		

#### ENVIRONMENTAL MATTERS AND REGULATORY MATTERS

The City and the System are subject to the environmental regulations of the State and the United States in the operation of the System's water, wastewater, stormwater, and chilled water systems. These regulations are subject to change, and the City and the System may be required to expend substantial funds to meet the requirements of such regulatory authorities.

#### GENERAL REGULATORY CLIMATE

The election of President Donald Trump in November 2016 resulted in a host of new administrators to top government agencies, especially those positions affecting the environment. Since inauguration and throughout the Trump administration, officials continue to engage in efforts to roll back previous regulations promulgated by the EPA under previous presidential administrations.

#### SAFE DRINKING WATER ACT

In August 1996, amendments to the federal Safe Drinking Water Act were signed into law, with additional amendments following in subsequent years, including provisions relating to eliminating lead in drinking water. The federal Safe Drinking Water Act requires the EPA to regulate a wide variety of contaminants that may be present in drinking water, including volatile organic chemicals ("VOCs"), other synthetic organic chemicals, inorganic chemicals, microbiological contaminants, and radionuclide contaminants. The list of contaminants to be regulated is so lengthy that the amendments require the EPA to establish a schedule for developing regulations regarding the contaminants. There are several phases in the EPA's regulatory timetables that are to be undertaken over the next few years. The initial impacts of the amendments to the System have not been significant, as the System has been able to materially comply with these regulations that have been promulgated to date. The full impact is difficult to project at this time, and would be dependent upon what maximum contaminant levels may be set for some future parameters and enhanced water treatment rules. Many of these parameters, such as waterborne pathogens, radionuclides, and infection by-products contaminants may require treatment changes that have not as yet been established by the EPA.

The System is in material compliance with several EPA drinking water rules adopted over the past decade including the Disinfectant/Disinfection Byproduct Rule, the Enhanced Surface Water Treatment Rule, the Long Term 2 Enhanced Surface Water Treatment Rule, the Stage 2 Disinfectant and Disinfection Byproduct Rule, and the Unregulated Contaminant Monitoring Rule. No increased capital expenditures have been required or are anticipated to be required to maintain compliance with the foregoing rules. In October 2006, the EPA also finalized its Groundwater Rule, a regulation designed to identify and address systems including ground water supplies that are at a high risk of contamination with fecal coliforms. The EPA's Groundwater Rule may have an impact on the System if it is determined that any individual production well may need additional treatment. Estimated cost for compliance with the Groundwater Rule may be up to \$2.00 per gallon at any well that may be affected.

Continued changes in rules and regulations may continue to cause process modifications, which may increase the cost of the maintenance and operation of the City's drinking water treatment and distribution facilities. These modifications and upgrades may require increased capital expenditures, which may be financed by the issuance of additional revenue bonds.

### FEDERAL AND STATE REGULATION OF THE WASTEWATER FACILITIES

The federal Clean Water Act and the Texas Water Code regulate the System's Wastewater operations, including the collection system and the wastewater treatment plants. All discharges of pollutants into the nation's navigable waters must comply with the Clean Water Act. The Clean Water Act allows municipal wastewater treatment plants to discharge treated effluent to the extent allowed in permits issued by the EPA pursuant to the National Pollutant Discharge Elimination System (the "NPDES") program, a national program established by the Clean Water Act for issuing, revoking, monitoring, and enforcing wastewater discharge permits. The Clean Water Act authorized the EPA to delegate the EPA's NPDES permit responsibility to State or interstate agencies after certain prerequisites have been met by the relevant agencies. The EPA has delegated NPDES permit authority to the TCEQ, which means that the TCEQ is the lead agency for issuing Clean Water Act permits to the System. The System has current TPDES permits for its facilities, issued by the TCEQ, which are also issued under authority granted to the TCEQ by the Texas Water Code. Both EPA and TCEQ have authority to enforce the Texas Pollutant Discharge Elimination System (the "TPDES") permits.

TPDES permits set limits on the type and quantity of wastewater discharge, in accordance with State and federal laws and regulations. The Clean Water Act requires municipal wastewater treatment plants to meet secondary treatment effluent limitations (as defined in EPA regulations). The

Clean Water Act also requires that municipal plants meet any effluent limitations established by State or federal laws or regulations, which are more stringent than secondary treatment.

On June 1, 2010, the EPA published a notice in the Federal Register seeking stakeholder input to help the EPA determine whether to modify the NPDES regulations as they apply to municipal sanitary sewer collection systems and sanitary sewer overflows. Four public listening sessions were conducted in June and July 2010 in which stakeholder and public comment was received by the EPA. The EPA represented that it has not yet determined whether new rules or policies will be proposed. Should the EPA propose new requirements in NPDES permits, SAWS may incur additional costs associated with the operation and maintenance of the sanitary sewer system. On October 27, 2011, the Office of Water and the Office of Enforcement and Compliance Assurance issued a Memorandum on Achieving Water Quality Through Integrated Municipal Stormwater and Wastewater Plans. The memorandum outlines the development of an integrated planning approach framework to help EPA work with local governments toward cost-effective decisions and solutions regarding the implementation of NPDES related obligations. The framework will identify: (1) the essential components of an integrated plan; (2) steps for identifying municipalities that might make the best use of such an approach; and (3) how best to implement the plans with state partners under the Clean Water Act permit and enforcement programs. On June 5, 2012, the EPA issued its Integrated Municipal Stormwater and Wastewater Planning Approach document. This document encourages the EPA Regions to work with the states in their regions to implement integrated planning that will assist municipalities on their critical paths to achieving health and water quality objectives of the Clean Water Act by identifying efficiencies in implementing requirements that arise from distinct wastewater and stormwater programs. In August 2014, the EPA finalized amendments to the Clean Water Act's NPDES program, requiring applicants use "sufficiently sensitive" analytical test methods when completing permit applications. Furthermore, the permit-issuing authority must prescribe that only sufficiently sensitive methods be used for analyses of pollutants or pollutant parameters under a NPDES permit. On October 10, 2014, the EPA announced its provision of \$335,000 in technical assistance to five communities to develop components of integrated plans for meeting Clean Water Act requirements for municipal wastewater and stormwater management. These five projects will provide examples of how communities can develop elements of integrated plans to support Clean Water Act permit conditions and provide useful information and transferable tools to other communities interested in integrated planning. On May 18, 2016, the EPA proposed revisions to the NPDES regulations to eliminate regulatory and application form inconsistencies, improve permit documentation, transparency and oversight, clarify existing regulations, and remove outdated provisions. Comments to the proposed revisions were due August 2, 2016. The EPA has not yet published the results of any comments received.

On February 28, 2017, President Trump executed an executive order mandating the EPA formally reconsider the EPA's Clean Water Rule, as well as the definition of "Waters of the U.S." (the "Water Executive Order" or "WOTUS"). On June 27, 2017, the EPA initiated the repeal of the WOTUS by proposing to reinstate prior Clean Water Rule policies, including jurisdictional provisions provided for in prior codifications. On November 16, 2017, the EPA and the U.S. Department of the Army (the "Army") proposed changes to the WOTUS to delay its effective date for two more years and hope to take further action in early 2018. On November 22, 2017, the EPA and the Army published a proposed rule in the Federal Register to amend the effective date of the 2015 rule defining WOTUS. The rule is still under a regulatory stay. The rule proposes to repeal the 2015 rule and recodify the regulatory text defining WOTUS that was in place prior thereto. The U.S. Senate Committee on Environment and Public Works held a hearing on April 18, 2018, entitled "The Appropriate Role of States and the Federal Government in Protecting Groundwater" and focused on the federal government's proper role in regulating groundwater pollution under the Clean Water Act, including whether a permit under the NPDES should be required to cover sources of pollutants that enter groundwater and then move into surface waters covered under the Clean Water Act as WOTUS.

On January 22, 2018, the Supreme Court ruled that challenges to the Clean Water Act belong at the district, rather than the appellate court level. Now that the Supreme Court established proper jurisdiction for Clean Water Act challenges, several district court cases previously put on hold could be restarted.

### STATUS OF DISCHARGE PERMITS FOR CITY'S WASTEWATER TREATMENT PLANTS

All of the System's wastewater treatment plants have been issued TPDES discharge permits by the TCEQ. An occasional upset may cause permit violations, but generally all of these plants are in compliance with their respective discharge limitations. The EPA notified the System during 2007 of concerns regarding reported sewer overflows under the TPDES permits. The EPA's concerns and the System's response are discussed under "THE SAN ANTONIO WATER SYSTEM - Sewer Management Program" herein.

### POTENTIAL PENALTIES FOR THE CITY'S WASTEWATER SYSTEM'S VIOLATIONS

The failure by the System to achieve compliance with the Clean Water Act could result in either a private plaintiff or the EPA instituting a civil action for injunctive relief and civil penalties of up to \$37,500 per day per violation. Effective January 15, 2017, for violations occurring after November 2, 2015, the maximum amount of a civil penalty that may be assessed will increase to \$52,414 per violation. In addition, the EPA has the power to issue administrative orders compelling compliance with its regulations and the applicable permits. The EPA can also bring criminal actions for recovery of penalties of up to \$50,000 per day for willful or negligent violations of permit conditions or discharge without a permit. Violations of permits or administrative orders may result in the disqualification of a municipality from eligibility for federal assistance to finance capital improvements pursuant to the Clean Water Act. Even though the System will be operating under TPDES permits, it still may be liable for penalties from the EPA under the Clean Water Act.

Under State law, civil penalties for violation of State wastewater discharge permits or orders of the TCEQ can be a maximum of \$25,000 per day per violation. The Executive Director of the TCEQ also has authority to levy administrative penalties of up to \$25,000 per day for violations of rules, orders, or permits. Orders resulting from a civil action could require the imposition of additional user or service charges or the issuance of additional bonds to finance the improvements required to ameliorate a condition that may have caused the violation of a TCEQ permit.

See "THE SAN ANTONIO WATER SYSTEM – Sewer Management Program" herein for a discussion regarding SAWS' receipt of an administrative order from the EPA regarding an alleged violation related to discharge limitations at its Mitchell Lake facility.

#### **GROUND-LEVEL OZONE**

On March 12, 2008, the EPA revised the national ambient air quality standards (the "NAAQS") for ground-level ozone (the primary component for smog). This revision was part of a required review process mandated by the Clean Air Act, as amended in 1990. Prior to the revision, an area met the ground-level ozone standards if the three-year average of the annual fourth-highest daily maximum eight-hour average at every ozone monitor (the "eight-hour ozone standard") was less than or equal to 0.08 parts per million ("ppm"). Because ozone is measured out to three decimal places, the standard effectively became 0.084 as a result of rounding. The EPA's March 2008 revision changed the NAAQS such that an area's eight-hour ozone standard must not exceed 0.075 ppm rather than the previous 0.084 ppm.

The Clean Air Act requires the EPA to designate areas as "attainment" (meeting the standards), "nonattainment" (not meeting the standards), or "unclassifiable" (insufficient data to classify). As a result of the revisions to the NAAQS, states were required to make recommendations to the EPA no later than March 12, 2009 for areas to be classified attainment, nonattainment, or unclassifiable. On March 10, 2009, former Texas Governor Rick Perry submitted a list of 27 counties in Texas, including Bexar County that should be designated as nonattainment. The final designations were put on hold while the EPA worked on revising the standard even further downward.

On January 6, 2010, the EPA formally proposed a regulation that would lower the primary NAAQS for ozone to a level within a range of 0.060 to 0.070 ppm. The EPA postponed issuing a final rule revising the ozone NAAQS standards from August 31, 2010 to October 2010. At the end of 2010, the EPA postponed the final rule until July 2011. On September 2, 2011, President Obama requested that the EPA withdraw the draft of the NAAQS revision. On September 22, 2011, the EPA issued a memorandum stating it would designate areas as non-attainment under the 2008 ozone standard of 0.075 ppm. On December 18, 2014, the EPA completed its initial nonattainment designations under the 2012 annual fine particle standard, issuing a revision to the list on March 31, 2015.

On November 26, 2014, the EPA proposed ozone standards to within a range of 65 to 70 parts per billion ("ppb"), while taking comment on a level as low as 60 ppb. The proposed revision to the NAAQS was published in December 2014. On October 1, 2015, the EPA lowered the NAAQS for ground level ozone from 75 ppb to 70 ppb, "based on extensive scientific evidence about the ozone's effects on public health and welfare". The EPA was under a court order to finalize this rulemaking on or before such date. Under the Clean Air Act, the EPA has two years from the time it finalizes a revised NAAQS to complete the designation process. Some final designations were issued in 2017. On February 25, 2016, the EPA issued the area designations for the 2015 NAAQS in a memorandum, which also outlined the important factors that the EPA intends to evaluate in making the final nonattainment area boundary decisions for these standards. On August 3, 2016, the TCEQ approved a recommended nonattainment designation for Bexar County and submitted that recommendation to Texas Governor Greg Abbott for consideration. Texas Governor Greg Abbott's recommendations of area designations within the State were due to the EPA by October 1, 2016. The EPA was expected to make final designations by October 1, 2017. On June 6, 2017, the EPA sent a letter to each state governor stating that designations will be delayed by one year, making October 2018 the new deadline; however, on August 11, 2017, the EPA stated it would provide designations by the original October 1, 2017 date. The EPA did not make the designations by October 1, 2017, and the designations are now expected to be made in spring 2018. On December 5, 2017 several states filed suit in the Northern District of California alleging the EPA had a duty to designate all areas within the county, as opposed to a partial designation of the counties released so far. Several environmental groups filed a lawsuit in the same court the day prior alleging the same causes of action. If the EPA issues a designation that deviates from a state's recommendation, it must notify the state at least 120 days prior to promulgating the final designations. Following the issuance of final designations, states are required to submit State Implementation Plans ("SIPs") outlining how they will reduce pollution to meet the new standards. These SIPs are due to the EPA by a date established under a separate rule, but will be no later than three years after the EPA's final designations (e.g., 2021 if the EPA makes its designations in 2018). On December 19, 2017, the United States Court of Appeals for the District of Columbia Circuit (the "D.C. Circuit Court") issued an order requiring the EPA to file a report describing when it plans to issue a final rule establishing air quality designation for the 2015 ozone NAAQS. In conjunction with the revised NAAQS, the EPA proposed separate rules to address monitoring the new standard. Generally, the proposal from the EPA would require a greater number of EPA-approved monitors in both urban and non-urban areas and longer ozone monitoring seasons in many states. For Texas, the proposal calls for year-round monitoring throughout the state. The EPA is scheduled to make remaining attainment or nonattainment designations no later than April 30, 2018, with the exception of Bexar County. On January 24, 2018, EPA Assistant Administrator William Wehrum stated in the California court proceedings that the EPA may take until August 10, 2018, to finalize designations for the eight counties in the San Antonio area. On March 12, 2018, U.S. District Judge Haywood S. Gilliam Jr. issued an order requiring the EPA to decide whether the City meets federal ozone standards by July 17, 2018, two weeks earlier than previously communicated by EPA officials.

The San Antonio metropolitan statistical area currently has three monitoring sites which are likely to be used to determine the area's compliance with the ozone standard. As of April 26, 2018, the area's three-year average was 70 ppb.

Any State plan formulated to reduce ground-level ozone may curtail new industrial, commercial and residential development in San Antonio and adjacent areas (the "San Antonio Area"). Examples of past efforts by the EPA and the TCEQ to provide for annual reductions in ozone concentrations in areas of nonattainment under the former NAAQS include imposition of stringent limitations on emissions of volatile organic compounds ("VOCs") and nitrogen oxides ("NOx") from existing stationary sources of air emissions, as well as specifying that any new source of significant air emissions, such as a new industrial plant, must provide for a net reduction of air emissions by arranging for other industries to reduce their emissions by 1.3 times the amount of pollutants proposed to be emitted by the new source. Studies have shown that standards significantly more stringent than those currently in place in the San Antonio Area and across the State are required to meaningfully impact an area's ground-level ozone reading, which will be necessary to achieve compliance with the new 70 ppb ozone standard. Due to the magnitude of air emissions reductions required as well as the limited availability of economically reasonable control options, the development of a successful air quality compliance plan for areas of nonattainment within the State has proven to be extremely challenging and will inevitably impact a wide cross-section of the business and residential community.

Failure by an area to comply with the ozone standard by the requisite time could result in the EPA's imposing a moratorium on the awarding of federal highway construction grants and other federal grants for certain public works construction projects, as well as severe emissions offset requirements on new major sources of emissions for which construction has not already commenced. Other constraints on economic growth and development include lawsuits filed under the Clean Air Act by plaintiffs seeking to require emission reduction measures that are even more stringent than those approved by the EPA. From time to time, various plaintiff environmental organizations have filed lawsuits against the TCEQ and the EPA seeking to compel the early adoption of additional emission reduction measures, many of which could make it more difficult for businesses to construct or expand industrial facilities or which could result in travel restrictions or other limitations on the actions of businesses, governmental entities and private citizens. Any successful court challenge to the currently effective air emissions control plan could result in the imposition of even more stringent air emission controls that could threaten continued growth and development in the San Antonio Area. It remains to be seen exactly what steps will ultimately be required to meet federal air quality standards, how the EPA may respond to developments as they occur, and what impact such steps and any EPA action have upon the economy and the business and residential communities in the San Antonio Area.

#### CLEAN POWER PLAN

On October 23, 2015, the EPA published its final rules to limit greenhouse gas emissions from fossil fuel fired power plants ("Clean Power Plan"). The rule limits carbon dioxide emissions from power plants, requiring a 32% nationwide reduction of such emissions (compared to 2005 emissions) by 2030. States are required to develop comprehensive plans to implement rule requirements and to submit them to EPA by September 6, 2016, with a possible 2 year extension, so final complete state plans must be submitted no later than September 6, 2018. States must demonstrate emissions reductions by 2022.

Lawsuits have been filed challenging the new rules and consolidated into one case in the D.C. Circuit Court. Parties requested that the D.C. Circuit Court stay the application of the rules pending final resolution of the legal challenges. On January 21, 2016, the D.C. Circuit Court denied the requests. On January 26, 2016, the parties, led by the States of West Virginia and Texas, filed a petition with the Supreme Court of the United States ("SCOTUS") requesting postponement of any implementation of the Clean Power Plan until the D.C. Circuit Court's review is complete. A second stay application was submitted to SCOTUS by a group of sixty utility companies and industry trade groups.

On February 9, 2016, the SCOTUS granted the applications of numerous parties to stay the Clean Power Plan pending judicial review of the rule. The stay will remain in effect pending disposition of the applicant's petition for writ of certiorari, if such review is sought. States were required to submit an emission reduction plan or request an extension by September 6, 2016. For states receiving an extension, progress updates were due to the EPA on September 6, 2017, with final plans due September 6, 2018.

The D.C. Circuit Court, on its own motion, issued an order delaying oral arguments, which such arguments were heard *en banc* on September 27, 2016. The litigation is massive in scale — nearly every state in the nation is involved in some capacity. West Virginia is leading a coalition of 27 states who are challenging the rule, while 18 states have come to the Clean Power Plan's defense. The parties are currently awaiting a decision on the merits. On March 28, 2017, President Trump signed an executive order directing the EPA Administrator to immediately review and begin steps to rescind the Clean Power Plan, which included a request to delay the court proceedings. The EPA asked the D.C. Circuit Court to delay issuing an opinion on the matter in March 2017. On April 5, 2017, seventeen states and seven municipalities filed a brief in opposition to this delay. On April 28, 2017, the D.C. Circuit Court granted the EPA's request, holding the litigation in abeyance for 60 days and requested briefing on consolidated cases concerning whether the Clean Power Plan should be remanded to the EPA or held in abeyance. On August 8, 2017, the court postponed the litigation for 60 more days. On November 9, 2017, the D.C. Circuit Court issued an order rejecting the Trump Administration's request for an indefinite abeyance of the Clean Power Plan litigation. The D.C. Circuit Court ordered the abeyance to extend for another 60 days and issued another order, dated March 1, 2018, continuing the abeyance for an additional 60 days.

On April 3, 2017, the EPA withdrew the Clean Power Plan. The EPA has not indicated what new regulations designed to limit carbon dioxide emissions may be promulgated by the EPA in the future. If regulations similar to the Clean Power Plan are eventually promulgated and adopted, individual states would be required to reduce carbon dioxide emissions by 2030 from between approximately 7% to 48%. The State is expected to be required to reduce carbon dioxide emissions by approximately one-third as compared to 2005 emission levels. Given the size of the State's electricity market and the electricity demand from the State's large manufacturing and chemical industries, the State will be required to reduce more carbon dioxide emissions (as a matter of tons) than any other state.

It is not currently known what effect the implementation of any new rules may have on the cost of electricity. SAWS is a major consumer of electricity in the operation of its water production wells, water distribution system, sewer treatment operations, and reuse water distributions system. Any increases in the cost of electricity will increase the cost of providing these services. It is also not known whether required conversion to nonfossil fueled electrical generation will affect the provision of electrical capacity required to operate SAWS' current systems. These effects will not be known until the compliance requirements for electrical generating utilities become more certain.

### LITIGATION

## CITY OF SAN ANTONIO GENERAL LITIGATION AND CLAIMS

This section describes the litigation involving the City that does not directly involve SAWS or claims payable out of System revenues. Please see "LITIGATION – SAWS Litigation and Potential Litigation" herein for a description of litigation involving SAWS.

The City is a defendant in various lawsuits and is aware of pending claims arising in the ordinary course of its municipal and enterprise activities, certain of which seek substantial damages. That litigation includes lawsuits claiming damages that allege that the City caused personal injuries and wrongful deaths; class actions and promotional practices; various claims from contractors for additional amounts under construction contracts; and property tax assessments and various other liability claims. The amount of damages in most of the pending lawsuits is capped under the Texas Tort Claims Act, Chapter 101, Texas Civil Practice and Remedies Code, as amended (the "TTCA"). Therefore, as of the City's fiscal year ended

September 30, 2017, the amount of \$12,896,950 (unaudited) is included as a component of the reserve for claims liability. The estimated liability, including an estimate of incurred but not reported claims, is recorded in the Insurance Reserve Fund of the City. The status of such litigation ranges from early discovery stage to various levels of appeal of judgments both for and against the City. The City intends to defend vigorously against the lawsuits, including the pursuit of all appeals; however, no prediction can be made, as of the date hereof, with respect to the liability of the City for such claims or the outcome of such lawsuits.

In the opinion of the City Attorney, it is improbable that the lawsuits now outstanding against the City could become final in a timely manner, as determined by the date posted hereof, so as to have a material adverse financial impact upon the City that should be reflected in the financial information of the City included herein.

The City provides the following updated information related to the lawsuits:

Cheryl Jones, et al. v. City of San Antonio et al. On February 28, 2014, Marquise Jones was shot by a San Antonio Police Department ("SAPD") police officer at Chacho's Restaurant. Plaintiffs are asserting claims under 42 U.S.C. § 1983 against the City and the police officer for excessive force, racial profiling, and failure to train and under the Texas Survival Statute and Texas Wrongful Death Statute for assault and battery, intentional infliction of emotional distress, and gross negligence. Plaintiffs seek damages of at least \$5 million for loss of affection, consortium, financial assistance, pain and suffering of decedent prior to death, mental anguish, emotional distress, quality of life, exemplary and punitive damages, attorneys' fees, and costs of court. This case was tried beginning on March 27, 2017. A jury rendered a verdict in favor of the City and the officer on April 4, 2017. Plaintiffs filed a motion for a new trial, which was denied on August 30, 2017. Plaintiffs have appealed this matter to the Texas Supreme Court.

Jimmy Maspero and Regina Maspero, et al. v. City of San Antonio et al. Plaintiffs allege that on September 19, 2012 Plaintiffs' vehicle was involved in a collision with a vehicle being pursued by a SAPD patrol car causing the death of two of Plaintiffs' children and severe permanent injuries to the remaining Plaintiffs (two children, two adults). The Plaintiffs have asserted a "state-created danger" theory under 42 U.S.C. § 1983 alleging a violation of Plaintiffs' 14th Amendment substantive due process. Plaintiffs are also asserting State law theories of negligence. Plaintiffs seek to recover damages for mental anguish, physical pain, impairment, medical expenses, and the wrongful death of two of their children. Plaintiffs are seeking monetary damages of at least \$3 million. This case has been remanded back to State district court. On February 19, 2018, the District Court granted the City's plea to the jurisdiction, dismissing all claims. Plaintiffs have filed a motion for new trial.

Roxana Tenorio, Individually and on behalf of Pedro Tenorio, Deceased v. Benito Garza and City of San Antonio. Plaintiff claims that a SAPD high-speed pursuit of Defendant Benito Garza was the cause of a vehicle accident on September 21, 2012 in which Pedro Tenorio was killed. The accident occurred in the 9400 block of SW Loop 410. Plaintiff sued Benito Garza and the City under the TTCA for negligence. Plaintiff is seeking monetary relief in excess of \$1 million for past and future mental anguish, loss of consortium, loss of inheritance, loss of companionship and pecuniary damages under the Texas Wrongful Death Act and Texas Survival Act. The City's plea to the jurisdiction was denied. The City filed an interlocutory appeal to the Fourth Court of Appeals. The Trial Court's denial of the plea was affirmed, with one justice dissenting. The City filed a petition for review with the Texas Supreme Court. On March 23, 2018, the Texas Supreme Court issued an opinion granting the petition for review, reversing the denial of the plea and dismissing all claims against the City. It is anticipated the Plaintiffs will file a motion for reconsideration.

Estate of Norman Cooper, et al. v. City of San Antonio, et al. SAPD officers were called to a residence on a report of domestic violence. At the scene, decedent was tased on two separate occasions. Decedent later collapsed and died. Decedent's estate and family members have filed suit against the City and named officers alleging use of excessive force in violation of 42 U.S.C. § 1983. Plaintiffs seek damages in excess of \$250,000. Discovery closed on September 1, 2017. This matter is not yet set for trial.

Elena Scott, Individually and as Representative of the Estate of Antronie Scott v. City of San Antonio, et al./Diane Peppar, et al. v. City of San Antonio, et al. A SAPD officer was attempting to execute an arrest warrant when Plaintiff's decedent exited his vehicle with an object the officer believed was a weapon. The officer discharged his service weapon, fatally wounding decedent. Plaintiffs have filed suit under 42 U.S.C. § 1983 alleging use of excessive force. This case was consolidated with Diane Peppar v. City of San Antonio. Diane Peppar is Decedent Antronie Scott's mother. At present, no trial date is set. The parties are still completing expert discovery.

Rogelio Carlos III, et al. v. Carlos Chavez, et al. SWAT officers were assisting High Intensity Drug Trafficking Areas ("HIDTA") officer in searching for a fleeing suspect. Plaintiff was misidentified by the HIDTA officer as being a suspect. The HIDTA officer engaged and attempted to physically apprehend the Plaintiff and was assisted by SAPD SWAT officers. Plaintiff suffered minor injuries as a result of the arrest, although he later complained of neck and shoulder/arm pain. Several months after the incident, Plaintiff underwent surgery, during which procedure, Plaintiff was paralyzed. Plaintiff has filed suit against the City and various officers under 42 U.S.C. § 1983. Discovery is ongoing. The Plaintiff's have amended their suit to include the physicians involved in Plaintiff's surgical procedure. This case has not been set for trial.

Neka Scarborough Jenkins v. City of San Antonio. Plaintiff's decedent was driving northbound on Blanco Road and attempted to turn left onto Lockhill Selma Road at a controlled traffic signal. Plaintiff contends that the traffic signal for her lane of traffic was facing the wrong direction. While making the turn, decedent was struck by an oncoming vehicle and was killed. Plaintiff claims the City had prior notice but failed to correct the issue within a reasonable period of time. Plaintiff also claims the investigation revealed the light was placed too low and was not at the correct height for a traffic signal. This is fairly new litigation and is brought under the TTCA. Facts and damages have not been vetted through the discovery process at this time. Under the TTCA, damages are capped at \$250,000. Discovery is ongoing. This case is not yet set for trial.

Tracy Ann Carter, Individually and as Representative of the Estate of Josephine Carter, Deceased, and Paul Allen Carter, Individually v. Daniel Brian Jones and City of San Antonio. Plaintiffs bring suit for the wrongful death of their mother who was killed in a pedestrian - motor vehicle accident with a San Antonio Police Officer. Plaintiffs claim the decedent was walking across a cul de sac when the officer, who was parked on the west side of the cul de sac, engaged his vehicle and ran over decedent's foot. Decedent fell to the ground, striking her head, resulting in death. Under the TTCA, damages are capped at \$250,000. Discovery is ongoing. This case is not yet set for trial.

#### COLLECTIVE BARGAINING NEGOTIATIONS AND PETITION INITIATIVE

The City is required to collectively bargain the compensation and other conditions of employment with its fire fighters and police officers. The City engages in such negotiations with the association selected by the majority of fire fighters and police officers, respectively, as their exclusive bargaining agent. The International Association of Fire Fighters, Local 624 ("Local 624") is the recognized bargaining agent for the fire fighters. The San Antonio Police Officers Association ("SAPOA") is the recognized bargaining agent for the police officers. The following is a status of the collective bargaining negotiations with each association.

Collective Bargaining Agreement between the City of San Antonio and the San Antonio Police Officers' Association. The City Council approved a collective bargaining agreement with the SAPOA on September 1, 2016, which provides for a term through September 30, 2021.

Collective Bargaining Agreement between the City of San Antonio and the International Association of Fire Fighters, Local 624 (Local 624). The collective bargaining agreement between the City and Local 624 expired September 30, 2014, with refusal for renegotiation by Local 624 pursuant to the bargaining process. The parties continue to operate under the terms of agreement with a challenge by the City to the evergreen clause which purports to extend the agreement through September 30, 2024. The City filed a lawsuit questioning the constitutionality of the evergreen clause. On August 23, 2017, the Texas Fourth Court of Appeals ruled that the City's collective bargaining agreement with Local 624 does not violate the Texas Constitution. Following the decision from the Texas Fourth Court of Appeals, the City petitioned the Texas Supreme Court to rule under the Texas Constitution. The Texas Supreme Court requested that the City and Local 624 file briefs, scheduled for filing through April 13, 2018. After the Texas Supreme Court reviews the briefs, it will decide whether to rule on the case.

In addition, Local 624 commenced gathering signatures on three petitions seeking to amend the City Charter. One petition seeks to expand the topics of referendum in the City Charter to include referendum of any ordinance including appropriations, levying taxes, setting utility rates (which include prospective rate approval supporting the System) and zoning. It lowers the threshold of signatures for a referendum of any ordinance from approximately 70,000 to 20,000 and expands the timeframe for obtaining the signatures from 40 to 180 days. A second petition seeks to allow Local 624 to declare impasse in collective bargaining unilaterally and to unilaterally require binding arbitration upon the City. A third petition seeks to eliminate the City Council's authority to determine compensation and term of the City Manager by limiting pay to 10 times the amount of the lowest paid city employee and limiting the term of a City Manager to eight years. It further would require a supermajority (8 votes out of 11) to select the City Manager. Local 624 delivered these three petitions to the City on April 11, 2018. The City began the process of verifying the validity of each petition in accordance with applicable law. In the event one or more of the petitions are determined to be valid, the City would be required to call a charter amendment election, which would have to occur on a uniform election date permitted under Texas law (the next of which being November 6, 2018) for the voters to consider the amendments proposed under such petition or petitions. Neither the City nor SAWS make any representation as to the potential outcome of these petitions, the results of any referendums concerning their effectiveness if valid, or the immediate, interim, and long-term effect if enacted.

#### SAWS LITIGATION AND POTENTIAL LITIGATION

SAWS is a defendant in various lawsuits and is aware of pending claims arising in the ordinary course of its municipal and enterprise activities, certain of which seek substantial damages. That litigation includes lawsuits claiming damages that allege that SAWS caused personal injuries; claims from contractors for additional amounts under construction contracts; employment discrimination claims, and various other liability claims. The amount of damages in some of the pending lawsuits is capped under the TTCA. The status of such litigation ranges from early discovery stage to various levels of appeal of judgments both for and against SAWS. SAWS intends to defend vigorously against the lawsuits; including the pursuit of all appeals; however, no prediction can be made, as of the date hereof, with respect to the liability of SAWS for such claims or the outcome of such lawsuits.

Spiess Construction Co., Inc. v. San Antonio Water System; Cause No. 2018-CI-0056 in the 408th Judicial District Court, Bexar County, Texas.

On January 11, 2018, Spiess Construction Co. filed suit against SAWS alleging that SAWS breached the construction contract for the C-5 Culebra-Castroville to Laredo & C-28 Zarzamora Creek-San Gabriel to NW 23rd St. project (SAWS Job Nos. 14-4507 and 14-4007) by not paying amounts due for work performed of approximately \$353,000 and unpaid retainage of approximately \$251,000, together with interest and attorneys' fees. SAWS' answer was filed on April 30, 2018. SAWS denies the Plaintiff's allegations and may file a counterclaim for recovery of damages caused by Plaintiff's breaches of contract and for recovery of interest and attorneys' fees.

League of United Latin American Citizens (LULAC), et al. v. Edwards Aquifer Authority (EAA), et al.; Civil Action No. 5:12-CV-620 in the United States District Court for the Western District of Texas, San Antonio Division.

This case was filed by LULAC in June 2012 alleging that the current method of electing the Board of Directors of the EAA violates the federal Voting Rights Act and the one person/one vote requirement of the United States Constitution. Electoral districts for EAA Directors were established by the Texas Legislature in the EAA's enabling act. A subsequent amendment to the EAA Act authorized the EAA to redistrict and directed that any such redistricting had to comply with the Voting Rights Act, while also providing that the number of electoral districts in any county within the EAA's jurisdiction cannot be increased or decreased. As a result of dramatic population growth in Bexar County since adoption of the EAA Act, EAA directors from Bexar County now each represent an average in excess of 250,000 voters, while EAA directors from other counties represent as few as 11,000 voters. Plaintiffs contend that this disparity has greatly increased dilution of the voting strength of Bexar County voters,

and heightened underrepresentation of Bexar County voters and minorities on the EAA Board. Plaintiffs contend that the disparity is expected to grow with the continued growth in Bexar County's population. The great majority of Bexar County residents are SAWS customers. SAWS, and by extension its customers, paid approximately \$24 million in pumping fees to the EAA in 2013. These fees constituted approximately 75% of the EAA's income in 2013. The EAA asserts in its pleadings that it is not subject to federal constitutional rules for equal population of election districts because it is not a governmental entity that exercises levels of control over the lives of ordinary citizens sufficient to trigger the rule. The EAA asserts that it is instead a special purpose district of a type that has been exempted from federal equal population standards by a handful of United States Supreme Court cases, and that its election scheme is rational. SAWS intervened on the side of LULAC in August 2012. The City of San Marcos, New Braunfels Utilities, GBRA, Uvalde County, the City of Uvalde, and Yancey Water Supply Corporation have intervened on the side of the EAA. The Texas Secretary of State was joined in the case as a defendant by LULAC and SAWS in March 2013, primarily because the EAA disclaimed authority to fix the election district disparities. All parties have designated expert witnesses. On March 31, 2014, the United States District Judge issued an Order granting the Texas Secretary of State's motion to be dismissed from the case and denied the EAA's motion that the case should be dismissed on the basis of limitations. Substantive claims against the EAA are left to be resolved on motions for summary judgment. Oral arguments on the motions were heard on June 2, 2014. The Court has not yet issued a judgment, but on March 30, 2018, the Court issued an order indicating a ruling would issue within the next two months.

## Request of the San Antonio Water System for Renewal of Permit to Produce and Transport Groundwater from the Carrizo Aquifer in Gonzales County, Texas; Before the Gonzales County Underground Water Conservation District.

As discussed herein in greater detail under the caption "THE SAN ANTONIO WATER SYSTEM – Regional Carrizo Program", in November 2013, the System began receiving treated Carrizo Aquifer water from the System's Regional Carrizo Water Supply Project (the "RCWS Project"). The RCWS Project has been developed at a cost of approximately \$140 million. The water is produced from System-controlled land and wells in Gonzales County and transported to San Antonio by pipeline. Pursuant to a contract with the SSLGC, the water is treated to potable standards in route to San Antonio at a facility owned and operated by the SSLGC in Guadalupe County. Production and transportation of the water is regulated by the Gonzales County Underground Water Conservation District (previously defined herein as the "District"). The District's activities are governed by Chapter 36, Texas Water Code, as amended, and the District's rules adopted by its Board of Directors.

On July 13, 2010, after a lengthy contested proceeding, the System was issued a single permit (the "RCWS Permit") to produce and transport up to 11,700 acre-feet of water from the RCWS Project. The operating component of the RCWS Permit had a five-year term, with an expiration date of July 12, 2015. The transportation component of the RCWS Permit had a term of thirty years as required by State statute. The System filed a timely request for renewal of the RCWS Permit in accordance with the District's rules. The District's General Manager determined that the RCWS Project was in substantial compliance with the District's rules, thereby entitling the System to renewal of the RCWS Permit by the District's Board of Directors under the District's existing rules.

On July 14, 2015, the District's Board of Directors tabled scheduled action to renew the RCWS Permit. Pursuant to the existing District rules and the terms of the RCWS Permit, the RCWS Permit remained effective until the District's Board of Directors acted on the renewal request. Over the course of the following three months, the District adopted new rules but took no action on the System's request for renewal of the RCWS Permit. New rules adopted by the District on October 10, 2015, provide as follows: "An operating permit subject to renewal shall be administratively renewed for a period of five years in accordance to the rules in effect at the time of renewal." The rules no longer provide that a permit such as the System's will remain valid until action by the Board of Directors on a renewal request.

The Texas Water Code provides that an application such as the System's uncontested request for permit renewal shall be acted on by a groundwater district's board of directors at a publicly called and posted meeting, unless the board by rule has delegated to the general manager of the district the authority to act on the application. The District's Board of Directors has not acted on the System's application and has not delegated authority to the District's General Manager to act on the application. Nonetheless, the System subsequently received two permits from the District. One permit is titled Production Permit and the other permit is titled Export Permit. Both permits were signed by the President of the Board of Directors on November 10, 2015. The term of the Production Permit is five years. The term of the Export Permit is 30 years subject to periodic review by the Board of Directors. The Production Permit includes the following notation: "Auto Permit Granted: July 13, 2015." The Export Permit includes the following notation: "Auto Permit Granted: July 13, 2010."

#### Daniel Nishihara, et al. v. CDM Smith Inc., et al; Cause No. 2018-CI-05898 in the 285th Judicial District Court, Bexar County, Texas

On December 4, 2016, a road collapse occurred in the 8400 block of Quintana Road in the City. At approximately 8 p.m. two passenger vehicles that were operating on Quintana Road were either driven into a hole that developed when the road collapsed, or the road collapsed under the vehicles causing them to fall into a hole that developed where the road collapsed. On December 7, 2016 and January 23, 2017, SAWS received notices from attorneys representing separate individuals alleging that the named individuals were injured as a result of the incident. The letters alleged that an unspecified amount of damages were sustained as a result of the event and gave notice that the letters were a claim against SAWS for such damages. On January 23, 2017, SAWS received another notice from other attorneys representing another individual in another vehicle who died during the incident. On April 2, 2018, Daniel Nishihara, Deborah Danyelle Sanchez, Israel Solis as Independent Executor of the Estate of Dora Linda Nishihara, Deceased, Claudia Milay Silva and Anthony Villarreal (collectively, the "Plaintiffs") filed suit against CDM Smith Inc. F/K/A Camp Dresser & McKee Inc., Damien Herrera, P.E., S.J. Louis Construction of Texas Ltd., S.J. Louis LLC, and the City, acting by and through the SAWS Board (collectively, the "Defendants"). All three of the individuals that provided notice have joined in the suit and are represented by their respective counsel. The Plaintiffs allege various claims against the Defendants, including negligence and gross negligence, among other things. The Plaintiffs each separately seek an unspecified amount of damages of over \$1 million, for various damages including wrongful death and personal injuries allegedly sustained as a result of the incident. SAWS will vigorously defend this lawsuit, including seeking protection afforded by the TTCA, which provides for governmental immunity from suit that SAWS will assert applies to this event, and in the event that a lawsuit is sustainable, the TTCA limits SAWS' liability to \$250,000 for each person and \$500,000 for each single occurrence for bodily injury or death. The deadline for SAWS to file its answer is May 7, 2018.

#### TAX MATTERS

#### TAX EXEMPTION

The delivery of the Bonds is subject to the opinion of Norton Rose Fulbright US LLP, San Antonio, Texas, and Kassahn & Ortiz, P.C., San Antonio, Texas, as Co-Bond Counsel ("Co-Bond Counsel"), to the effect that interest on the Bonds for federal income tax purposes (1) is excludable from the gross income, as defined in section 61 of the Code, of the owners thereof pursuant to section 103 of the Code and existing regulations, published rulings, and court decisions, and (2) will not be included in computing the alternative minimum taxable income of the owners thereof who are individuals or, except as hereafter described, corporations. The statute, regulations, rulings, and court decisions on which such opinions are based are subject to change. The form of the opinion of Co-Bond Counsel concerning the excludability of interest on the Bonds for federal income tax purposes is attached hereto as APPENDIX D.

For taxable years that began before January 1, 2018, interest on the Bonds owned by a corporation will be included in such corporation's adjusted current earnings for purposes of computing the alternative minimum tax on such corporation, other than an S corporation, a qualified mutual fund, a real estate investment trust, a real estate mortgage investment conduit, or a financial asset securitization investment trust. The alternative minimum tax on corporations has been repealed for taxable years beginning on or after January 1, 2018.

In rendering the foregoing opinion, Co-Bond Counsel will rely upon the Certificate of Sufficiency and certifications of the City made in a certificate of even date with the initial delivery of the Bonds pertaining to the use, expenditure, and investment of the proceeds of the Bonds and will assume continuing compliance with the provisions of the Ordinance (pertaining to the Bonds) by the City subsequent to the issuance of the Bonds. The Ordinance contains covenants by the City with respect to, among other matters, the use of the proceeds of the Bonds and the facilities and equipment financed or refinanced therewith by persons other than state or local governmental units, the manner in which the proceeds of the Bonds are to be invested, if required, the calculation and payment to the United States Treasury of any arbitrage "profits" and the reporting of certain information to the United States Treasury. Failure to comply with any of these covenants may cause interest on the Bonds to be includable in the gross income of the owners thereof from the date of the issuance of the Bonds.

Except as described above, Co-Bond Counsel will express no other opinion with respect to any other federal, state or local tax consequences under present law, or proposed legislation, resulting from the receipt or accrual of interest on, or the acquisition or disposition of, the Bonds. Co-Bond Counsel's opinion is not a guarantee of a result, but represents their legal judgment based upon their review of existing statutes, regulations, published rulings and court decisions and the representations and covenants of the City described above. No ruling has been sought from the Internal Revenue Service (the "IRS") with respect to the matters addressed in the opinion of Co-Bond Counsel, and Co-Bond Counsel's opinion is not binding on the IRS. The IRS has an ongoing program of auditing the tax-exempt status of the interest on municipal obligations. If an audit of the Bonds is commenced, under current procedures the IRS is likely to treat the City as the "taxpayer," and the owners of the Bonds would have no right to participate in the audit process. In responding to or defending an audit of the tax-exempt status of the interest on the Bonds, the City may have different or conflicting interests from the owners of the Bonds. Public awareness of any future audit of the Bonds may adversely affect the value and liquidity of the Bonds during the pendency of the audit, regardless of its ultimate outcome.

### TAX CHANGES

Existing law may change to reduce or eliminate the benefit to bondholders of the exclusion of interest on the Bonds from gross income for federal income tax purposes. Any proposed legislation or administrative action, whether or not taken, could also affect the value and marketability of the Bonds. Prospective purchasers of the Bonds should consult with their own tax advisors with respect to any proposed or future changes in tax law.

## ANCILLARY TAX CONSEQUENCES

Prospective purchasers of the Bonds should be aware that the ownership of tax-exempt obligations such as the Bonds may result in collateral federal tax consequences to, among others, financial institutions, property and casualty insurance companies, life insurance companies, certain foreign corporations doing business in the United States, S corporations with subchapter C earnings and profits, owners of an interest in a FASIT, individual recipients of Social Security or Railroad Retirement benefits, individuals otherwise qualifying for the earned income tax credit and taxpayers who may be deemed to have incurred or continued indebtedness to purchase or carry, or who have paid or incurred certain expenses allocable to, tax-exempt obligations. Prospective purchasers should consult their own tax advisors as to the applicability of these consequences to their particular circumstances.

#### TAX ACCOUNTING TREATMENT OF DISCOUNT BONDS

The initial public offering price to be paid for certain Bonds may be less than the amount payable on such Bonds at maturity (the "Discount Bonds"). An amount equal to the difference between the initial public offering price of a Discount Bond (assuming that a substantial amount of the Discount Bonds of that maturity are sold to the public at such price) and the amount payable at maturity constitutes original issue discount to the initial purchaser of such Discount Bonds. A portion of such original issue discount, allocable to the holding period of a Discount Bond by the initial purchaser, will be treated as interest for federal income tax purposes, excludable from gross income on the same terms and conditions as those for other interest on the Bonds. Such interest is considered to be accrued actuarially in accordance with the constant interest method over the life of a Discount Bond, taking into account the semiannual compounding of accrued interest, at the yield to maturity on such Discount Bond and generally will be allocated to an initial purchaser in a different amount from the amount of the payment denominated as interest actually received by the initial purchaser during his taxable year.

However, such accrued interest may be required to be taken into account in determining the alternative minimum tax on corporations for taxable years that began before January 1, 2018, and the amount of the branch profits tax applicable to certain foreign corporations doing business in the United States, even though there will not be a corresponding cash payment. In addition, the accrual of such interest may result in certain other

collateral federal income tax consequences to, among others, financial institutions, property and casualty insurance companies, life insurance companies, S corporations with subchapter C earnings and profits, owners of an interest in a FASIT, individual recipients of Social Security or Railroad Retirement benefits, individuals otherwise qualifying for the earned income tax credit, and taxpayers who may be deemed to have incurred or continued indebtedness to purchase or carry, or who have paid or incurred certain expenses allocable to, tax-exempt obligations.

In the event of the sale or other taxable disposition of a Discount Bond prior to maturity, the amount realized by such owner in excess of the basis of such Discount Bond in the hands of such owner (adjusted upward by the portion of the original issue discount allocable to the period for which such Discount Bond was held) is includable in gross income.

Owners of Discount Bonds should consult with their own tax advisors with respect to the determination for federal income tax purposes of accrued interest upon disposition of Discount Bonds and with respect to the state and local tax consequences of owning Discount Bonds. It is possible that, under applicable provisions governing determination of state and local income taxes, accrued interest on the Discount Bonds may be deemed to be received in the year of accrual, even though there will not be a corresponding cash payment.

#### TAX ACCOUNTING TREATMENT OF PREMIUM BONDS

The initial public offering price to be paid for certain Bonds may be greater than the stated redemption price on such Bonds at maturity (the "Premium Bonds"). An amount equal to the difference between the initial public offering price of a Premium Bond (assuming that a substantial amount of the Premium Bonds of that maturity are sold to the public at such price) and its stated redemption price at maturity constitutes premium to the initial purchaser of such Premium Bonds. The basis for federal income tax purposes of a Premium Bond in the hands of such initial purchaser must be reduced each year by the amortizable bond premium, although no federal income tax deduction is allowed as a result of such reduction in basis for amortizable bond premium with respect to the Premium Bonds. Such reduction in basis will increase the amount of any gain (or decrease the amount of any loss) to be recognized for federal income tax purposes upon a sale or other taxable disposition of a Premium Bond. The amount of premium, which is amortizable each year by an initial purchaser, is determined by using such purchaser's yield to maturity.

Purchasers of the Premium Bonds should consult with their own tax advisors with respect to the determination of amortizable bond premium on Premium Bonds for federal income tax purposes and with respect to the state and local tax consequences of owning and disposing of Premium Bonds.

#### RATINGS

Fitch Ratings, Inc., Moody's, and S&P rated the Bonds "AA", "Aa2", and "AA", respectively. An explanation of the significance of such ratings may be obtained from the company furnishing the rating. The ratings reflect only the respective views of such organizations, and the City makes no representation as to the appropriateness of the ratings. There is no assurance that such ratings will continue for any given period of time or that they will not be revised downward or withdrawn entirely by any or all of such rating companies, if in the judgment of any or all companies, circumstances so warrant. Any such downward revision or withdrawal of such ratings, or any of them, may have an adverse effect on the market price of the Bonds. A securities' rating is not a recommendation to buy, sell or hold securities, and may be subject to revision or withdrawal at any time.

#### CONTINUING DISCLOSURE OF INFORMATION

In the Ordinance, the City, acting by and through SAWS (who has accepted such responsibility by resolution of the Board adopted on April 3, 2018), has made the following agreement for the benefit of the holders and beneficial owners of the Bonds. The City is required to observe the agreement for so long as it remains an "obligated person" with respect to the Bonds, within the meaning of the SEC's Rule 15c2-12 (the "Rule"). Under the agreement, SAWS, on behalf of the City, will be obligated to provide certain updated financial information and operating data annually, and timely notice of specified events, to the MSRB through its EMMA system where it will be available free of charge to the general public at www.emma.msrb.org.

#### ANNUAL REPORTS

SAWS will provide certain updated financial information and operating data to the MSRB. The information to be updated includes all quantitative financial information and operating data with respect to SAWS of the general type included in this Official Statement under the sections DEBT INFORMATION DEBT AND OTHER FINANCIAL INFORMATION and SAWS STATISTICAL SECTION AND MANAGEMENT DISCUSSION, and in APPENDIX B. SAWS will update and provide this information within six months after the end of each fiscal year ending in and after 2018.

The financial information and operating data to be provided may be set forth in full in one or more documents or may be included by specific reference to any document available to the public through EMMA or filed with the SEC, as permitted by the Rule. The updated information will include audited financial statements, if the City commissions an audit and it is completed by the required time. If audited financial statements are not available by the required time, SAWS will provide unaudited financial statements by the required time and audited financial statements when and if such audited financial statements become available. Any such financial statements will be prepared in accordance with the accounting principles described in APPENDIX B or such other accounting principles as SAWS may be required to employ from time to time pursuant to State law or regulation.

SAWS' current fiscal year end is December 31. Accordingly, it must provide updated information by June 30 in each year, unless SAWS changes its fiscal year. If SAWS changes its fiscal year, it will file notice of such change with the MSRB.

#### NOTICE OF CERTAIN EVENTS

SAWS will also provide timely notices of certain events to the MSRB. SAWS will provide notice in a timely manner not in excess of 10 business days after the occurrence of the event of any of the following events with respect to the Bonds: (1) principal and interest payment delinquencies; (2) non-payment related defaults, if material; (3) unscheduled draws on debt service reserves reflecting financial difficulties; (4) unscheduled draws on credit enhancements reflecting financial difficulties; (5) substitution of credit or liquidity providers, or their failure to perform; (6) adverse tax opinions, the issuance by the IRS of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701-TEB) or other material notices or determinations with respect to the tax status of the Bonds, or other material events affecting the tax status of the Bonds; (7) modifications to rights of holders of the Bonds, if material; (8) Bond calls, if material, and tender offers; (9) defeasances; (10) release, substitution, or sale of property securing repayment of the Bonds, if material; (11) rating changes; (12) bankruptcy, insolvency, receivership or similar event of the City or SAWS; (13) the consummation of a merger, consolidation, or acquisition involving the City or SAWS or the sale of all or substantially all of the assets of the City or SAWS, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material; and (14) appointment of a successor or additional Paying Agent/Registrar or change in the name of the Paying Agent/Registrar, if material. As used above in clause (12), the phrase "bankruptcy, insolvency, receivership or similar event" means the appointment of a receiver, fiscal agent or similar officer for the City or SAWS in a proceeding under the U.S. Bankruptcy Code or in any other proceeding under state or federal law in which a court or governmental authority has assumed jurisdiction over substantially all of the assets or business of the City or SAWS, or if such jurisdiction has been assumed by leaving the governing body and officials or officers of the City or SAWS in possession but subject to the supervision and orders of a court or governmental authority, or the entry of an order confirming a plan of reorganization, arrangement or liquidation by a court or governmental authority having supervision or jurisdiction over substantially all of the assets or business of the City or SAWS. Neither the Bonds nor the Ordinance make any provision for liquidity enhancement, debt service reserves as additional security for the Bonds, or credit enhancement. In addition, SAWS will provide timely notice of any failure by SAWS to provide information, data, or financial statements in accordance with its agreement described above under "Annual Reports."

### AVAILABILITY OF INFORMATION

Effective July 1, 2009 (the "EMMA Effective Date"), the SEC implemented amendments to the Rule which approved the establishment by the MSRB of EMMA, which is now the sole successor to the national municipal securities information repositories with respect to filings made in connection with undertakings made under the Rule after the EMMA Effective Date. Commencing with the EMMA Effective Date, all information and documentation filing required to be made by SAWS in accordance with the City's undertaking made for the Bonds will be made with the MSRB in electronic format in accordance with MSRB guidelines. Access to such filings will be provided, without charge to the general public, by the MSRB.

With respect to debt of the City secured by System revenues issued prior to the EMMA Effective Date, SAWS remains obligated to make annual required filings, as well as notices of material events, under its continuing disclosure obligations relating to those debt obligations (which includes a continuing obligation to make such filings with the Texas state information depository (the "SID")). Prior to the EMMA Effective Date, the Municipal Advisory Council of Texas (the "MAC") had been designated by the State and approved by the SEC staff as a qualified SID. Subsequent to the EMMA Effective Date, the MAC entered into a Subscription Agreement with the MSRB pursuant to which the MSRB makes available to the MAC, in electronic format, all Texas-issuer continuing disclosure documents and related information posted to EMMA's website simultaneously with such posting. Until the City receives notice of a change in this contractual agreement between the MAC and EMMA or of a failure of either party to perform as specified thereunder, the City has determined, in reliance on guidance from the MAC, that making its continuing disclosure filings solely with the MSRB will satisfy its obligations to make filings with the SID pursuant to their continuing disclosure agreements entered into prior to the EMMA Effective Date.

### LIMITATIONS AND AMENDMENTS

The City, acting by and through SAWS, has agreed to update information and to provide notices of certain events only as described above. The City, acting by and through SAWS, has not agreed to provide other information that may be relevant or material to a complete presentation of SAWS' financial results of operations, condition, or prospects or agreed to update any information that is provided, except as described above. The City and SAWS make no representation or warranty concerning such information or concerning their usefulness to a decision to invest in or sell Bonds at any future date. The City and SAWS disclaim any contractual or tort liability for damages resulting in whole or in part from any breach of their continuing disclosure agreement or from any statement made pursuant to its agreement, although holders of Bonds may seek a writ of mandamus to compel the City and SAWS to comply with their agreements.

The City may amend its continuing disclosure agreement from time to time to adapt to changed circumstances that arise from a change in legal requirements, a change in law, or a change in the identity, nature, status, or type of operations of the City or SAWS, if (i) the agreement, as amended, would have permitted an underwriter to purchase or sell Bonds in the offering described herein in compliance with the Rule, taking into account any amendments or interpretations of the Rule to the date of such amendment, as well as such changed circumstances, and (ii) either (a) the holders of a majority in aggregate principal amount of the outstanding Bonds consent to the amendment or (b) any person unaffiliated with the City or SAWS (such as nationally recognized bond counsel) determines that the amendment will not materially impair the interests of the holders and beneficial owners of the Bonds. The City may also amend or repeal the provisions of this continuing disclosure agreement if the SEC amends or repeals the applicable provisions of the Rule or a court of final jurisdiction enters judgment that such provisions of the Rule are invalid, but only if and to the extent that the provisions of this sentence would not prevent an underwriter from lawfully purchasing or selling Bonds in the primary offering of the Bonds. If the City so amends the agreement, it has agreed that SAWS, on behalf of the City, shall include with the next financial information and operating data provided in accordance with its agreement described above under "Annual Reports" an explanation, in narrative form, of the reasons for the amendment and of the impact of any change in the type of financial information and operating data so provided.

#### COMPLIANCE WITH PRIOR UNDERTAKINGS

During the past five years, SAWS has complied in all material respects with all continuing disclosure agreements made by the City for which SAWS has agreed to comply on the City's behalf, in accordance with the Rule.

#### OTHER INFORMATION

#### REGISTRATION AND QUALIFICATION OF BONDS FOR SALE

The sale of the Bonds has not been registered under the federal Securities Act of 1933, as amended, in reliance upon the exemption provided thereunder by Section 3(a)(2), and the Bonds have not been qualified under the Securities Act of Texas in reliance upon various exemptions contained therein; nor have the Bonds been qualified under the securities acts of any other jurisdiction. The City assumes no responsibility for qualification of the Bonds under the securities laws of any jurisdiction in which the Bonds may be sold, assigned, pledged, hypothecated, or otherwise transferred. This disclaimer of responsibility for qualification for sale or other disposition of the Bonds must not be construed as an interpretation of any kind with regard to the availability of any exemption from securities registration provisions.

It is the obligation of the Underwriters to register or qualify the sale of the Bonds under the securities laws of any jurisdiction which so requires. The City has agreed to cooperate, at the Underwriters' written request and sole expense, in registering or qualifying the Bonds or in obtaining an exemption from registration or qualification in any state where such action is necessary; provided, however, that the Underwriters shall not be required to qualify as a foreign corporation or to execute a general or special consent to service of process in any jurisdiction.

#### LEGAL INVESTMENTS AND ELIGIBILITY TO SECURE PUBLIC FUNDS IN TEXAS

Section 1201.041 of the Public Security Procedures Act (Chapter 1201, Texas Government Code, as amended) provides that the Bonds are negotiable instruments governed by Chapter 8, Texas Business and Commerce Code, as amended, and are legal and authorized investments for insurance companies, fiduciaries, and trustees, and for the sinking funds of municipalities or other political subdivisions or public agencies of the State of Texas. With respect to investment in the Bonds by municipalities or other political subdivisions or public agencies of the State of Texas, the Public Funds Investment Act (Chapter 2256, Texas Government Code, as amended), requires that the Bonds be assigned a rating of at least "A" or its equivalent as to investment quality by a national rating agency (see "RATINGS" herein). In addition, various provisions of the Texas Finance Code provide that, subject to a prudent investor standard, the Bonds are legal investments for state banks, savings banks, trust companies with at least \$1 million of capital, and savings and loan associations. The Bonds are eligible to secure deposits of any public funds of the State, its agencies, and its political subdivisions, and are legal security for those deposits to the extent of their market value.

The City has made no investigation of other laws, rules, regulations, or investment criteria which might apply to such institutions or entities or which might limit the suitability of the Bonds for any of the foregoing purposes or limit the authority of such institutions or entities to purchase or invest in the Bonds for such purposes. The City has made no review of laws in other states to determine whether the Bonds are legal investments for various institutions in those states.

#### LEGAL MATTERS

The City will furnish the Underwriters with a complete transcript of proceedings incident to the authorization and issuance of the Bonds, including the unqualified approving legal opinion of the Attorney General of the State of Texas to the effect that the Bonds are valid and legally binding special obligations of the City, and based upon examination of such transcript of proceedings, the legal opinion of Co-Bond Counsel to the effect that the Bonds are valid and legally binding special obligations of the City and, subject to the qualifications set forth herein under "TAX MATTERS," the interest on the Bonds is excludable from the gross income of the owners thereof for federal income tax purposes under existing statutes, published rulings, regulations, and court decisions. The customary closing papers, including a certificate to the effect that no litigation of any nature has been filed or is then pending to restrain the issuance and delivery of the Bonds, or which would affect the provision made for their payment or security, or in any manner questioning the validity of the Bonds will also be furnished. In their capacity as Co-Bond Counsel, Norton Rose Fulbright US LLP, San Antonio, Texas, and Kassahn & Ortiz, P.C., San Antonio, Texas, have reviewed the information appearing in this Official Statement under the captions "PLAN OF FINANCING – Refunded Obligations", "THE BONDS" (except for the information under the captions "Outstanding Debt", "Perfection of Security for the Bonds", "Book-Entry-Only System", and "Payment Record", as to which no opinion is expressed), "SECURITY FOR THE BONDS", "TAX MATTERS", "CONTINUING DISCLOSURE OF INFORMATION" (except under the caption "Compliance with Prior Undertakings", as to which no opinion is expressed), "OTHER INFORMATION - Registration and Qualification of Bonds for Sale", "OTHER INFORMATION - Legal Investments and Eligibility to Secure Public Funds in Texas", and "OTHER INFORMATION - Legal Matters" (except for the last sentence of the first paragraph of such subsection, as to which no opinion is expressed), "APPENDIX C - SELECTED PROVISIONS OF THE ORDINANCE", and "APPENDIX D – FORM OF CO-BOND COUNSEL'S OPINION" to determine whether such information accurately and fairly describes and summarizes the information, material and documents and legal issues referred to therein and is correct as to matters of law and such firms are of the opinion that the information relating to the Bonds, the Ordinance and the legal issues contained under such captions and subcaptions is an accurate and fair description of the laws and the legal issues addressed therein and, with respect to the Bonds, such information conforms to the Ordinance. Co-Bond Counsel has not, however, independently verified any of the factual information contained in this Official Statement nor has it conducted an investigation of the affairs of the City for the purpose of passing upon the accuracy and completeness of this Official Statement. No person is entitled to rely upon Co-Bond Counsel's limited participation as an assumption of responsibility for, or an expression of opinions of any kind with regard to the accuracy or completeness of any of the information contained herein. Though they represent the Co-Financial Advisors and the Underwriters from time to time in matters unrelated to the issuance of the Bonds, Co-Bond Counsel have been engaged by and only represent the System and the City in connection with the issuance of the Bonds. The legal fees to be paid to Co-Bond Counsel for services rendered in connection with the issuance of the Bonds are contingent on issuance and delivery of the Bonds. The legal opinions of Co-Bond Counsel will accompany the obligations deposited with DTC or will be printed on the definitive obligations in the event of the discontinuance of the Book-Entry-Only System. Certain legal matters will be passed upon for the City by the City Attorney, for the Board by Langley & Banack, Incorporated, San Antonio, Texas, and for the Underwriters by McCall, Parkhurst & Horton L.L.P, San Antonio, Texas, and Mahomes Bolden PC, Dallas, Texas, Co-Counsel for the Underwriters (whose legal fees are contingent upon the issuance of the Bonds).

The various legal opinions, to be delivered concurrently with the delivery of the Bonds, express the professional judgment of the attorneys rendering the opinions as to the legal issues explicitly addressed therein. In rendering a legal opinion, the attorney does not become an insurer or guarantor of that expression of professional judgment, of the transaction opined upon, or of the future performance of the parties to the transaction. Nor does the rendering of an opinion guarantee the outcome of any legal dispute that may arise out of the transaction.

#### AUTHENTICITY OF FINANCIAL DATA AND OTHER INFORMATION

The financial data and other information contained herein have been obtained from SAWS records, audited financial statements and other sources which are believed to be reliable. There is no guarantee that any of the assumptions or estimates contained herein will be realized. All of the summaries of the statutes, documents and resolutions contained in this Official Statement are made subject to all of the provisions of such statutes, documents and resolutions. These summaries do not purport to be complete statements of such provisions and reference is made to such documents for further information. Reference is made to original documents in all respects.

#### CO-FINANCIAL ADVISORS

PFM Financial Advisors LLC and Estrada Hinojosa & Company, Inc. are employed as Co-Financial Advisors to the System in connection with the issuance of the Bonds. The Co-Financial Advisors' fee for services rendered with respect to the sale of the Bonds is contingent upon the issuance and delivery of the Bonds. PFM Financial Advisors LLC and Estrada Hinojosa & Company, Inc., in their capacity as Co-Financial Advisors, have relied on the opinion of Co-Bond Counsel and have not verified and do not assume any responsibility for the information, covenants, and representations contained in any of the legal documents with respect to the federal income tax treatment of the interest on the Bonds, or the possible impact of any present, pending or future actions taken by any legislative or judicial bodies.

The Co-Financial Advisors have provided the following sentence for inclusion in this Official Statement. The Co-Financial Advisors have reviewed the information in this Official Statement in accordance with their responsibilities to the System, and, as applicable, to investors under the federal securities laws as applied to the facts and circumstances of this transaction, but the Co-Financial Advisors do not guarantee the accuracy or completeness of such information.

#### UNDERWRITING

J.P. Morgan Securities LLC ("JPMS"), as the co-senior and book-running manager of a group of underwriters (the "Underwriters"), has agreed, subject to certain conditions, to purchase the Bonds from the City at the prices indicated on the inside front cover of this Official Statement, less an underwriting discount of \$730,648.92, and no accrued interest. The Underwriters will be obligated to purchase all of the Bonds if any Bonds are purchased. The Bonds to be offered to the public may be offered and sold to certain dealers (including the Underwriters and other dealers depositing Bonds into investment trusts) at prices lower than the public offering prices of such Bonds, and such public offering prices may be changed, from time to time, by the Underwriters.

The Underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, principal investment, hedging, financing and brokerage activities. Certain of the Underwriters and their respective affiliates have, from time to time, performed, and may in the future perform, various investment banking services for the City or the System for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, the Underwriters and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (which may include bank loans and/or credit default swaps) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investment and securities activities may involve securities and instruments of the City.

JPMS entered into negotiated dealer agreements (each, a "Dealer Agreement") with each of Charles Schwab & Co., Inc. ("CS&Co.") and LPL Financial LLC ("LPL") for the retail distribution of certain securities offerings at the original issue prices. Pursuant to each Dealer Agreement, each of CS&Co. and LPL may purchase Bonds from JPMS at the original issue price less a negotiated portion of the selling concession applicable to any Bonds that such firm sells.

## FORWARD-LOOKING STATEMENTS

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

The forward-looking statements, included 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, regulatory circumstances and conditions and actions taken or omitted to be taken by third parties, including customers, suppliers, business partners 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 of future business decisions, all of which are difficult or impossible to predict accurately and many of which are beyond the control of 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 will prove to be accurate.

\* \* \*

#### **MISCELLANEOUS**

References to web site 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 web sites and the information or links contained therein are not incorporated into, and are not part of, this final official statement for purposes of, and as that term is defined in, SEC Rule 15c2-12.

The Ordinance also approved the form and content of this Official Statement and any addenda, supplement or amendment thereto and authorized its further use in the reoffering of the Bonds by the Underwriters. This Official Statement has been approved by the City Council for distribution in accordance with the provisions of the SEC's rule codified at 17 C.F.R. Section 240.15c2-12, as amended.

	/s/ Ron Nirenberg
	Mayor
ATTEST:	City of San Antonio, Texas
ATTEST.	
/s/ Leticia Vacek	
City Clerk	
City of San Antonio, Texas	



#### SCHEDULE I

# SCHEDULE OF REFUNDED OBLIGATIONS Obligations to be refunded with proceeds of the Bonds:

City of San Antonio, Texas Water System Junior Lien Revenue Bonds, Series 2008

Interest Rate			Call Price
(%)	Par Amount (\$)	Call Date	(%)
2.700	800,000	5/31/18	100
2.900	825,000	5/31/18	100
3.050	850,000	5/31/18	100
3.200	875,000	5/31/18	100
3.250	905,000	5/31/18	100
3.450	935,000	5/31/18	100
3.550	970,000	5/31/18	100
3.600	1,005,000	5/31/18	100
3.650	1,040,000	5/31/18	100
3.650	1,080,000	5/31/18	100
3.750	1,120,000	5/31/18	100
3.800	1,165,000	5/31/18	100
3.800	1,210,000	5/31/18	100
3.850	1,255,000	5/31/18	100
3.850	1,305,000	5/31/18	100
3.850	1,355,000	5/31/18	100
3.850	1,410,000	5/31/18	100
3.850	1,465,000	5/31/18	100
3.850	1,520,000	5/31/18	100
3.950	1,580,000	5/31/18	100
	(%)  2.700 2.900 3.050 3.200 3.250 3.450 3.550 3.600 3.650 3.750 3.800 3.850 3.850 3.850 3.850 3.850 3.850 3.850 3.850 3.850	(%)         Par Amount (\$)           2.700         800,000           2.900         825,000           3.050         850,000           3.200         875,000           3.250         905,000           3.450         935,000           3.550         970,000           3.600         1,005,000           3.650         1,040,000           3.750         1,120,000           3.800         1,165,000           3.850         1,255,000           3.850         1,305,000           3.850         1,355,000           3.850         1,410,000           3.850         1,465,000           3.850         1,520,000	(%)         Par Amount (\$)         Call Date           2.700         800,000         5/31/18           2.900         825,000         5/31/18           3.050         850,000         5/31/18           3.200         875,000         5/31/18           3.250         905,000         5/31/18           3.450         935,000         5/31/18           3.550         970,000         5/31/18           3.600         1,005,000         5/31/18           3.650         1,040,000         5/31/18           3.650         1,080,000         5/31/18           3.750         1,120,000         5/31/18           3.800         1,165,000         5/31/18           3.850         1,210,000         5/31/18           3.850         1,305,000         5/31/18           3.850         1,355,000         5/31/18           3.850         1,410,000         5/31/18           3.850         1,465,000         5/31/18           3.850         1,520,000         5/31/18

City of San Antonio, Texas Water System Junior Lien Revenue and Refunding Bonds, Series 2008A

Maturity Date	<b>Interest Rate</b>			Call Price
(May 15)	(%)	Par Amount (\$)	Call Date	(%)
2019	3.700	580,000	5/31/18	100
2020	3.900	600,000	5/31/18	100
2021	4.050	625,000	5/31/18	100
2022	4.200	650,000	5/31/18	100
2023	4.250	680,000	5/31/18	100
2024	4.450	710,000	5/31/18	100
2025	4.550	740,000	5/31/18	100
2026	4.600	775,000	5/31/18	100
2027	4.650	815,000	5/31/18	100
2028	4.650	850,000	5/31/18	100
2029	4.750	890,000	5/31/18	100
2030	4.800	935,000	5/31/18	100
2031	4.800	980,000	5/31/18	100
2032	4.850	1,030,000	5/31/18	100
2033	4.850	1,080,000	5/31/18	100
2034	4.850	1,135,000	5/31/18	100
2035	4.850	1,190,000	5/31/18	100
2036	4.850	1,250,000	5/31/18	100
2037	4.850	1,315,000	5/31/18	100
2038	4.950	1,255,000	5/31/18	100
2038	4.950	1,255,000	5/31/18	100

[ADDITIONAL REFUNDED OBLIGATIONS SET FORTH ON THE FOLLOWING PAGE.]

SCHEDULE I
City of San Antonio, Texas Water System Commercial Paper Notes, Series A

Dealers: J.P. Morgan Securities LLC, MUFG Bank, Ltd., and Ramirez & Co., Inc.

Maturity	Principal	Interest	Interest	Payment
Date	Amount (\$)	Amount (\$)	(%)	Amount (\$)
5/24/18	26,965,000.00	61,177.31	1.69	27,026,177.31
5/24/18	14,035,000.00	31,376.88	1.70	14,066,376.88
5/24/18	9,655,000.00	29,774.43	1.34	9,684,774.43
5/24/18	35,000,000.00	93,205.48	1.35	35,093,205.48
5/24/18	25,000,000.00	51,205.48	1.78	25,051,205.48
5/24/18	15,000,000.00	24,041.10	<u>1.95</u>	15,024,041.10
Total:	125,655,000.00	290,780.68	-	125,945,780.68

## APPENDIX A

GENERAL INFORMATION REGARDING THE CITY



#### APPENDIX A

# CITY OF SAN ANTONIO, TEXAS GENERAL DEMOGRAPHIC AND ECONOMIC INFORMATION

This Appendix contains a brief discussion of certain economic and demographic characteristics of the City of San Antonio, Texas (the "City" or "San Antonio") and of the metropolitan area in which the City is located. Although the information in this Appendix has been provided by sources believed to be reliable, no investigation has been made by the City to verify the accuracy or completeness of such information. For updates regarding certain City financial data through September 30, 2017, please reference the City's most recent annual financial disclosure report and Comprehensive Annual Financial report filed with EMMA on March 30, 2018 and available at www.emma.msrb.org and on the City's website (www.santonio.gov).

### **Population and Location**

The 2010 Decennial Census ("2010 Census"), prepared by the United States Census Bureau ("U.S. Census Bureau"), found a City population of 1,327,407. For the 2010 San Antonio population, it was determined that the U.S. Census Bureau had erroneously assigned 35 census blocks to the City that are actually outside of the City limits. The revised 2010 San Antonio population is 1,326,539.

The City's Information Technology Services Department has estimated the City's population to be 1,475,416 in 2017. The U.S. Census Bureau ranks the City as the second largest in the State of Texas (the "State") and the seventh largest in the United States ("U.S.").

The City is the county seat of Bexar County. Bexar County had a population of 1,714,773 according to the 2010 Census. The City's Information Technology Services Department has estimated Bexar County's population to be 1,983,356 and the San Antonio-New Braunfels Metropolitan Statistical Area ("MSA") population to be 2,507,082 in 2017. The City is located in south central Texas approximately 80 miles south of the State capital of Austin, 165 miles northwest of the Gulf of Mexico, and approximately 150 miles from the U.S./Mexico border cities of Del Rio, Eagle Pass, and Laredo.

The following table provides the population of the City, Bexar County, and the San Antonio-New Braunfels MSA for the years shown:

Year	City of San Antonio	Bexar County	San Antonio- New Braunfels MSA <sup>1</sup>
1920	161,379	202,096	255,928
1930	231,542	292,533	351,048
1940	253,854	338,176	393,159
1950	408,442	500,460	556,881
1960	587,718	687,151	749,279
1970	654,153	830,460	901,220
1980	785,880	988,800	1,088,710
1990	935,933	1,185,394	1,324,749
2000	1,144,646	1,392,931	1,711,703 <sup>2</sup>
2010	1,326,539	1,714,773	2,142,508 <sup>3</sup>

Data for 1920-1990 has been restated from the redefined eight-county MSA to the original four-county MSA.

Sources: U.S. Census Bureau; Texas Association of Counties – County Information Project; and City of San Antonio, Information Technology Services Department.

<sup>&</sup>lt;sup>2</sup> As of June 2003, the U.S. Office of Management and Budget redefined the MSA by increasing the number of counties from four to eight: Atascosa, Bandera, Kendall, and Medina Counties were added to its mainstays of Bexar, Comal, Guadalupe, and Wilson Counties. (The 2000 figure reflects the new 2003 redefined eight-county area.) As of December 2009, New Braunfels, Texas qualified as a new principal city of the San Antonio MSA, and the MSA was re-titled San Antonio-New Braunfels MSA.

<sup>&</sup>lt;sup>3</sup> Provided by the 2010 Decennial Census.

### Area and Topography

The area of the City has increased through numerous annexations and now contains approximately 505.5 square miles. The topography of San Antonio is generally hilly with heavy black to thin limestone soils. There are numerous streams fed with underground spring water. The average elevation is 795.5 feet above mean sea level.

#### **Three-Year Annexation Plan Process**

Through both full and limited-purpose annexations, the City has grown from its original size of 36 square miles to its current area, encompassing approximately 500.5 square miles in 2016, and having a net taxable assessed value of \$99.2 billion in tax year 2016.

By City Charter and State law, City Council has the power to annex territory by passage of an ordinance following an open public process. State law provides two methods by which properties may be annexed. Full-purpose annexation entails that municipalities prepare a Municipal Annexation Plan that specifically identifies the areas that may be annexed and that no annexation may occur until the third anniversary of the date such plan was adopted. State law allows exemptions from the Three-Year Municipal Annexation Plan process, including property owner-initiated annexation, also referred to as voluntary annexation, and areas with less than 100 residences. Limited-purpose annexation extends city limits, certain City regulations, and plans for capital improvements, where by the end of the third year of limited-purpose annexation, the area must be annexed for full purposes.

# 2016 Annexations and Municipal Boundary Adjustments

In June 2016, City Council approved the voluntary annexation of the 202.8 acre, II Southfork Development Property. In October 2016, the City Council approved the release of 93.1 acres of corporate area to the City of Kirby. These City Council actions were effective within 30 days of their respective approval dates.

On September 8, 2016, City Council adopted a Three-Year Municipal Annexation Plan that included the US 281 North residential area (11 square miles) and the IH 10 West area (15 square miles). The IH 10 West area will be considered by City Council for full-purpose annexation before October 8, 2019. The US 281 North residential area does not include the US 281 North commercial corridor, which was annexed on December 1, 2016. The inclusion of the US 281 North residential area in the annexation plan allowed the City to negotiate a non-annexation agreement with the annexation area's representatives in 2017.

In November 2016, City Council approved the full-purpose annexation of approximately 19.1 square miles of limited-purpose area and 10 voluntary annexation tracts in South San Antonio. [Since the limited-purpose areas were already included in San Antonio's corporate area, City Council's action converted their limited-purpose status to full-purpose.] On December 1, 2016, City Council approved the full-purpose annexation of the 1.9 square mile US 281 North commercial corridor. The US 281 North commercial corridor was exempted from the Three-Year Municipal Annexation Plan because the area had less than 100 homes. All of these annexations were effective on December 31, 2016.

# 2017 Annexations and Municipal Boundary Adjustments

On March 2, 2017, City Council approved a non-annexation agreement for the US 281 North residential area. The term of the proposed non-annexation agreement will correspond with the expiration of two adjacent non-annexation agreements and the consent to voluntarily annexation will be effective in 2034.

On March 9, 2017, City Council approved an interlocal agreement with the City of Converse ("Converse") that will culminate with the annexation by Converse of approximately 12 square miles and a transfer to Converse of 3.6 square miles through boundary adjustments, over the course of seventeen years. The transferred area includes the commercial corridors of IH 10 East, Loop 1604, FM 78-Seguin Road, and Gibbs Sprawl Road. This also includes transferring the Northampton neighborhood and area along Graytown Road to Converse's jurisdiction by January 2018.

On June 22, 2017, City Council approved the full-purpose annexation of the Neal Road Area, which is effective July 13, 2017. The area consists of approximately 5.9 square miles in southern Bexar County, generally located south of Mauermann Road and the Medina River, west of Pleasanton Road, north of S. Loop 1604 E., and east of Applewhite Road.

#### **Governmental Structure**

The City is a Home Rule Municipality that operates pursuant to the City Charter, which was adopted on October 2, 1951, became effective on January 1, 1952 and was last amended pursuant to an election held on May 9, 2015, whereby, subject only to the limitations imposed by the Texas Constitution, Texas statutes, and the City Charter, all powers of the City are vested in an 11-member City Council which enacts legislation, adopts budgets, and determines policies. The City Charter provides for a Council-Manager form of government with ten council members elected from single-member districts, and the Mayor elected at-large, each serving two-year terms, limited to four full terms of office as required by the City Charter. The Office of the Mayor is considered a separate office. All members of the City Council stand for election at the same time in odd-numbered years. The City Council appoints a City Manager who administers the government of the City and serves as the City's chief administrative officer. The City Manager serves at the pleasure of City Council.

### **City Charter**

The City may only hold an election to amend its City Charter every two years. Since its adoption, the City Charter has been amended on nine separate occasions including: November 1974, January 1977, May 1991, May 1997, November 2001, May 2004, November 2008, May 2012, and May 2015.

At a special election held on May 9, 2015, the City submitted four propositions to amend the City Charter to the voters for their consideration. The Charter amendments were as follows: Proposition 1 provided that the City may not alter or damage a public way or appropriate any funds for a streetcar unless first approved by a majority of the voters at a subsequent election on the matter; Proposition 2 provided for an annual salary of \$45,722 (which is the median household income in the San Antonio area) to the City Council Members and \$61,725 (median household income plus 35%) for the Mayor; Proposition 3 provided for the filling of City Council and Mayoral vacancies at a special election, rather than by appointment, if more than 120 days remain in the unexpired council term, and allows the City Council to appoint a temporary Council Member or Mayor until such special election can be held; and Proposition 4 provided for the "clean-up" of language or provisions in the Charter because the provisions have been superseded by State law or to update the language to current usage. All four propositions passed by a majority vote and became effective May 20, 2015. The City Charter was amended to reflect these changes.

A Charter Review Commission ("Commission") was authorized by an ordinance passed by the City Council in 2014 to study and make recommendations regarding provisions that were in conflict with current State law, did not reflect current practices, or were outdated and obsolete. Current membership of the Commission is studying and preparing recommendations on the following potential changes: staggering City Council elections; extending City Council terms; changing the general election date; using bond funds for affordable housing developments; reforming the composition of the Planning Commission; and restructuring ethics oversight. The Commission may make recommendations to the full City Council, who will then decide which amendments to place on the ballot for consideration by the voters at a future election.

### Services

The full range of services provided to its constituents by the City includes ongoing programs to provide health, welfare, art, cultural, and recreational services; maintenance and construction of streets, highways, drainage, and sanitation systems; public safety through police and fire protection; and urban redevelopment and housing. The City also considers the promotion of convention and tourism and participation in economic development programs high priorities. The funding sources from which these services and capital programs are provided include ad valorem, sales and use, and hotel occupancy tax receipts, grants, user fees, debt proceeds, tax increment financing, and other sources.

In addition to the above described general government services, the City provides services financed by user fees set at levels adequate to provide coverage for operating expenses and the payment of outstanding debt. These services include airport and solid waste management.

Electric and gas services to the San Antonio area are provided by CPS Energy ("CPS"), an electric and gas utility owned by the City that maintains and operates certain utilities infrastructure. This infrastructure includes a 21-generating unit electric system and the gas system that serves the San Antonio area. CPS' operations and debt service requirements for capital improvements are paid from revenues received from charges to its customers. As specified in the City ordinances authorizing the issuance of its system debt, CPS is obligated to transfer a portion of its revenues to the City. CPS revenue transfers to the City for the City's fiscal year ended September 30, 2016 were \$331,846,513. (See "San Antonio Electric and Gas Systems" herein.)

Water services to most of the City are provided by the San Antonio Water System ("SAWS"), San Antonio's municipally-owned water supply, water delivery, and wastewater treatment utility. SAWS is in its 25<sup>th</sup> year of operation as a separate, consolidated entity. SAWS' operating and debt service requirements for capital improvements are paid from revenues received from charges to its customers. SAWS is obligated to transfer a portion of its revenues to the City. SAWS revenue transfers to the City for the City's fiscal year ended September 30, 2016 were \$13,819,868. (See "San Antonio Water System" herein.)

On January 28, 2012, by operation of legislation passed by the 82<sup>nd</sup> Texas Legislature and popular vote in an election held on November 8, 2011, the City, acting by and through SAWS, assumed the Bexar Metropolitan Water District, and the San Antonio Water System District Special Project ("SAWS DSP") was created. (See "San Antonio Water System – Former Bexar Metropolitan Water District and the District Special Project" herein.) In accordance with a plan to fully integrate SAWS DSP into SAWS, on February 25, 2016, SAWS issued sufficient bonds and commercial paper to retire all outstanding debt of SAWS DSP. SAWS DSP was then dissolved and SAWS assumed all assets, liabilities, and operations of SAWS DSP. Since SAWS reports comparative financial statements, all financial and statistical information has been restated to incorporate the financial results of SAWS DSP for 2015 and 2016.

#### **Economic Factors**

The City facilitates a favorable business environment that supports economic diversification and growth. San Antonio's economic base is composed of a variety of industries, including convention and tourism, healthcare and bioscience, government employment, automotive manufacturing, information security, financial services, and oil and gas, all with growing international trade. Support for these economic activities is demonstrated in the City's commitment to ongoing infrastructure improvements and development, and investment in a growing and dedicated work force. This commitment and San Antonio's continued status as one of the top leisure and convention destinations in the country support a strong and growing economy.

San Antonio's rate of unemployment fares well when compared to the State and nation. The San Antonio-New Braunfels MSA unemployment rate remained at 3.6% in May 2017, matching the rate reported in April 2017.

The Texas unadjusted (actual) unemployment rate decreased to 4.4% in May 2017, down from 4.5% reported in April 2017. The nation's unadjusted (actual) unemployment rate remained at 4.1% in May 2017, matching the rate reported in April 2017.

Total nonfarm employment in the San Antonio-New Braunfels MSA for May 2017 was 1,041,600. Since May 2016, the San Antonio-New Braunfels MSA has added 25,500 jobs for an annual growth rate of 2.5%.

### Healthcare and Bioscience Industry

The healthcare and bioscience industry is the largest industry in the San Antonio economy and has experienced robust growth since the early 1990s. The industry is composed of related industries such as research, pharmaceuticals, and medical device manufacturing contributing approximately the same economic impact as health services. According to the San Antonio's Health Care and Bioscience Industry: 2015 Economic Impact Study commissioned by the Greater San Antonio Chamber of Commerce, the economic impact from this industry sector

totaled approximately \$37 billion in 2015. The industry provided 172,094 jobs, or more than 17% of the City's total employment. The healthcare and bioscience industry's annual payroll in 2015 approached \$8.9 billion, a 14% increase over 2013. The 2015 average annual wage of San Antonio workers was \$46,411, compared to \$51,731 for healthcare and bioscience employees. The healthcare and bioscience industry has added 49,355 net new jobs over the past decade, an increase of 46%.

Health Care. According to the 2014 South Texas Medical Center Area Progress Report written by the San Antonio Medical Foundation, the 900-acre South Texas Medical Center (the "Medical Center") has over 100 medically related treatment, education, and research facilities. There are several nursing facilities and more than 20 medical professional office buildings. Other support activities include banks, a post office, a power plant, pharmacies, and housing facilities. Approximately 300 acres are held for future expansion. Over 29,000 Medical Center employees have provided care for over 5.64 million outpatients and over 106,728 inpatients. Physical plant values, not adjusted for inflation, representing the original investments in physical facilities and equipment (less depreciation) represent approximately \$3.352 billion. Capital projects in progress as of January 2014 represent \$438 million, with an additional \$509 million planned over the next five years, for a total of approximately \$947 million.

Central to the Medical Center is the University of Texas Health Science Center at San Antonio (the "UT Health Science Center"), located on more than 100 acres in the heart of the Medical Center. A total of 4,400 students (including residents and fellows) are enrolled in the UT Health Science Center's five schools – the School of Allied Health Sciences, the Dental School, the Graduate School of Biomedical Sciences, the Medical School, and the School of Nursing. The UT Health Science Center has nearly two million square feet of education, research, treatment and administrative facilities. The UT Health Science Center employs approximately 5,400 persons with a total annual operating budget of approximately \$802 million, supporting six campuses in San Antonio, Laredo, Harlingen, and Edinburg. The UT Health Science Center also oversees the federally funded Regional Academic Health Center in the Rio Grande Valley with facilities in Harlingen, McAllen, Brownsville, and Edinburg.

The UT Health Science Center is one of the country's leading health sciences universities, and ranks in the top 3% of all institutions worldwide receiving federal funding from the National Institutes of Health ("NIH"). The university's schools of medicine, nursing, dentistry, health professions, and graduate biomedical sciences have produced more than 32,000 graduates since inception.

The UT Health Science Center's Medical Arts and Research Center offers state-of-the-art patient care under UT Medicine San Antonio and its Cancer Therapy & Research Center, and is one of only four National Cancer Institute ("NCI") designated Cancer Centers in Texas. In September 2015, UT Health Science Center's Dental School, regarded as one of the top in the nation, opened its newly built 198,000 square foot Center for Oral Health Care & Research.

There are numerous other medical facilities outside the boundaries of the Medical Center, including 25 short-term general hospitals, two children's psychiatric hospitals, and two State hospitals. The U.S. Department of Defense ("DoD") has historically operated two major regional hospitals in San Antonio, Wilford Hall Medical Center ("Wilford Hall"), today known as the Wilford Hall Ambulatory Surgical Center ("WHASC"), and Brooke Army Medical Center ("BAMC"), today known as the San Antonio Military Medical Center ("SAMMC"). As a result of the 2005 Base Realignment and Closure actions ("BRAC 2005"), DoD is investing over \$1.3 billion in two projects, expanding BAMC into one of two national DoD Regional Medical Centers and constructing a new outpatient clinic to replace Wilford Hall. BAMC also participates with UT Health Science Center and University Hospital in operating two Level I trauma centers in the community.

On February 2, 2012, City Council authorized an economic development incentive package for the Metropolitan Methodist Hospital Expansion, including a \$120,000 grant for the creation of 40 jobs located in the City's downtown area. Methodist Healthcare System proposed a \$43.6 million expansion of its intensive care unit located at 1310 McCullough Avenue. The project was to be constructed in two phases and include the following: Phase 1, an investment of \$36.9 million in real and personal property; construction of a 65,000 square foot facility that includes 24 Intensive Care Unit ("ICU") beds and their respective support facilities that would enable the relocation of existing laboratory facilities and allow for the expansion of the endoscopy facilities; the creation of 30 new full-time jobs; and Phase 2, construction of 12 additional ICU beds and their respective support facilities, and the creation of five full-time jobs. Since opening in January 2014, the Methodist Hospital has reported creating 1,146

jobs and investing \$50 million for the project which added 85,000 square feet of new space to the downtown hospital. That space houses expanded radiology and emergency department services, a new gastrointestinal lab, and a 24-bed ICU. Additional space in the new tower is reserved for future growth needs.

*Biomedical Research and Development.* Research and development are important areas that strengthen San Antonio's position as an innovator in the biomedical field.

The Texas Research Park (the "Park") is a 1,236-acre campus owned and operated by the Texas Research & Technology Foundation ("TRTF"), a 501(c)(3) non-profit organization. TRTF is San Antonio's champion for driving economic development in the biosciences and technology industry. The Park is home to the UT Health Science Center's Research Park Campus, which includes the Institute for Biotechnology, the South Texas Centers for Biology in Medicine, and the Barshop Institute for Longevity and Aging. Several biopharmaceutical and medical device commercial ventures call the Park home as well. TRTF also develops and funds new innovative technology ventures focused on building San Antonio's emerging technology economy.

The Texas Biomedical Research Institute ("Texas Biomed"), formerly the Southwest Foundation for Biomedical Research, which conducts fundamental and applied research in the medical sciences, is one of the largest independent, non-profit, biomedical research institutions in the U.S. and is internationally renowned. As one of the world's leading independent biomedical research institutions, Texas Biomed is dedicated to advancing the health of San Antonio's global community through innovative biomedical research. Today, Texas Biomed's multidisciplinary team of 72 doctoral-level scientists works on more than 200 major research projects.

Located on a 200-acre campus in the City, Texas Biomed partners with hundreds of researchers and institutions around the world, pursuing advances in the prevention and treatment of heart disease, diabetes, obesity, cancer, osteoporosis, psychiatric disorders, tuberculosis, AIDS, hepatitis, malaria, parasitic infections, and a host of other diseases. Texas Biomed is the site of the Southwest National Primate Research Center and home to the world's largest baboon research colony, including a unique pedigreed baboon colony that is invaluable for genetic studies on complex diseases.

Texas Biomed enjoys a distinguished history in the innovative, humane and appropriate use of nonhuman primates in biomedical research. Texas Biomed also is home to other extraordinary resources that give its scientists and their collaborators an advantage in the search for discoveries to fight disease. With the nation's only privately owned biosafety level 4 laboratory, designed for maximum containment, Texas Biomed investigators can safely study deadly pathogens for which there currently are no treatments or vaccines, including potential bio-terror agents and emerging diseases. Another resource that puts the TRTF on the cutting edge of biomedical research is the AT&T Genomics Computing Center, which houses the world's largest computer cluster for human genetic and genomic research. This high-performance computing facility allows scientists to search for disease-influencing genes at record speed.

The UT Health Science Center has been a major bioscience research engine since its inception, with strong research groups in cancer, cancer prevention, diabetes, drug development, geriatrics, growth factor and molecular genetics, heart disease, stroke prevention, and many other fields. Established by the largest single oncology endowment in the nation's history, \$200 million from the State tobacco settlement, the Greehey Children's Cancer Research Institute is part of the UT Health Science Center. The UT Health Science Center, along with the Cancer Therapy and Research Center, form the San Antonio Cancer Institute, a NCI-designated Comprehensive Cancer Center.

The University of Texas at San Antonio ("UTSA") houses a number of research institutes. The Neuroscience Research Center, which is funded by \$6.3 million in ongoing grants, is tasked with training students in research skills while they perform basic neuroscience research on subjects such as aging and Alzheimer's disease. UTSA is also a partner in Morris K. Udall Centers of Excellence for Parkinson's Disease Research, which provides research for the causes and treatments of Parkinson's disease and other neurodegenerative disorders. A joint partnership between UTSA, the UT Health Science Center, and the participation of Texas Biomed and the Southwest National Primate Research Center, has resulted in the formation of the San Antonio Institute of Cellular and Molecular Primatology ("SAICMP"). The focus of the SAICMP is the study of primate stem cells and early embryos to develop nonhuman model systems for studies of primate stem cells and their applications to regenerative medicine, as well as to develop methods of primate transgenesis and to facilitate other investigations of primate embryology and biogenesis. The

South Texas Center for Emerging Infectious Diseases ("STCEID") was established to focus State and national attention on UTSA in the fields of molecular microbiology, immunology, medical mycology, virology, microbial genomics, vaccine development, and biodefense. One of the major areas of emphasis at STCEID is on the pathogenic mechanisms of emerging infectious diseases.

A number of highly successful private corporations, such as Mission Pharmacal, DPT Laboratories, Ltd., and Genzyme Oncology, Inc., operate their own research and development groups and act as guideposts for numerous biotech startups, bringing new dollars into the San Antonio area's economy. A notable example of the results of these firms' research and development is Genzyme Oncology, Inc., which has developed eight of the last 11 cancer drugs approved for general use by the U.S. Food and Drug Administration ("FDA").

As an equity investment, InCube Labs, LLC ("InCube") was the impetus for the City to establish the San Antonio Economic Development Corporation ("SAEDC"). The mission of the SAEDC is to foster the commercialization of intellectual property in San Antonio through direct equity investment in projects. This model represents a new economic development strategy that seeks to realize a direct return on investment back to the City through its economic development efforts. By making equity investments in later stage companies or key entrepreneurs with proven track records, the City seeks to support commercialization of intellectual property in San Antonio, creating more jobs, investment, and entrepreneurs.

On June 17, 2010, InCube Chairman and CEO Mir Imran announced that InCube planned to establish a branch of its operations in San Antonio and launch five life science companies in San Antonio over the next five years. InCube, formerly located in San Jose, California, is a life sciences research laboratory focused on developing medical breakthroughs that dramatically improve patient outcomes. The organization is led by Mr. Imran who has founded more than 20 companies and holds more than 200 patents. Mr. Imran has created many innovations that have resulted in new standards of care, including the first FDA-approved Automatic Implantable Cardioverter Defibrillator, Mr. Imran and his partners also manage a venture fund, InCube Ventures, which invests in life science companies and has raised approximately \$30 million from local investors. InCube will create at least 50 jobs within the business incubator with salaries ranging from \$50,000 to over \$200,000. In September 2010, the State awarded \$9.2 million through the Emerging Technology Fund for three existing InCube start-up life science companies to relocate to San Antonio from San Jose, California. By April 27, 2011, InCube had relocated three companies and begun its operations in San Antonio, and on May 2, 2013, InCube announced the formation of two new companies, Theracle and iBridge Medical, fulfilling a requirement to create two new companies in San Antonio prior to July 1, 2013. Incube has recently agreed to create three additional companies in the next five years. As of March 31, 2016, InCube has raised \$20,568,779 in non-public funds on its activities in San Antonio toward a requirement to spend \$15 million during the five-year term. InCube is also collaborating with UTSA and the UT Health Science Center on research opportunities.

In June 2011, the City approved an economic development grant ("EDG") through the SAEDC to assist in funding the construction of the UT Health Science Center South Texas Research Facility (the "STRF"). This action also authorized the SAEDC to enter into an economic development agreement with the UT Health Science Center. The City, through the SAEDC, committed funding in the amount of \$3.3 million through June 2014 with the potential to receive repayment of the principal amount plus a return on its investment through acquiring a percentage equity interest in UT Health Science Center start-up companies over a ten-year period.

The STRF is a state-of-the-art \$200 million research building. The project is a significant economic generator for the community, creating over 150 new high-paying research and scientific jobs. The facility primarily houses the Institute of Integration of Medicine and Science, which is the home for the \$26 million National Institutes of Health Clinical and Translational Science Awards program. The facility also houses other core research programs on cancer, diseases affecting the elderly, disorders such as stroke, diabetes in children and adults, and the engineering of new body tissues to cure diseases in partnership with the military.

The City's \$3.3 million investment in the STRF at UT Health Science Center greatly enhances the university's research capabilities by increasing opportunities for growing local entrepreneurs and companies, helping attract top tier researchers and scientists, demonstrating an investment in the City's local institutions and talent, and providing opportunities to leverage other research, such as military medicine.

The \$3.3 million investment also provides the City the opportunity to leverage its investment through the SAEDC, which was created by the City as a nonprofit corporation in May 2010. Through the SAEDC, the City can invest in economic development projects and take out an equity position in a project to potentially achieve a return on the public's investment. The UT Health Science Center agreed to enter into an economic development agreement with the SAEDC and provide the SAEDC, over ten years, a 15% interest in any equity position (e.g., founders shares of stock) taken by the university in start-up companies formed through the discovery of intellectual property owned by the university. The SAEDC could then potentially receive a return on its investment up to a cap of \$4,000,000 (the \$3,300,000 principal amount plus an additional \$700,000 return) during the term of the agreement from the university's distribution to the SAEDC based on its equity interest in start-up companies as those companies are acquired or go public. The SAEDC has an equity interest in two UT Health Science Center startup companies.

Also through the SAEDC, the City invested \$300,000 in assisting Innovative Trauma Care, Inc. ("ITC") to establish its first U.S. based operations in San Antonio to market, sell, and distribute the ITClamp, and entered into an economic development agreement with ITC on August 30, 2012. The device is a wound clamp designed to control severe bleeding within seconds of application. In exchange for financial assistance, ITC agreed to provide the City, through its SAEDC, an equity interest in the parent company's stock. ITC will add high-paying jobs in the targeted SA2020 Bioscience and Healthcare industry, and will also bring its life-saving device to the world, from San Antonio. ITC has secured approval and initiated the marketing and selling of the ITClamp in Canada and 16 countries in Europe. Approval to market and sell the ITClamp in the U.S. was received from the FDA in May 2013. Additionally, ITC has achieved its fourth regulatory milestone with an expanded indication for use from the FDA to include the temporary control of severe bleeding of the scalp. ITC has already created eight full-time jobs in San Antonio with plans to add more personnel as sales increase.

Another SAEDC equity investment was approved by City Council on October 21, 2013 for StemBioSys, Inc. ("SBS"). SBS, a local bioscience startup company, was formed in November 2010 by Dr. Xiao-Dong Chen, of the UT Health Science Center, and Dr. Steve Davis, a local dermatologist. While at the UT Health Science Center, Dr. Chen discovered a way to isolate and expand adult stem cells for research, diagnostics, and therapeutic treatments. SBS has secured two patents on its stem cell technology platforms, and has three other patents pending. In May 2011, SBS signed an agreement with the UT Health Science Center to license, develop, and commercialize Dr. Chen's technologies in the regenerative medicine market which is expected to grow by 48% over the next six years. City Council authorized the SAEDC to invest these funds in SBS through a loan at a 5% interest rate for five years in exchange for a Convertible Promissory Note (the "Note") for \$200,000. The Note would provide the SAEDC the option to convert the loan into preferred shares of SBS stock during the term or to accept repayment of the loan at the end of the term with interest (\$255,256). For the loan, SBS agreed to retain its business operations in San Antonio for the term of the Note or until such time as the SAEDC may exercise its option to convert the Note into shares of equity. SBS also agreed to retain and create a minimum of six full-time jobs by December 2014 and pay an average annual salary of at least \$50,000. As of December 2016, SBS employs 9 people.

In June 2015, City Council approved a \$1,000,000 grant over five years to recruit German based Cytocentrics, Inc. ("Cytocentrics") to San Antonio, further adding to the biosciences ecosystem that positively impacts the community. Cytocentrics has unique patented technology called a cytopatch machine that conducts an automated cell analysis called "patch clamping" for drug testing to more quickly meet FDA testing requirements; this technology replaces the current manual testing methods. The company plans to create 300 high-wage jobs with an average salary of at least \$70,000 and invest \$15 million. Additionally, Cytocentrics will enter into a research development partnership with the Center for Innovative Drug Discovery, a joint venture between the UTSA and UT Health Science Center, as well as a partnership for workforce development with Alamo Colleges.

*Military Health Care.* San Antonio's military healthcare facilities have positively impacted the City for decades. Many military medical transformations came as a result of the BRAC 2005 legislation.

Historically, BAMC at Joint Base San Antonio-Fort Sam Houston ("JBSA-Fort Sam Houston") was known as a hospital and an Army Unit, but the BAMC name is now specifically the unit that commands Army medical activity in San Antonio. BAMC's medical facilities include SAMMC, Center for the Intrepid, Fort Sam Houston Primary Care Clinic, McWethy Troop Medical Clinic, Taylor Burk Clinic at Camp Bullis, and the Schertz Medical Home. These BAMC facilities have a total workforce of over 7,500 personnel.

The renowned hospital known as BAMC became SAMMC in September 2011 and has expanded to 2.1 million square feet due to BRAC 2005 legislation. SAMMC is the largest inpatient medical facility in the DoD, the only DoD Burn Center, and the only DoD Level 1 Trauma Center in the U.S. SAMMC hosts Centers of Excellence for amputee care, burn care, and breast imaging and contains dedicated inpatient units for bone marrow transplant, maternal-child and neonatal intensive care; as well as pediatric, burn, cardiac and psychiatric care. On any given day at SAMMC, the emergency department averages 174 visits and admits approximately five civilian emergencies, four babies are born and 238 inpatient beds are occupied.

WHASC at Joint Base San Antonio-Lackland ("JBSA-Lackland") is the largest outpatient ambulatory surgical center in the DoD with more than 29 sub-specialties and 30 Credited Graduate Medical Education training programs. The facility is manned by more than 2,600 personnel and provides primary and specialty care; outpatient surgery; a sleep center; a contingency aeromedical staging facility; and eye, hearing and diabetes centers of excellence. The new 681,000 square foot Ambulatory Surgical Center at JBSA-Lackland opened in 2015. It is part of the \$450 million recapitalization of the old Wilford Hall Medical Center facility.

The San Antonio Military Health System ("SAMHS") oversees the healthcare delivery of 230,000 DoD beneficiaries in the San Antonio metropolitan region. Healthcare services are provided by the SAMMC and the WHASC. The SAMHS treatment facility manages a total combined budget of over \$839 million and contributes over \$138 million annually in inpatient/outpatient private sector care expenses.

Previously, all U.S. Army combat medic training was conducted at Fort Sam Houston. As a result of BRAC 2005, all DoD military enlisted combat medic training is now accomplished at the new Medical Education and Training Campus at JBSA-Fort Sam Houston.

San Antonio received a new medical research mission due to BRAC 2005. BRAC 2005 transformed the U.S. Army Institute of Surgical Research ("USAISR") into a tri-service Battlefield Health and Trauma ("BHT") Research Institute that has been operating at Fort Sam Houston since August 2010. The BHT is composed of the USAISR, Naval Medical Research Unit San Antonio and the Air Force Dental Evaluation and Consultation Service. This new research facility is adjacent to the SAMMC and was created to remove redundancy and create a synergy in combat casualty care research.

# Finance Industry

The largest private sector employer in the industry is United Services Automobile Association ("USAA"). The company has about 9.4 million customers, comprised of military members, veterans and their families. The company currently employs a total of 17,000 people. While this sector is led by USAA, San Antonio is home to other insurance company headquarters such as Catholic Life and GPM Life, as well as being the home to many regional operations centers for many health care insurers. Insurers with substantial regional operations centers in San Antonio include Allstate Insurance Company ("Allstate"), Nationwide Mutual Insurance Company ("Nationwide"), Caremark, United Health, and PacifiCare.

After considering Little Rock, Tulsa, and Raleigh, Nationwide established a new regional corporate headquarters location in San Antonio in October 2009. Nationwide, headquartered in Columbus, Ohio, is a national insurance provider with over 34,000 employees, and had \$26 billion in revenue in 2015, up 3% from 2014. With its announcement to expand in San Antonio, Nationwide committed to retaining 932 current employees and creating an additional 838 new jobs over the life of the agreement with the City which ends in 2028. Phase I of the project involved a consolidation of existing operations into an existing facility, and \$3 million in new personal property improvements. Nationwide has broken ground on Phase II of its investment in San Antonio with an \$89 million corporate campus.

On September 27, 2012, the City and Nationwide officials inaugurated the grand opening of the 300,000 square foot facility which is located in the master-planned Westover Hills community, near the intersection of Hyatt Resort Drive and State Highway 151 on the City's far west side. As of December 2016, Nationwide reported that it employs 1,551 people at this location.

On February 9, 2010, Allstate announced its decision to locate a customer operations center, invest \$12 million, and create 600 new full-time jobs in San Antonio. The core function of this operations center will support direct sales calls and selling additional insurance products to existing clients. Allstate is the nation's largest publicly held personal lines insurer. Allstate's main lines of insurance include automobile, property, life, and retirement and investment products. Allstate has two other sales support centers located in Northbrook, Illinois (its headquarters) and Charlotte, North Carolina. As of December 2016, Allstate reported that it employs 261 people at its San Antonio operations center and eventually expects the center will employ 600 employees, who will sell Allstate products and provide service to the company's customers.

San Antonio is also the home of many banking headquarters and regional operations centers such as Frost Bank, Broadway National Bank, and USAA Federal Savings Bank. In December 2014, Security Service Federal Credit Unit ("SSFCU"), the largest credit union in Texas and seventh largest credit union in the United States, established its corporate headquarters in San Antonio City Council District 8. City Council approved an incentive package based on a capital investment of \$120,000,000 that will allow SSFCU to employ a planned total of 947 full-time banking and financial professionals. One hundred percent of the incentives the company receives during this time will go toward infrastructure improvements. Other companies with large regional operations centers in San Antonio include Bank of America, Wells Fargo, J.P. Morgan Chase, and Citigroup.

#### Hospitality Industry

The City's diversified economy includes a significant sector relating to the hospitality industry. An Economic Impact Report of San Antonio's Hospitality Industry (representing 2015 data) found that the hospitality industry has an economic impact of \$13.6 billion. The estimated annual payroll for the industry is \$2.9 billion, and the industry provided an average of 130,796 jobs.

In 2016, the City's overall level of hotel occupancy was flat at 0.5%; room supply was increased 2.2%; total room nights sold increased 2.7%; the average daily room rate increased 1.8%; revenue per available room increased 2.3%; and overall revenue increased 4.5%.

Tourism. The list of attractions in the San Antonio area includes, among many others, the Alamo and other sites of historic significance, the River Walk, and two major theme parks, SeaWorld San Antonio and Six Flags Fiesta Texas. San Antonio attracts 34.4 million visitors a year. Of these, over 18.2 million are overnight visitors, placing San Antonio as one of the top U.S. destinations in Texas. Recent FY 2016 accomplishments contributing to the City's success include: (1) the grand opening of the transformed Henry B. Gonzalez Convention Center. On January 26, 2016, the \$325 million expansion marked the largest capital improvement project in the City of San Antonio's history and increased the footprint to 1.6 million square feet. The project provided a clear opportunity to further secure the convention center's position as a top destination for conferences and events, while challenging the convention center design team to find a creative way to integrate the convention center into the surrounding downtown area and Hemisfair Park; (2) in FY 2016, there was an addition of 686 new San Antonio Tourism Ambassadors. The San Antonio Tourism Ambassadors Program is designed to create an inspired, informed and resourced community to enhance the San Antonio visitor experience and keep visitors coming back. The program provides an affordable, credible way to teach skills needed to exceed visitor expectations, enhance corporate training with destination-specific information and reinforce customer service training. It incorporates key destination training featuring area history, hidden gems, interesting facts and more. Ultimately, it helps the San Antonio tourism industry to speak with one voice, stay competitive and raise the level of professional development for everyone who participates; and (3) reported an estimated \$33.7 million in Earned Media Value for FY 2016. This media value is the dollar value of the positive media coverage generated by San Antonio Convention & Visitors Bureau's ("CVB") communications team, which represents the stories and articles in print (i.e., magazines, newspapers, etc.), TV, radio, and online media; the dollar figure aligns with what the advertising cost of that coverage would have been if the City had purchased the exposure.

In September 2016, the San Antonio City Council approved a new management agreement that essentially transitioned the CVB to a new public-private nonprofit called Visit San Antonio. The management agreement for the 501(c)(6) nonprofit took effect October 1, 2016 with the organization's staff and structure moving under the Visit San Antonio model on January 1, 2017. This significant vote from City Council for a nonprofit model came after months of collaborative work between the City Council, CVB, industry leaders, and other community stakeholders. With a

more nimble speed-to-market capability under the new Visit San Antonio structure, the goal is to see the organization's marketing budget and operations grow to keep pace with the rising competition.

Conventions. San Antonio is also one of the top convention cities in the country and hosts 6.3 million business visitors a year who come to the area for a convention, meeting or other business purpose. In FY 2016, the CVB sales staff booked over 936,000 room nights for current and future years. Significant meetings booked included: National Corn Growers Association & American Soybean Association with 20,944 room nights for 2021; Golf Course Superintendents Association of America with a total of 19,800 room nights for 2024; American Society of Safety Engineers with a total of 16,833 room nights for 2018; and a multi-year agreement to host American Football Coaches Association with a total of 18,390 room nights for 2028 and 2030. In addition, the new Visit San Antonio will continue to be proactive in attracting convention business through its management practices and marketing efforts.

The following table shows both overall City performance as well as convention activity hosted by the CVB for the calendar years indicated:

		Revenue per Available			
Calendar	Hotel	Room	Room	Convention	Convention
<u>Year</u>	Occupancy 1	(RevPAR) 1	Nights Sold 1	Attendance 2	Room Nights <sup>2</sup>
2006	69.1	69.43	7,439,783	467,426	736,659
2007	66.3	69.90	7,397,123	455,256	647,386
2008	64.6	70.82	7,669,475	563,164	691,525
2009	57.1	55.94	7,167,603	399,408	660,736
2010	59.3	57.02	7,768,002	535,400	736,325
2011	61.3	58.08	8,236,019	499,171	637,593
2012	63.5	60.79	8,651,826	449,202	635,829
2013	63.1	63.44	8,610,676	712,577	734,190
2014	64.9	67.32	8,817,338	652,443	725,333
2015	65.7	69.55	8,913,575	699,662	773,569
2016	65.9	71.12	9,116,363	637,658	676,501

Data obtained from Smith Travel Research based on hotels in the San Antonio selected zip code reports dated January 2017 (reporting 2016 numbers), and historical annual reports for prior years.

Source: City of San Antonio, Convention and Visitors Bureau.

# Military Industry

The growth in new missions and significant construction activities brought about by BRAC 2005 strengthened San Antonio's role as a leading military research, training, and education center. One of the major outcomes of BRAC 2005 was the creation of Joint Base San Antonio ("JBSA") which is the largest joint base in the United States. JBSA consolidates all the base support functions, real property, and land for JBSA-Lackland, JBSA-Randolph, and JBSA-Fort Sam Houston (including Camp Bullis) under the 502<sup>nd</sup> Air Base Wing. JBSA includes over 46,500 acres, supports 80,000 personnel, has a plant replacement value of \$10.3 billion, and an annual budget of \$800 million. Over 132,000 personnel are trained at JBSA facilities every year.

JBSA and its more than 266 mission partners represent a significant component of the City's economy providing an annual economic impact, when combined with other DoD contracts and contractors, military retirees, veterans, and direct and indirect jobs, of over \$29 billion for the City and \$49 billion to the State of Texas. In addition, the property of the former Brooks Air Force Base ("Brooks AFB"), a fourth major military installation, was transferred from the U.S. Air Force to the City-created Brooks Development Authority ("BDA") in 2002 as part of the Brooks City-Base Project ("Brooks City-Base"). Furthermore, the military is still leasing over 1.7 million square feet of space at Port San Antonio (the "Port"), which is the former Kelly Air Force Base that was closed in 2001.

<sup>&</sup>lt;sup>2</sup> Reflects only those conventions hosted by the CVB.

One of the other significant events brought about by BRAC 2005 is the realignment of medical facilities resulting in a major positive impact on military medicine in San Antonio, with \$3.2 billion in construction and the addition of approximately 12,500 jobs at the JBSA complex.

JBSA-Fort Sam Houston. JBSA-Fort Sam Houston is engaged in military-community partnership initiatives to help reduce infrastructure costs and pursue asset management opportunities using military facilities. In April 2000, the U.S. Army entered into a partnership with the private organization, Fort Sam Houston Redevelopment Partners, Ltd. ("FSHRP"), for the redevelopment of the former BAMC and two other buildings at Fort Sam Houston. These three buildings, totaling about 500,000 square feet in space and located in a designated historic district, had been vacant for several years and were in a deteriorating condition. On June 21, 2001, FSHRP signed a 50-year lease with the U.S. Army to redevelop and lease these three properties to commercial tenants.

Some of the major mission partner organizations on JBSA-Fort Sam Houston are: U.S. Army North, the Army Installation Management Command, the Army Medical Command, U.S. Army South, the Army Medical Department and School, the Southern Regional Medical Command, BAMC, the Medical Educational and Training Campus, the Mission and Installation Contracting Command, the Navy Medicine Education and Training Command, Three Army Reserve Depots, a Navy/Marine Reserve Operations Center, and a Texas Army National Guard armory.

The potential economic impact from JBSA-Fort Sam Houston due to the BRAC 2005 expansion, along with major growth from the Army Modular Force and Army Grow the Force programs, is estimated at nearly \$8.3 billion. The economic impact due to the amount of construction on post to accommodate the new mission accounts for approximately 80% of the impact (\$6.7 billion). While the major surge of construction from BRAC 2005 and the other major force programs are complete, the economic impact from JBSA-Fort Sam Houston will increase by nearly \$1.6 billion annually with additional annual sales tax revenue of \$4.9 million. The major personnel moves under BRAC 2005 were completed by September 15, 2011, and this increase in personnel and missions at JBSA-Fort Sam Houston could support the employment of over 15,000 in the community.

Various construction projects continue at JBSA-Fort Sam Houston. The new Walters Street Gate and Entry Control Point and a new Medical Education and Training Campus Headquarters Building have been completed. A new Student Activity Center opened in November 2013 and construction was completed on a new BAMC Visitor Control Center and Entry Control Point in January 2014. A new 310-room hotel was completed in October 2014, and a new 192-room apartment style dormitory broke ground in 2016. A small addition to the hospital for a hyperbaric chamber was completed in June 2017 and a new two story Army-Air Force Exchange Services Exchange Main Store is planned for 2018 or 2019. In 2016, the USO in partnership with JBSA, completed a new all-service facility located in the Sam Houston Community Center.

JBSA-Camp Bullis. Armed Forces medics at JBSA-Fort Sam Houston receive additional field training at JBSA-Camp Bullis, which comprises 28,000 acres. JBSA-Camp Bullis is also used by the 37th Training Wing for Security Forces technical and professional development training. Additionally, JBSA-Camp Bullis is home to the USAF Medical Training Readiness Center, which encompasses four medical-related courses. It is also home to multiple Army Reserve and Army National Guard units of all types, to include Military Intelligence, Engineer, Medical, Infantry and Special Forces. The 470th Military Intelligence Brigade, headquartered at JBSA-Fort Sam Houston, operates the INSCOM Detention Training Facility at JBSA-Camp Bullis, and the Defense Medical Readiness Training Institute operates the Combat Casualty Care Course. JBSA-Camp Bullis also supports regular use by local law enforcement agencies and Federal entities. In 2013-2016, JBSA-Camp Bullis supported the training of approximately 550,000 personnel. Because of its geographical size, numerous units and missions are continually looking at JBSA-Camp Bullis as a viable place to locate and train.

JBSA-Lackland. JBSA-Lackland is home to the 37<sup>th</sup> Training Wing, situated on 9,700 acres, all within the city limits of San Antonio. According to a recent Economic Impact Analysis, over 53,000 military, civilian, student, contractors and military dependents work, receive training, or utilize JBSA-Lackland services. JBSA-Lackland hosts the Air Force's only Basic Military Training ("BMT") function for all enlisted Airmen, which is known as the "Gateway to the Air Force". Additionally, JBSA-Lackland hosts many of the technical training courses which the BMT graduates are routed to prior to their first assignment. On an annual basis, JBSA-Lackland is expected to graduate 86,000 Airmen and international students. The Air Force is in the middle of a \$900 million program to replace the BMT Recruit Housing and Training buildings that have been in continuous operation since construction

in the late 1960s. Construction is now complete for four of the Airmen Training Complexes ("ATC") and the first two Dining/Classroom Facilities ("DCF") that support the ATCs. Construction is also complete for the Pfingston BMT Reception Center, every new recruit's entry into BMT. The beginning of the second half of the Basic Military Training Complex replacement program is planned for FY 2018 with the start of the fifth ATC and the third DCF. Each ATC will house up to 1,200 trainees and the DCF includes dining halls and classroom facilities for two ATCs. The BMT replacement program is estimated to be complete by FY 2020.

Projected growth also includes a 160,000 square foot expansion of the 24th Air Force, the Cyber Command, facilities, and a potential increase of 1,500 students at the Defense Language Institute English Learning Center. Permanent bed down of the Transportation Security Agency's Canine Academy is on-going as construction of their headquarters, additional kennels, and training lab facilities began in 2014.

Adjacent and contiguous to JBSA-Lackland is the Port, where the Air Force maintains a significant presence. The Air Force and the Port jointly utilize the Kelly Field runway for military and commercial airfield operations. The Air Force continues to lease over 30 buildings, which consist of 1.75 million square feet of space and over 270 acres. The largest Air Force leaseback is at Building 171, a 460,000 square foot facility previously closed from the 1995 Base Realignment and Closure of Kelly AFB. Approximately 7,000 Air Force and other DoD employees work at this and other facilities on the Port in this post-BRAC 2005 era.

Much of the new BRAC 2005 growth which occurred on the Port property is at Building 171. The Air Force spent \$26.5 million to renovate the building, which houses 11 missions. Seven missions and approximately 800 personnel have relocated to the building from Brooks City-Base. These include the Air Force Civil Engineer Center, four medical missions including Air Force Medical Operations Agency, and other support missions. Building 171 also houses the new "Cyber" 24th Air Force consisting of approximately 450 personnel and the Air Force Real Property Agency.

JBSA-Randolph. JBSA-Randolph, which is known as "the Showplace of the Air Force" because of its consistent Spanish Colonial Revival architectural standard retained from when the installation was first constructed in the early 1930s, is on the northeast side of San Antonio and houses the Headquarters Air Education and Training Command and the Air Force Personnel Center. Other major tenant organizations include the Air Force Manpower Agency, 19<sup>th</sup> Air Force, the Air Force Recruiting Service, and the Air Force Office of Special Investigations (Region 4). The main operational mission is carried out by the 12<sup>th</sup> Flying Training Wing (the "Wing") which equips and trains aviators and supports worldwide contingency operations. The Wing operates parallel runways on either side of the main installation facilities and conducts 24-hour-a-day flight training operations. In a related aviation mission, JBSA-Randolph, which recently added 85 instructors and staff to its Remotely Piloted Aircraft ("RPA") training unit, will produce RPA pilots to man an Unmanned Aerial Systems ("UAS") force which now encompasses 8.5% of total Air Force pilot manning. The UAS force is projected to grow by approximately 25% between FY 2013 and FY 2017.

The BRAC 2005 growth supported the City's economic development strategy to promote development in targeted areas of the City, to leverage military installation economic assets to create jobs, and to assist the City's military installations in reducing base support operating costs.

San Antonio is home to two large projects which serve all of the military branches. The Audie L. Murphy Veterans Administration Hospital, which includes a new \$67 million Level I Polytrauma Center, was completed in 2011. This hospital is designed to be the most advanced in the world and is capable of providing state-of-the art medical care to veterans with multiple serious injuries. San Antonio is also home to the National Trauma Institute ("NTI"), a collaborative military-civilian trauma institute involving BAMC, University Hospital, the UT Health Science Center, and the USAISR. The NTI coordinates resources from the institutions to most effectively treat the trauma victims and their families.

In 2005, the San Antonio community put in place organizations and mechanisms to assist the community and the military with the BRAC 2005 and other military-related issues. The Military Transformation Task Force ("MTTF") is a City, Bexar County, and Greater San Antonio Chamber of Commerce organization which provides a single integrated voice from the community to the military. The MTTF is formed of several committees each dedicated to working with the community and military on the BRAC 2005 actions and post-BRAC 2005 actions.

In January 2007, the City established the Office of Military Affairs ("OMA") as the single point of contact for the City on military and veteran related issues. The mission of OMA is to work with the military to sustain and enhance mission readiness, develop and institutionalize relations to strengthen a community-military partnership, and to provide an official formalized point of contact for the military and veteran community on issues of common concern. OMA provides staff support to the MTTF and works closely with each MTTF committee in order to facilitate their work. OMA is also working with the local military bases to address compatible land-use issues around the installations in order to enhance mission readiness. Finally, OMA assists the Mayor with the Commission on Veterans Affairs. Chartered in 2001, this eleven-member board serves the Mayor and ten City Council Districts in an advisory capacity focused on all veteran issues within the community.

In 2008, OMA introduced the Growth Management Plan as one of the responses to the growth brought about by the BRAC 2005 actions, and it clearly laid out the partnership between the San Antonio community and the military. One example of the partnership is the City's effort to gather over \$30 million in resources and funding from bond proceeds, City funding, federal earmarks, and grants to provide significant infrastructure improvements around Fort Sam Houston. The premier project was the reconstruction and widening of Walters Street, a primary entrance to Fort Sam Houston. This project was substantially completed in June of 2013. This project was complex, since it was the center segment of a cooperative effort joining the already completed Texas Department of Transportation ("TxDOT") improvements on IH-35 to a new, high security gate entrance that was completed by Fort Sam Houston. An even more unique project is the City's construction of a much improved bridge over Salado Creek on Binz Engleman Road, which was actually built on federal property and was gifted to the military upon completion in June of 2012. Other key projects include intersection improvements on Harry Wurzbach Road between the JBSA-Fort Sam Houston Gate and Rittiman Road, and the construction of a new bridge on Rittman Road, west of IH-35. The City also expended significant funding to support development along Walters Street by improving utilities, installing a new water line and improving numerous side streets in that area. These improvements are now complete. The City was also selected by the DoD's Office of Economic Adjustment to receive an award of \$25 million in federal funds to construct new ramp connectors between IH-35 and Loop 410 near BAMC. This project is under construction. This initiative with TxDOT will greatly improve traffic flow and safety for personnel seeking access to the medical facility area.

On March 24, 2017, the United States Patent and Trademark Office granted San Antonio the Trademark Military City, USA. The trademark was a result of a year-long process to ensure that no other city had previously met the criteria. For over 300 years, San Antonio has had a rich military history. The moniker Military City, USA became most prominent after World War II. During this time, five military installations operated in San Antonio and the surrounding areas. The trademark emphasizes San Antonio's rich military history and honors its approximately 250,000 veterans.

Currently, DoD is the community's largest employer, supporting the employment of over 805,685 people, with an economic impact of approximately \$137 billion to the Texas economy. JBSA alone directly employs 282,995 people and has a total economic impact of \$49 billion in payroll, contract expenditures, and value of jobs created. Over 250,000 veterans reside in San Antonio and receive over \$1.5 billion in annual benefit payments. The BRAC 2005 program in San Antonio concluded in 2011, but the construction momentum continues. Multiple projects are planned through FY 2021. The value of the proposed construction projects during this time period is anticipated to average between \$200 and \$300 million per year.

### Other Major Industries

Aerospace. According to the Economic Impact Study commissioned by the Greater San Antonio Chamber of Commerce in 2010, the aerospace industry's annual economic impact to the City was about \$5.4 billion. This industry provides approximately 13,616 jobs, with employees earning total annual wages of over \$678 million. The aerospace industry continues to expand as the City leverages its key aerospace assets, which include San Antonio International Airport, Stinson Municipal Airport, the Port, JBSA-Randolph, JBSA-Lackland, and training institutions. Many of the major aerospace industry participants such as Boeing, Lockheed Martin, General Electric, Pratt & Whitney, Raytheon, Cessna, San Antonio Aerospace — a division of Singapore Technologies, Southwest Airlines, American Airlines, Delta Air Lines, United Airlines, US Airways, FedEx, UPS, and others, have significant operations in San Antonio. The aerospace industry in San Antonio is diversified with continued growth in air passenger service, air cargo, maintenance, repair, overhaul, and general aviation.

In February 2011, Southwest Airlines ("SWA") finalized its acquisition of AirTran Holdings, Inc. for \$1.4 billion in cash and stock. The acquisition provided SWA with a presence in 37 new cities, including Hartsfield-Jackson Atlanta International Airport (AirTran's main hub) and two AirTran customer service centers in Orlando, Florida and Atlanta, Georgia. As of March 1, 2012, SWA and AirTran are operating under a single operating certificate. Following this acquisition, SWA began discussions with City staff about its intent to consolidate customer service operations in San Antonio or at one or more of their other customer service centers.

In 1981, SWA opened its customer services and support center in San Antonio. This facility accommodated the existing workforce of 478 employees, but could not expand to include the additional 322 employees SWA planned to hire. Therefore, SWA began exploring other sites in San Antonio to accommodate a potential consolidation and growth. Other expansion sites SWA considered included Orlando, Florida, Atlanta, Georgia, Oklahoma City, Oklahoma, and Phoenix, Arizona. After consideration, SWA decided that due to changing needs and requirements in the company, and new technology being utilized to meet customer needs, it would only need to hire an additional 227 employees for a total of 705. SWA remains committed to its Customer Support and Service Operations in San Antonio, having signed a long-term lease at its new facility, and plans to maintain its workforce in San Antonio.

In early 2012, Boeing announced that its San Antonio facility would gain 300 to 400 workers and maintenance responsibilities for the nation's executive fleet due to a decision to close a Wichita, Kansas plant. The aircraft maintenance and support work, which moved to San Antonio, included improvements to the nation's fleet of executive jets, including Air Force One, the Boeing 747s that transport the President of the United States, and the jets that transport the Vice President, Cabinet members, and other government officials.

Applied Research and Development. The Southwest Research Institute ("SwRI") is one of the original and largest independent, nonprofit, applied engineering and physical sciences research and development organizations in the U.S., serving industries and governments around the world in the engineering and physical sciences field. SwRI has contracts with the Federal Aviation Administration (the "FAA"), General Electric, Pratt & Whitney, and other organizations to conduct research on many aspects of aviation, including testing synthetic jet fuel, developing software to assist with jet engine design, and testing turbine safety and materials stability. SwRI occupies 1,200 acres and provides nearly two million square feet of laboratories, test facilities, workshops, and offices for approximately 3,000 scientists, engineers, and support personnel. SwRI's total revenue for FY 2016 was \$559 million, managing 106 projects with expenditures of more than \$7.4 million to its internally sponsored research and development program which is designed to encourage new ideas and innovative technologies.

Information Technology. The information technology ("IT") industry plays a major role in San Antonio. The economic impact of IT and cyber business already measures in the billions (\$10 billion in 2010, with conservative estimates of growth to \$15 billion in 2015). The industry itself is both large and diverse, including IT and Internet-related firms that produce and sell IT products. San Antonio is particularly strong in information security. In fact, San Antonio is recognized as a national leader in this vital field, with the U.S. Air Force's Air Intelligence Agency, a large and growing National Security Agency ("NSA") presence, and the Center for Infrastructure Assurance and Security ("CIAS") at UTSA.

San Antonio boasts some of the most sophisticated uses of IT in the world, even though much of that advanced usage remains undisclosed for security reasons, since the community is home to a large concentration of military and intelligence agencies charged with the missions of intelligence, surveillance and reconnaissance, information operations and network defense, attack and exploitation. Prominent activities in cyber warfare, high tech development, acquisition and maintenance are found among the Air Intelligence Agency, Joint Information Operations Warfare Command, NSA/Central Security Service Texas, 67th Network Warfare Wing, Air Force Information Operations Center, and Cryptology Systems Group.

The CIAS at UTSA is one of the leading research and education institutions in the area of information security in the country. The CIAS has established partnerships with major influential governmental and non-governmental organizations such as the DoD, Department of Homeland Security, and the United States Secret Service. The CIAS has also been actively involved with sector-based Information Sharing and Analysis Centers' security preparedness exercises for organizations in critical infrastructures.

Chevron U.S.A. Inc. ("Chevron") selected San Antonio as the site for the construction of a 130,000 square foot data center to consolidate all of its North American data center operations. City Council approved the execution of a tax abatement agreement with Chevron. The data center involves a capital investment of over \$335 million over ten years and will create 17 new jobs that pay approximately \$60,000 annually in the targeted industry of IT. Chevron completed construction of the data center on a 33.82 acre site in Westover Hills (adjacent to the Microsoft Center), located at 5200 Rogers Road, and commenced operations in September 2014.

CyrusOne is a publicly traded owner, operator, and developer of enterprise-class data center properties. CyrusOne currently owns and operates a 107,000 square foot co-location data center at 9999 Westover Hills Blvd. The company's customers include 15 of the top 100 global companies and five of the top 10 companies, including local companies such as Christus Health, Schlumberger, and Halliburton. City Council approved a six year, 50% tax abatement agreement with CyrusOne on its planned investment of approximately \$120 million in real and personal property improvements, and the creation of 15 new full-time jobs.

In August and September 2016, Council voted and approved incentive packages for three tech-industry projects to open offices in downtown San Antonio: Easy Expunctions; Dialpad, Inc.; and LiquidWeb.

Additionally, the SAEDC supported two economic developments IT projects. Parlevel Systems ("Parlevel") is a local technology startup located in downtown San Antonio that offers software and hardware platforms for the food vending industry. In June 2016, City Council approved an economic development agreement for the company to remain and expand in San Antonio. Parlevel must retain its headquarters and business operations in San Antonio, maintain at least 30 jobs, and add 10 jobs for a total of at least 40 jobs by December 2017. In September 2016, City Council approved an investment for downtown San Antonio IT startup HelpSocial, Inc. ("HelpSocial"). Founded in 2014, HelpSocial graduated the Techstars Cloud program in 2016. The company has developed web and mobile apps for integrating social media to support customer service center operations. HelpSocial will retain its six current jobs and add four more jobs by December 2017.

Manufacturing Industry. Toyota Motor Corporation ("Toyota"), one of the largest manufacturing employers in San Antonio with an estimated workforce of over 3,000, expanded its local production in 2010, adding the production of the Tacoma truck at its manufacturing facility in San Antonio. Toyota shifted its Tacoma manufacturing from Fremont, California to San Antonio, creating an additional 1,000 jobs and investing \$100 million in new personal property, inventory, and supplies. Toyota and its 23 on-site suppliers, located on San Antonio's south side, support Toyota's production of Tundra and Tacoma vehicles, generating an estimated annual impact of \$1.7 billion. Toyota and the 17 suppliers that have contracts with the City have created a total of 7,415 new and retained jobs through December 2016.

NBTY Manufacturing Texas, LLC ("NBTY") is the largest vertically integrated manufacturer of nutritional supplements in the United States. The company manufactures, wholesales, and retails more than 25,000 products including vitamins, minerals, herbs, and sports drinks. The company sells its goods through pharmacies, wholesalers, supermarkets, and health food stores around the world. NBTY is owned by the investment firm, The Carlyle Group, which purchased 100% of the firm's publicly traded shares on October 1, 2010. NBTY considered an expansion of its vitamin manufacturing operations at 4266 Dividend – the site of the former Judson-Atkinson Candies, Inc., which closed its operations in November 2011. NBTY also considered other potential sites in Long Island, New York and Hazelton, Pennsylvania. To attract NBTY to San Antonio, the City offered the company a cash grant of \$200,000 over four years and the annual reimbursement of ad valorem taxes paid on new real and personal property improvements over ten years not to exceed \$201,546 for a total cumulative grant of up to \$401,546. Based on the City's offer of incentives, NBTY indicated its intent to expand in San Antonio, create 65 new jobs by January 1, 2016, occupy the former Judson-Atkinson facility, and invest \$6 million in improvements. NBTY also intends to offer employees with production experience with the existing manufacturing equipment. As of December 31, 2016, NBTY has created 66 jobs and invested over \$66 million in real and personal property improvements.

Xenex Healthcare Services LLC ("Xenex"), formerly headquartered in Austin, Texas, manufactures a patented mobile disinfection machine to decontaminate patient care environments. Xenex is an early stage company selling its disinfection machines to hospitals around the country. City Council authorized an EDG of \$150,000 from the Economic Development Incentive Fund to Xenex contingent upon Xenex relocating its headquarters and

operations from Austin to San Antonio and creating 27 jobs over two years. Xenex relocated the company to San Antonio in 2012. Xenex business operations in San Antonio have expanded as more hospitals and health facilities are investing in the company's disinfecting robot. Since moving to San Antonio in 2012, Xenex has grown from 15 employees to 72 employees.

Support Operations. On November 22, 2010, PETCO Animal Supplies, Inc. ("PETCO") announced it had selected San Antonio over 47 other communities as the site of a new satellite support center, which is as an extension of the company's San Diego headquarters and called the National Support Center. The National Support Center in San Antonio houses 400 PETCO associates in functions including accounting, human resources, internal audit, loss prevention, risk management, and ethics and compliance over the life of the agreement with the City which ends in 2027. These 400 new jobs have an annual average wage of approximately \$58,000 with at least 10% of the jobs paying \$80,000 or more. Many of these jobs are corporate-level positions with decision-making authority over major company functions. As of December 2016, PETCO has reported employing 357 people in its facility. PETCO is the second-largest U.S. retailer of specialty pet supplies. PETCO operates more than 1,000 stores in all 50 states and the District of Columbia, making it the only pet store to cover the entire U.S. market.

Glazer's Wholesale Drug Company ("Glazer's"), headquartered in Dallas, is one of the largest beverage distributors in the U.S. The company represents a wide variety of wine, spirits, malt beverage, and non-alcoholic suppliers in 11 states and employs over 6,000 people. Glazer's has operated in San Antonio since 1940 and is currently located at 3030 Aniol Street, where it employs 613 people. Glazer's requested an amendment to a Tax Abatement Agreement with the City, dated August 19, 2010, to reflect a new investment of over \$32 million in real and personal property at a new facility purchased by Glazer's, and creation of 100 new jobs and retainment of 350 jobs, for a total of 450 jobs to be located at the new facility. Glazer's also purchased an additional 9.37 acres of City-owned land adjacent to the previous 35-acre purchase to accommodate the larger facility. City staff negotiated to sell the additional land for \$399,999 plus a \$75,000 charitable donation by Glazer's to the City for the benefit of targeted area redevelopment, such as the City's West side, with payments of \$25,000 over each of the three years from 2014 to 2016.

*Green Technology.* In response to an April 2009 Request for Proposal, CPS negotiated and entered into a 30-year power purchase agreement with TX Solar I, LLC to construct a clean, dependable, and renewable energy solar farm in San Antonio and Bexar County, known as the "Blue Wing Solar Energy Generation Project". TX Solar I, LLC, a wholly owned subsidiary of Duke Energy, is one of the largest electric power companies in the U.S. The project consists of 214,500 ground-mounted thin film panels manufactured by First Solar with an annual generation of about 14 megawatts ("MW"). This project created approximately 100 green jobs during the construction and operation phases with a capital investment of approximately \$41,590,000 in real and personal property. The site is located southwest of the City near the intersection of IH-37 and U.S. Highway 181. Approximately 80% of the property site lies within Bexar County and approximately 20% is within the City limits.

In June 2010, CPS and UTSA announced a ten-year, \$50 million agreement to position San Antonio as a national leader in green technology research. The agreement established the Texas Sustainable Energy Research Institute at UTSA. Dr. Les Shephard, the USAA Robert F. McDermott Distinguished Chair in Engineering at UTSA, heads the institute formerly known as the Institute for Conventional, Alternative and Renewable Energy. This research institute works with other academic and research entities with robust green programs including the SwRI as well as the Mission Verde Center, a City partnership that includes the Alamo Colleges and the Texas A&M University Texas Engineering Experiment Station. It also has an active military establishment looking to address specific energy needs. CPS began investing \$50 million over ten years in the UTSA Institute in 2011.

The City continues to maximize the municipally-owned CPS utility to develop investment and employment in San Antonio. Through a combination of power purchase agreements and local economic development incentives, the City and CPS are steadily securing jobs, investment, and enhancing university research and development in the area of renewable energy.

As of January 31, 2017, CPS' renewable energy capacity totals 1,409.8 MW in service with another 160.2 MW under contract. CPS has one of the strongest renewable energy programs in Texas with a renewable capacity under contract totaling 1,570.0 MW. CPS executed a Master Agreement with OCI Solar Power ("OCI") for 400 MW from seven facilities. The last of the seven facilities became operational in early 2017. Each individual

facility comprising OCI's 400 MW has an existing Purchase Power Agreement ("PPA"). OCI's Alamo 1 project facility of 40.7 MW achieved commercial operation in December 2013; St. Hedwig (Alamo 2) for 4.4 MW achieved commercial operation in March 2014; Eclipse (Alamo 4) facility at 39.6 MW, achieved commercial operation in August 2014; Walzem (Alamo 3) project at 5.5 MW achieved commercial operation in January 2015. The Uvalde (Helios – Alamo 5) facility at 95 MW became operational at the end of December 2015. The Haskell (Solara – Alamo 7) facility at 106.4 MW became operational in September 2016. The Sirius 1 (Alamo 6), at 110.2 MW in Pecos County, Texas, became operational in March 2017. Alamo 6 is currently one of the largest solar PV plants in Texas.

On June 20, 2011, CPS and the City announced the expansion of five companies into the area directly related to renewable energy and energy efficiency technologies. These firms were: Consert, GreenStar, ColdCar USA, Summit Power, and SunEdison. Since that time, these companies have begun implementing their commitments to San Antonio. In early January 2014, CPS allowed its agreement with Summit Power to expire. Recent developments include the following:

- Three separate purchase power contracts have been signed with SunEdison that will bring approximately 30 MW of renewable solar energy to CPS. CPS will provide about 60% of the long-term capital for development of the project by prepaying for a portion of the anticipated electrical output. SunEdison will utilize these funds to reduce the interest cost of the project. These uniquely structured contracts, a first in the solar industry, will ultimately provide CPS ratepayers with more than \$32 million in energy savings over the next 25 years. The two 10 MW solar farm projects on approximately 200 acres at the SAWS Dos Rios Water Recycling Center are operational. The third solar farm achieved commercial operation in August 2012.
- GreenStar, a manufacturer of LED streetlights, has moved into a new manufacturing space in the Alamo Downs area. Currently, the company employs about 42 people in its San Antonio location. At the end of September 2011, the first shipment containing 100 LED lights was delivered to CPS. A total of 25,000 LED streetlights will be installed throughout the City over the next several years.
- Consert relocated its corporate headquarters from North Carolina to San Antonio and has hired 53 employees. Consert has completed close to 17,000 installations of its innovative energy management technology in the San Antonio area.
- ColdCar USA continues to actively seek a manufacturing facility site in San Antonio. In November 2011, ColdCar USA delivered its first all electric refrigeration truck to Ft. Collins, Colorado.
- On January 11, 2012, OCI and Mission Solar (formerly Nexolon) were selected by CPS to build one of the country's largest solar projects, a 400-MW solar power manufacturing plant in San Antonio, resulting in an investment of more than \$100 million. This solar project is the largest in the nation and will catapult Texas into the top five U.S. solar producing states. CPS reached an agreement with OCI to build the 400-MW solar energy project, and entered into a 25-year Power PPA on July 23, 2012. The PPA with CPS requires OCI to ensure the following: (1) establishment of an "anchor" facility to manufacture solar energy related products and one or more manufacturing facilities for multiple components of the solar energy value chain, such as racking systems; (2) investment of at least \$100 million for the proposed "anchor" facility; and (3) the creation of at least 800 total solar energy related jobs with an annual payroll of \$30 million. One of OCI's partners, Mission Solar will initially create 404 solar manufacturing jobs toward meeting the total job requirement and both companies plan to establish their U.S. corporate headquarters in San Antonio, with OCI creating 76 corporate jobs and Mission Solar creating 40 corporate jobs.

### Inner City Development

On February 4, 2010, the City Council approved the Inner City Reinvestment/Infill Policy as a strategy to stimulate growth in the inner city. Current market trends support a renewed interest in the heart of San Antonio, as illustrated by studies conducted for San Antonio such as the Downtown Housing Study, the Real Estate Market Value Analysis, and the Housing + Transportation Affordability Index. In particular, the Real Estate Market Value Analysis shows that a substantial portion of San Antonio's core has very high rates of vacant properties, properties that could be put to use to support increasing demand for near-downtown housing, jobs, and services. This policy establishes the Inner City Reinvestment/Infill Policy Target Area as the highest priority for incentives. Specifically, the following actions are endorsed: (1) waiver of certain City fees and SAWS fees within the target area, and (2) greater incentives for economic development projects within the target area. The policy is designed to combat sprawl by strengthening San Antonio's vibrant urban core and driving investment into the heart of the City.

Argo Group US, Inc. ("Argo") moved its insurance operations from Menlo, California to San Antonio in 2001 and maintains its U.S. corporate headquarters in San Antonio. In 2007, Argo merged with PXRE Group Ltd., a Bermuda-based property reinsurer, and established its international headquarters in Bermuda. Argo has about 1,300 employees worldwide in eight countries, including 17 offices in 12 states, with annual revenues of approximately \$1.3 billion. Argo was located at 10101 Reunion Place and considering relocation of its San Antonio operations to other sites within San Antonio, as well as to sites in other U.S. cities. In order to retain these good-paying corporate headquarters jobs in San Antonio, the City offered Argo free parking at the St. Mary's garage for ten years valued at approximately \$2,850,120 for up to 300 parking spaces. In exchange for this financial incentive, Argo located over 200 jobs at the IBC Centre building at 175 E. Houston Street and has agreed to retain these jobs at this location for the ten-year term of the agreement. Argo also agreed to meet the City's minimum wage requirements and pay an average annual salary of at least \$50,000. These incentives were approved by City Council on September 15, 2011.

HVHC Inc. ("HVHC") established its headquarters in San Antonio in 1988 and currently employs 440 people at its headquarters facility downtown with plans to add another 100 jobs over the next two years. HVHC operates the third largest optical retail sector in the U.S. under several brand names, such as Visionworks. The company currently operates over 540 retail stores in 36 states and plans to grow to 1,000 stores in the next five years. City staff met with representatives of the company in December 2010 as part of the community's Business Retention and Expansion program administered through the City's contract with the Economic Development Foundation. During this meeting, City staff learned the company planned to relocate from its current facility at 11103 West Avenue and was considering a consolidation and expansion of its operations at either another site in San Antonio or in other Texas cities, including Dallas and Austin. In order to retain the company's operations and headquarters in San Antonio, the City offered the following financial incentives to HVHC: (1) a cash grant of \$1,050,000 payable over two years at \$3,000 per job created/retained, and (2) approximately \$2,923,200 in parking subsidies in the St. Mary's garage over ten years, to include free parking for up to 350 employees for five years and parking at a 60% discount for up to 350 employees for another five years. In exchange for these financial incentives, HVHC agreed to: (1) retain its operations and corporate headquarters in San Antonio; (2) relocate 265 corporate jobs to the IBC Centre building on Houston Street; (3) relocate its vision care benefits subsidiary, Davis Vision, from Latham, New York to San Antonio; (4) add 85 new jobs for a total of 350 jobs at the IBC Centre no later than December 31, 2012; (5) meet the City's minimum wage requirements in the Tax Abatement Guidelines; and (6) pay an annual average salary of at least \$50,000. These incentives were approved by City Council on September 1, 2011. As of December 31, 2015, HVHC has complied with all of the outlined requirements.

Additionally, HVHC entered into another agreement with the City, expanding its headquarter operations by agreeing to create an additional 150 jobs for a total of 500 jobs by December 31, 2015 and retaining these jobs downtown for the remainder of the term of the grant through September 11, 2021. In turn, City Council approved an amendment to the current parking grant agreement in the amount of \$360,000 payable over five years at \$72,000 per year. In September 2012, HVHC advised City staff that the company was considering San Antonio and two sites in the Dallas area for the expansion of their manufacturing operations. To secure the manufacturing project for San Antonio, City staff recommended City Council approve a cash grant of up to \$1,140,000 for the manufacturing project. For this grant, HVHC must locate its new manufacturing operations at 655 Richland Hills for a term of at least ten years, create up to 600 jobs, pay the living wage of \$11.08/hour to all employees, designate a minimum of 50 "high wage" jobs paying an annual salary of at least \$43,186 and invest approximately \$25 million in personal property improvements. Both of these incentives were approved by City Council on April 11, 2013, and as of December 2016, HVHC has created a total of 505 jobs.

On June 21, 2012, City Council adopted the Center City Housing Incentive Policy ("CCHIP") to encourage high-density housing development in the targeted growth areas identified in the City's Downtown Strategic Framework Plan. CCHIP encourages historic rehabilitation, adaptive reuse, brownfield redevelopment, transit oriented development, and encourages mixed-use and mixed-income redevelopment. CCHIP is an as-of-right housing incentive policy that applies to multi-family rental and for-sale housing projects within the Community Revitalization Action Group ("CRAG"), San Antonio's original 36 square mile boundary. Eligible projects may receive City fee waivers, SAWS fee waivers, and real property tax reimbursement grants for new residential development and residential conversions in the center city. Additionally, low interest construction loans and mixed-use forgivable loans may be awarded based on the geographic location of the housing project. Projects located within the urban core are eligible to receive a higher grant amount per housing unit. As of June 13, 2017, 63 incentive agreements have been executed under the program which will produce 6,275 new housing units in the center city.

### Port San Antonio

The Port is a logistics-based industrial platform on the 1,900-acre site of the former Kelly Air Force Base. It was created by the Texas Legislature in 2001 following the closure of the base and tasked with redeveloping and managing the property to ensure that it continues serving as an economic engine for the region. Though created by the local government, the Port is self-sustaining and operates like a business – receiving its income from the properties it leases and services it provides, and reinvesting profits into further development of the property.

The Port is the region's single largest real estate management and leasing firm, overseeing 12.9 million square feet of facilities and logistics assets that include an industrial airport, Kelly Field, SKF, and a 350-acre railport, East Kelly Railport. The entire site is contained within a foreign-trade zone, FTZ #80-10, and has quick road connections to Interstate Highways 35, 10, and 37.

The Port redevelopment efforts to date have attracted almost 80 customers to its site, including aerospace, logistics and military/governmental organizations. These customers employ more than 14,000 workers and generate over \$4 billion in regional economic activity each year. The Port has received numerous recognitions for its innovative work, including being named Redevelopment Community of the Year in 2010 by the Association of Defense Communities. A regional sustainability leader since 2009, two of the Port's newly developed properties have been LEED-certified by the U.S. Green Building Council.

Fourteen of the Port's customers are aerospace-related firms, including industry leaders Boeing, Lockheed Martin, StandardAero, Chromalloy, Gore Design Completions ("Gore"), and Pratt & Whitney. Of the 14,000 workers at the Port, about 5,000 are employed in the aerospace sector.

The Port reached important milestones in 2011, as further described below, positioning it and its customers for further growth as an important economic engine for the region.

In the aerospace sector, Boeing San Antonio continues the legacy of aviation as a high performance, nationally-recognized facility. The company, which has been operating at Kelly Field since 1998 with a focus on maintenance, repair, and overhaul of military aircraft, welcomed its first 787 Dreamliner in the spring of 2011. The airplane is one of four scheduled to undergo change incorporation (electronics and software upgrades) at the Port before final completion and delivery to customers worldwide. In addition, the first of six new 747-8 tankers arrived at Boeing's Port facility in 2011 where they underwent change incorporation through 2013. Based on the success of this project, the Port San Antonio Boeing facility will continue to incorporate commercial maintenance, repair, and overhaul into their operations.

Similarly, Gore (now called GDC Technics), which is North America's largest outfitter of custom interiors for wide body jets and the third largest company of its type in the world, has been steadily growing since its arrival at the Port in 2005. In 2010, Gore added over 100,000 square feet to its hangar and workshop facilities at Kelly Field, giving it the necessary room to deliver luxury interiors for a Boeing 767 and its first Boeing 777 completion to foreign heads of state in 2011. Projects in the GDC Technics portfolio include green completions, refurbishments, or maintenance for aircraft such as the Boeing 727, Boeing 737 BBJ, Boeing 767-300, Boeing 777-200LR, Boeing 757, and Boeing 777, along with the Airbus 320, Airbus 330, Airbus A340-200, and Airbus A340-500.

Elsewhere at the Port, efforts to upgrade a 450,000 square foot office facility known as Building 171 continued in 2011. The facility accommodates 11 Air Force agency headquarters and 3,000 personnel. Since 2009, the Port has managed over \$60 million in upgrades to the property to meet new Anti-Terrorism Force Protection standards that ensure the safety of its occupants and the sensitive work that takes place within. In 2012, the completion of final bays allowed the 24th Air Force-Cyber Command to become the final occupant of the building. There, the unit leads operations to defend the Air Force's information systems worldwide against the new frontier in warfare-cyber attacks.

Four properties adjacent to Building 171 are also undergoing upgrades managed by the Port to support Air Force expansion within a single 70-acre containment area. Buildings 178, 179, and 200, measuring a combined 218,000 square feet, provide additional offices and specialized space for important servers and other computer equipment, including those utilized by the 24<sup>th</sup> Air Force-Cyber Command.

In 2010, the Port also completed a \$10 million upgrade to a former World War II era warehouse, which now comprises 85,000 square feet of modern office space. The building allowed ACS, a Xerox Company and Port customer since 2000, to relocate from a 45,000 square foot space it previously occupied into its new facility as it grew its workforce from 400 to over 800 employees throughout 2010 and 2011. The company provides business support services to private and governmental customers, including serving as the State Disbursement Unit for Texas child support payments.

The Port will reach an important milestone as two road construction phases which began in 2011 are expected to be completed in 2017. The first phase of construction which was completed in 2013 starts on the Port's northwest entrance, where 36<sup>th</sup> Street intersects with Growdon Road, and stretches for almost a mile to the south until it intersects with Billy Mitchell Boulevard. The new 36<sup>th</sup> Street extension creates an enhanced route inside the Port. The first phase of construction, also known as the 36<sup>th</sup> Street Project, is now fully open inside the Port between U.S. Highway 90 and Billy Mitchell Boulevard, and has improved overall access to the Port and opens 150 acres at Kelly Field for the development of new air-served facilities. In late 2015, the City began the second phase of construction on work that extends the road from Billy Mitchell Boulevard to General Hudnell Drive, creating additional connections for Port workers and commercial drivers.

The new sites opened by the 36<sup>th</sup> Street extension will enable the construction of new hangars and workshops that can support an additional 8,000 new jobs in that part of the Port alone – further positioning the region as an important and thriving aerospace center. The project is headed by the City's Capital Improvement Management Services Department. Additional project partners include the Metropolitan Planning Organization, CPS, SAWS, and TxDOT.

While San Antonio is securing its position as the premier cybersecurity hub, the Port is embarking on a new path to become a major subhub in securing cybersecurity operations at the Port's campus. The Port is moving forward with planning a new cybersecurity complex facility to accommodate growing demand by both military and private-sector cybersecurity operations. The Port's initial plan is to build an 80,000 square foot office space at a cost of \$15 million. If demand builds and cyber and technology operations continue to grow, the Port will bring additional phases to create over 500,000 square feet of additional office space to accommodate the possibility of 1,000 jobs.

# Brooks City-Base

Brooks City-Base continues to foster the development of its business and technology center on the south side of San Antonio through its aggressive business attraction and retention efforts. Recognized as one of the most innovative economic development projects in the United States, Brooks City-Base is a 1,200 acre campus with approximately 250 acres available for immediate development. The U.S. Air Force ceased all operations at Brooks City-Base on September 15, 2011.

Since the project's inception, more than 3,000 jobs have been created with an average salary of \$50,000. More than \$300 million in real estate development has occurred on campus, with another \$170 million in projects being planned and constructed at Brooks City-Base through 2018.

Brooks Development Authority ("BDA") encouraged economic growth noting the following projects:

- VMC Consulting expanded its center at Brooks City-Base creating 600 additional jobs to support San Antonio client base.
- Brooks City-Base has completed restoration of Hangar 9, thereby maintaining its historical presence on campus.
- Spine and Pain Center of San Antonio, PLLC signed a ten-year lease agreement with BDA. The center opened its doors with approximately 9,622 rentable square feet.
- The Landings at Brooks City-Base completed the first phase of construction on a 300 unit multi-family apartment complex. The development is owned by the BDA and the NRP Group is the co-developer.
- The City completed construction of its new Fire and Police Emergency Dispatch Center, a state-of-theart communications facility located across from the City's Emergency Operations Center and replaced the 9-1-1 center located at the police headquarters downtown.

- BDA finalized a land sale to Head and Neck, a medical facility, to establish a 20,000 square foot medical office building on the Brooks City-Base Campus.
- On June 27, 2011, the Mission Trail Baptist Hospital, located on 28 acres at Brooks City-Base, opened its doors. This facility consists of three stories, with the capability of adding additional floors and square footage as needed. It currently employs 567 people.
- In June 2014, the University of the Incarnate Word ("UIW") announced plans to build the city's first osteopathic medical school on the campus of Brooks City-Base.
- Phase 1 of the medical school will begin with four buildings in the historic district of Brooks City-Base. The cost of building the school is approximately \$12 million. UIW began leasing the buildings in 2014 and will take ownership after 25 years. The school is scheduled to open in 2017.
- Construction has begun on The Residences at Kennedy Hill, a 306-unit high-end apartment project at Brooks City-Base. NRP Group is partnering with Brooks City-Base on the roughly \$40 million project. The Residences at Kennedy Hill are intended to house the 500 or so faculty, staff and students expected to occupy the adjacent University of the Incarnate Word's School of Osteopathic Medicine, under construction on the site of Brooks' former School of Aerospace Medicine. Both are scheduled to open in fall 2017.
- On June 26, 2015, BDA closed on a bridge loan in the amount of \$7,422,569, for development costs as part of a financing package for the construction of the Embassy Suites by Hilton Hotel Project. The hotel opened in May 2017.

To continue fostering economic activities on the south side of San Antonio, BDA leveraged its resources and BDA was awarded \$1.9 million from the State Energy Conservation Office ("SECO") for energy saving upgrades to eight buildings and 163 residential housing units. The SECO loans were obtained by BDA for energy saving upgrades to various residential housing units, new chiller systems for various buildings, replacement of heating, ventilation, and air conditioning systems associated with Buildings 160 and 170, and upgrades to Buildings 532, 570, 775, and 150, for installation of rooftop solar panels and the replacement of the HVAC system.

On December 13, 2012, City Council designated Brooks City-Base as a Reinvestment Zone in accordance with State statute for the purpose of the Mission Solar project. A Reinvestment Zone designation to the Brooks City-Base site will contribute to the retention and expansion of primary employment and attract major investment in the zone. Mission Solar has decided to locate its solar panel manufacturing operations and its U.S. corporate headquarters at Brooks City-Base. Mission Solar has also agreed to support the creation and sustainment of a renewable energy and advanced manufacturing workforce through a \$350,000 contribution to the Alamo Colleges. These funds will be used by the Alamo Colleges to continue its efforts to develop a customized curriculum and training program to support the development of a renewable energy workforce.

Sources: The Greater San Antonio Chamber of Commerce; San Antonio Medical Foundation; City of San Antonio, Department of International and Economic Development Department; Convention and Visitors Bureau; and the Strategic Alliance for Business and Economic Research Institute.

# Construction Activity

Set forth below is a table showing building permits issued for construction within the City at December 31 for the years indicated:

	New Residential		Residential				
Calendar	Sing	gle Family 1	Mu	Multi-Family <sup>2</sup>		Other <sup>3</sup>	
Year	<b>Permits</b>	Valuation	<b>Permits</b>	Valuation	<b>Permits</b>	Valuation	
2007	4,035	\$533,453,592	329	\$203,966,595	12,788	\$2,023,856,110	
2008	2,575	\$386,407,251	414	\$336,579,967	11,106	\$2,006,112,379	
2009	2,119	\$309,815,331	145	\$216,621,122	10,634	\$1,473,424,436	
2010	1,982	\$295,097,549	154	\$186,518,798	10,489	\$1,174,710,884	
2011	1,650	\$245,542,976	270	\$205,177,825	10,290	\$1,594,888,560	
2012	1,993	\$323,925,290	226	\$302,749,653	11,390	\$1,636,131,582	
2013	1,902	\$336,790,668	268	\$320,007,487	9,888	\$1,664,008,739	
2014	2,290	\$407,108,162	252	\$501,829,279	11,214	\$2,496,182,001	
2015	2,161	\$408,047,290	263	\$500,853,131	11,580	\$2,096,065,163	
2016	2,150	\$409,048,513	219	\$408,327,871	19,106	\$2,093,010,308	

<sup>&</sup>lt;sup>1</sup> Includes new single family attached and detached projects.

# Total Municipal Sales Tax Collections - Ten Largest Texas Cities

Set forth below in alphabetical order is total municipal sales tax collections for the calendar years indicated:

	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>
Amarillo	\$ 74,412,781	\$ 74,423,001	\$ 72,301,582	\$ 70,744,051	\$ 65,386,227
Arlington	102,892,000	98,718,419	93,694,878	94,043,810	88,941,229
Austin	204,636,966	195,469,522	182,254,926	167,597,270	158,855,261
Corpus Christi 1	N/A	77,787,653	80,774,939	76,088,455	72,581,730
Dallas	284,659,887	272,645,990	256,926,027	242,456,290	232,445,766
El Paso	83,879,102	81,307,487	78,615,134	75,831,660	74,164,329
Fort Worth	139,042,987	131,705,412	126,263,002	118,919,449	112,745,847
Frisco <sup>1</sup>	74,691,991	N/A	N/A	N/A	N/A
Houston	630,172,429	659,339,722	646,063,653	608,189,684	569,942,545
Plano	78,286,505	77,558,042	75,393,702	69,804,509	68,410,251
SAN ANTONIO	324,561,595	315,346,501	303,992,585	269,947,330	244,094,371

In 2016 the City of Frisco replaced the City of Corpus Christi as the 10<sup>th</sup> largest city in the state. *Source: State of Texas, Comptroller's Office.* 

<sup>&</sup>lt;sup>2</sup> Includes new two-, three- and four-family projects, townhomes, and multifamily apartment complexes. Apartment complexes are permitted per building.

<sup>&</sup>lt;sup>3</sup> Includes commercial building permits, commercial additions, improvements, extensions, and certain residential improvements. *Source: City of San Antonio, Development Services Department.* 

### **Education**

There are 15 independent school districts within Bexar County with a combined enrollment of 327,389 encompassing 44 high schools, 69 middle/junior high schools, 263 early education/elementary schools, 21 magnet schools, and 50 alternative schools as of October 2016. There are an additional 23 charter school districts with 55 open enrollment charter schools at all grade levels. In addition, Bexar County has 79 accredited private and parochial schools at all education levels. Generally, students attend school in the districts in which they reside. There is currently no busing between school districts in effect. The seven largest accredited and degree-granting universities, which include a school of medicine, a school of nursing, a dental school, a law school, and five public community colleges, had combined enrollments of 117,706 for Fall 2016.

Sources: Texas Education Agency; and Texas Higher Education Coordinating Board.

### **Employment Statistics**

The following table shows current nonagricultural employment estimates by industry in the San Antonio-New Braunfels MSA for the period of May 2017, as compared to the prior periods of April 2017 and May 2016, respectively.

# Employment by Industry

San Antonio-New Braunfels MSA <sup>1</sup>	May 2017	<u>April 2017</u>	May 2016
Mining and Logging	7,200	7,000	6,800
Construction	54,500	52,400	51,200
Manufacturing	49,000	48,700	47,300
Trade, Transportation, and Utilities	178,000	178,300	177,000
Information	20,600	20,600	21,600
Financial Activities	86,700	87,200	87,200
Professional and Business Services	133,400	133,400	128,500
Education and Health Services	167,100	167,600	156,800
Leisure and Hospitality	132,900	130,400	131,800
Other Services	38,100	37,300	37,300
Government	<u>174,100</u>	<u>173,800</u>	<u>170,600</u>
Total Nonfarm	1,041,600	1,036,700	1,016,100

<sup>&</sup>lt;sup>1</sup> Based on Labor Market Information Department, Texas Workforce Commission (model-based methodology).

The following table shows civilian labor force estimates, the number of persons employed, the number of persons unemployed, and the unemployment rate in the San Antonio-New Braunfels MSA, Texas, and the United States for the period of May 2017, as compared to the prior periods of April 2017 and May 2016, respectively.

### **Unemployment Information** (all estimates in thousands)

San Antonio-New Braunfels MSA <sup>1</sup>	May 2017	April 2017
Civilian Labor Force	1,154.0	1,156.8
Number of Employed	1,112.3	1,115.2
Number of Unemployed	41.7	41.6
Unemployment Rate (%)	3.6	3.6
Texas (Actual) <sup>1</sup>	May 2017	<u>April 2017</u>
Civilian Labor Force	13,449.2	13,506.9
Number of Employed	12,857.2	12,895.1
Number of Unemployed	592.0	611.8
Unemployment Rate (%)	4.4	4.5
United States (Actual) <sup>1</sup>	<u>May 2017</u>	<u>April 2017</u>
Civilian Labor Force	159,979.0	159,817.0
Number of Employed	153,407.0	153,262.0
Number of Unemployed	6,572.0	6,555.0
Unemployment Rate (%)	4.1	4.1

Based on Labor Market Information Department, Texas Workforce Commission (model-based methodology).

### San Antonio Electric and Gas Systems

San Antonio Electric and Gas Systems are described in the most recent City offering document published in connection with the issuance of debt secured by revenues of such system and is available at www.emma.msrb.org.

# San Antonio Water System

San Antonio Water and Wastewater Systems are covered in the body of this Official Statement.

# The Airport System

#### General

The San Antonio International Airport (the "Airport" or "SAT"), located on a 2,600-acre site that is adjacent to Loop 410 freeway and U.S. Highway 281, is nine miles north of the City's downtown business district. The Airport consists of three runways with the main runway measuring 8,502 feet and able to accommodate up to and including Group V passenger aircraft. Its two terminal buildings contain 25 second-level gates. Presently, the following domestic air carriers provide scheduled service to San Antonio: American Airlines, Delta Air Lines, Southwest Airlines, United Airlines, Allegiant, Alaska and Frontier, as well as associated affiliates of certain of the aforementioned air carriers. AeroMexico, Southwest, United, Interjet, Volaris, and associated affiliates, provide passenger service to four Mexico destinations. New air service that started in 2015 includes American to Miami, Southwest to New Orleans, Delta to Los Angeles, and Allegiant to three markets: Ft. Lauderdale, Las Vegas and Orlando-Sanford. New air service that started in 2016 includes Frontier to four markets: Atlanta, Denver, Las Vegas and Philadelphia, Southwest to Kansas City and added frequency to Houston-Hobby. In April 2017, Frontier began direct service to Chicago, and on May 1, 2017, Air Canada began service to Toronto.

The Airport is classified as a medium hub facility by the FAA. A "medium hub facility" is defined as a facility that enplanes between 0.25% and 0.50% of all passengers enplaned on certificated route air carriers in all services in the 50 states, the District of Columbia, and other designated territorial possessions of the United States. According to Airports Council International – North America ("ACI-NA"), an airport industry group, the Airport ranked 43<sup>rd</sup> based on preliminary total U.S. airport's passenger traffic for calendar year 2015. For the calendar year ended December 31, 2016, the Airport enplaned approximately 4.3 million passengers. Airport management has determined that approximately 98% of the Airport's domestic passenger traffic is origination and destination in nature, which is important because it demonstrates strong travel to and from the City independent from any one airline's hub strategies. A variety of services is available to the traveling public from approximately 245 commercial businesses which lease facilities at the Airport and Stinson Municipal Airport ("Stinson" and, together with the Airport, the "Airport System").

The City updated the Master Plan ("Vision 2050") for the Airport, which was approved by City Council on March 31, 2011 and provides direction for the development of the Airport for five, ten, and 20 years into the future. For the five-year plan, the Vision 2050 update recommends modest improvements to complement the Capital Improvement Plan (defined below). Among the recommended improvements to be financed and constructed by the City are renovating and renewing Terminal A, land acquisition, and constructing a taxiway connector, Airport maintenance facility, and an administrative center. Additionally, recommended improvements included in Vision 2050 to be financed and constructed by non-City sources, such as customer facility charges and third party and/or tenant financing, include an expansion of the Airport fuel farm, a consolidated rental car center, and the expansion of tenant ground service equipment maintenance and storage facilities.

Stinson, located on 300 acres approximately 5.2 miles southeast of the City's downtown business district, was established in 1915, and is one of the country's first municipally-owned airports. It is the second oldest continuously operating airport in the U.S. and is the FAA's designated general aviation reliever airport to the Airport. The Airport Master Plan for Stinson was updated in May 2013 to establish a long range development strategy or "blueprint" for the sustained, and fiscally responsible, growth of the Airport through 2031. The Airport Master Plan for Stinson seeks to balance airport growth against the need to minimize impacts on the surrounding environment. In doing so, the study focused on optimizing operations at the airport and providing flexible options for growth, while identifying possible areas suitable for new facilities.

The City entered into an Airport Project Participation Agreement with TxDOT for a Federally Assisted Airport Development Grant on April 11, 2013 for engineering/design services for: evaluation of FAA Advisory Circular 1050/5300-13A on Runway 14/32 and Taxiway A; overlay and mark of Runway 14/32; overlay of Taxiway A, B, and C; replacement of medium intensity lights on Taxiway A, B, and C; replacement of medium intensity runway lights on Runway 14/32; upgrade of airfield guidance signs on Runway 14/32 and Taxiway A, B, and C. A second agreement with TxDOT was made on April 18, 2013 for engineering/design services to relocate the air traffic control tower.

# Capital Improvement Plan

The proposed six-year (FY 2015 – FY 2020) Capital Improvement Plan (the "CIP") totals approximately \$261 million and is comprised of certain projects including the design and construction of a consolidated rental car facility, airfield improvements, land acquisition, residential acoustical treatment, road improvements, aircraft apron expansion, and cargo improvements.

The CIP consists of the following:

### Terminal Facilities

- Terminal A Renovations and Refurbishments, Phase II. This project is for design and construction for the expansion of the customs facility in Terminal A which will be constructed in phases along with addressing building infrastructure not captured in the first phase.
- TSA-Advanced Surveillance Program. This project provides greater surveillance of the various Terminal locations to enhance security, aid in the speedy resolution of claims, and assist in the resolution of law enforcement issues.
- Terminal A Security Checkpoint Expansion. This project designs and constructs the expansion of Terminal A Security Checkpoint for additional security lines and provides a connector between Terminals A and B to improve checkpoint congestion.

### <u>Airfield Improvements</u>

- Terminal Area Reconstruction. Phased to minimize construction impacts on airport operations. Package I provides the reconstruction of the southeastern section of Taxiway G, from Runway 4/22 to Taxiway A. Package II provides a reconstruction of Taxiway G at intersections of Taxiway N and L, along with the South Inner Taxilane parallel to Terminal A.
- Perimeter Road Reconstruction. This project provides for the design and phased reconstruction of critical areas of the perimeter road.

# Acoustical Treatment Program

• Acoustical Program. Continuation of the Residential Acoustical Treatment Program.

### Other Projects

- Consolidated Rental Car Facility. This project provides a consolidated rental car facility, which centralizes Airport rental car operators into a single facility.
- Support Service Building. Provides for the construction of an administrative office facility to house the Airport System staff.
- Outside Plant Campus IT Ring. This project will complete the Outside Plant Communication Ring around the campus.
- Other Capital Projects. Miscellaneous projects at the Airport and at Stinson.

The anticipated sources of funding for the CIP are as follows:

Funding Sources	<b>Projected Funding (\$)</b>
Federal Grants	
Entitlements	6,400,000
Discretionary	16,623,760
General Discretionary	
Noise Discretionary	6,400,000
TxDOT Grant	50,000
Passenger Facility Charges ("PFCs")	
Pay-As-You-Go	122,500
PFC-Secured Bonds	1,600,000
Other Funding	
Airport Funds	71,919,251
Airport Revenue Bonds	6,937,278
Customer Facility Charge Bonds	150,551,805
Total	260,604,594

The CIP includes capital improvements, which are generally described as follows:

Improvement	Amount (\$)
Airport	
Terminal Facilities	17,249,134
Airfield Improvements	31,278,773
Acoustical Treatment Program	8,300,000
Consolidated Rental Car Facility	150,551,805
Other Projects	48,325,882
Stinson	4,899,000
Total	260,604,594

*PFC Projects*. Public agencies wishing to impose PFCs are required to apply to the FAA for such authority and must meet certain requirements specified in the 49 USC § 40117, and the implementing regulations issued by the FAA.

The FAA issued a "Record of Decision" on August 29, 2001 approving the City's initial PFC application. The City, as the owner and operator of the Airport, received authority to impose a \$3.00 PFC and to collect, in the aggregate, approximately \$102,500,000 in PFC Revenues. On February 15, 2005, the FAA approved an application amendment increasing the PFC funding by a net amount of \$13,893,537. On February 22, 2005, the FAA approved the City's application for an additional \$50,682,244 in PFC collections to be used for 11 new projects. On June 26, 2007, the FAA approved two amendments to approved applications increasing the PFC funding by a net amount of \$121,611,491 for two projects and \$67,621,461 for four projects. Additionally, the FAA approved the increased collection rate from \$3.00 to \$4.50, effective October 1, 2007. In May 2010, the FAA approved amendments to the City's PFC collection authorization to increase the scope of the PFC funding for certain PFC projects and permitted the addition of several elements. The May 28, 2010 FAA approvals increased the PFC funding amount from \$380,958,549 to \$574,569,629. On March 18, 2015, the City submitted an amendment to reduce the PFC Collection authority from the amount of approximately \$573.8 million to approximately \$463.7 million (a reduction of approximately \$110.1 million). This reduction was due to (i) estimated finance and interest costs that were overstated in the submittals compared to actual finance and interest costs and (ii) lower project costs in some cases. The FAA issued the Final Agency Decision on April 13, 2015, approving the proposed PFC amendment.

On October 1, 2007, the City began collecting a \$4.50 PFC (less a \$0.11 air carrier collection charge) per qualifying enplaned passenger. The City has received PFC "impose and use" authority, meaning that it may impose the PFC and use the resultant PFC Revenues for all projects, contemplated to be completed using proceeds of the Parity PFC Bonds. As of April 30, 2017, the City has collected \$207,482,922 (unaudited) in PFC Revenues since authority to impose and collect the PFC was received. The estimated PFC collection expiration date is June 1, 2028.

To date, the following projects have been approved as "impose and use" projects:

- Replace Remain Overnight Apron
- Implement Terminal Modifications
- Reconstruct Perimeter Road
- Construct New Terminal B
- Acoustical Treatment Program
- Construct Elevated Terminal Roadway
- Upgrade Central Utility Plant
- Construct Apron Terminal Expansion
- Install Utilities Terminal Expansion
- Replace Two Aircraft Rescue and Fire Fighting Vehicles
- Conduct Environmental Impact Statement
- Reconstruct Terminal Area Roadway
- Install Noise Monitoring Equipment
- Install Terminal and Airfield Security Improvements
- Install Airfield Electrical Improvements
- PFC Development and Administration Costs

CFC and CFC Projects. The City Council, by ordinance adopted on March 8, 2012, authorized the Airport to impose the collection of a \$4.50 per transaction day Customer Facility Charge ("CFC") for rental car customers to pay for all costs and expenses associated with the planning, financing, and construction and certain other costs for a Consolidated Rental Car Facility (the "ConRAC") to open in three to five years. The rental car companies (RACs) began collecting the CFC on all car rentals at the Airport on April 1, 2012. The CFC was reapproved at a collection rate of \$5.00 per transaction day, effective July 1, 2015, pursuant to the ordinance adopted by the City Council on June 18, 2015. The ConRAC project cost is estimated at \$165.6 million. As of April 30, 2017, the City has received \$47,817,619 (unaudited) in CFC Revenues since the April 1, 2012 inception of the CFC.

ConRAC Update: Construction is proceeding according to schedule. In June 2016, Council approved an amendment to the construction contract to accelerate substantial completion of the car rental portion to July 2017 versus the previous date of September 2017. Overall, the project is 62% complete. The Slab on Grade and Level 2 decks are 100% complete. Level 3 is 80% complete. All piers have been completed. The Quick Turnaround Area ("QTA") Slab on Grade, Level 2 and Level 3 are 100% complete. SkyBridge structural steel has been installed. Customer Service Center Level 4 exterior glass is being installed.

### Airport Operations

Direct supervision of airport operations is managed by the Department of Aviation (the "Department"). The Department is responsible for: (1) managing, operating, and developing the Airport System and any other airfields that the City may control in the future; (2) negotiating leases, agreements, and contracts; (3) computing and supervising the collection of revenues generated by the Airport System under its management; and (4) coordinating aviation activities under the FAA.

The Department is an enterprise fund of the City. The operations and improvements at the Airport and Stinson are paid for by airport user charges, bond funds, and funds received from the FAA. No general tax fund revenues are used to operate or maintain the Airport System. The City Council appoints a 19-member Airport Advisory Commission. The Commission's primary purpose is to advise the Department regarding policies, including any noise-related issues affecting the Airport System and air transportation initiatives.

Russell J. "Russ" Handy was appointed in January 2017 to serve as the City's Aviation Director. In this role, he oversees the day-to-day operations for the Airport System. Mr. Handy is a retired Air Force Lieutenant General who previously served as Commander of Alaskan Command, Eleventh Air Force and the Alaskan Region of the North American Aerospace Defense Command.

The Airport System has police and fire departments on premises. The police and fire fighters are assigned to duty at the Airport System from the City's police and fire departments, but their salaries are paid by the Department as an operation and maintenance expense of the Airport System.

The FAA has regulatory authority over navigational aid equipment, air traffic control, and operating standards for the Airport System.

The passage of the Aviation and Transportation Security Act in November of 2001, created the Transportation Security Administration ("TSA"). The Department has worked closely with the TSA to forge a higher level of security for the traveling public. TSA employs about 300 individuals at the Airport System to meet the federal security requirements.

As of October 1, 2016, the Airport System has 473 authorized positions:

Planning, Development & Maintenance	164
Airport Operations	150
Police	58
Fire Rescue	32
Finance & Administration	31
Aviation Director	30
Stinson Airport	8

# Comparative Statement of Gross Revenues and Expenses - San Antonio Airport System

The historical financial performance of the Airport System is shown below for the last five fiscal years:

	Fiscal Year Ended September 30				
	2012	2013	2014	2015 1	2016
Gross Revenues <sup>2</sup>	\$90,163,733	\$89,323,659	\$91,034,569	\$91,617,612	\$96,847,128
Expenses	(47,048,746)	(50,987,401)	(50,938,202)	(56,198,508)	(58,913,011)
Net Revenues	<u>\$43,114,987</u>	<u>\$38,336,258</u>	\$40,096,367	<u>\$35,419,104</u>	<u>\$37,934,117</u>

<sup>&</sup>lt;sup>1</sup> 2015 data has been restated to match CAFR amounts.

<sup>&</sup>lt;sup>2</sup> As reported in the City's audited financial statements. *Source: City of San Antonio, Department of Finance.* 

# Total Domestic and International Enplaned Passengers - San Antonio Airport

The total domestic and international enplaned passengers on a calendar year basis, along with year-to-year percentage change are shown below:

Calendar		Increase/	Percent (%)
<u>Year</u>	<u>Total</u>	(Decrease)	<u>Change</u>
2007	4,030,571	27,668	0.69
2008	4,167,440	136,869	3.40
2009	3,905,439	(262,001)	(6.29)
2010	4,022,070	116,631	2.99
2011	4,071,781	49,711	1.24
2012	4,103,364	31,583	0.78
2013	4,119,039	15,675	0.38
2014	4,191,391	72,352	1.76
2015	4,257,688	66,297	1.58
2016	4,309,761	52,073	1.20

Source: City of San Antonio, Department of Aviation.

# Total Enplaned and Deplaned International Passengers - San Antonio Airport

The total enplaned and deplaned for international passengers on a calendar year basis, along with year-to-year percentage change are shown below:

Calendar		Increase/	Percent (%)
Year	<u>Total</u>	(Decrease)	<u>Change</u>
2007	197,585	(1,553)	(0.78)
2008	177,219	(20,366)	(10.31)
2009	139,286	(37,933)	(21.40)
2010	136,970	(2,316)	(1.66)
2011	182,031	45,061	32.90
2012 1	421,718	239,687	131.67
2013	474,609	52,891	12.54
2014	464,765	(9,844)	(2.07)
2015	511,076	46,311	9.96
$2016^{2}$	400,061	(111,015)	(21.72)

The increase in total enplaned and deplaned international passengers from 2011 to 2012 is attributable to 3 new airlines operating in 2012. These airlines are AirTran, InterJet, and Viva AeroBus.

Source: City of San Antonio, Department of Aviation.

The decline in international is in large part a result of capacity reductions by Southwest to Mexico City and Interjet to Toluca. In addition to capacity adjustments, the continuing devaluation of the Peso to the U.S. Dollar may be contributing to decreased leisure travel between the two countries. In December 2016, the Peso had 13.7% less value than the same time in 2015, and 47.0% less value than two years prior to that.

# Air Carrier Landed Weight - San Antonio Airport

The historical aircraft landed weight in 1,000-pound units on a calendar year basis is shown below. Landed weight is utilized in the computation of the Airport's landed fee.

Calendar		Increase/	Percent (%)
<u>Year</u>	<u>Total</u>	(Decrease)	<u>Change</u>
2007	6,098,276	152,044	2.56
2008	6,209,192	110,916	1.82
2009	5,487,537	(721,655)	(11.62)
2010	5,632,203	144,666	2.64
2011	5,707,294	75,091	1.33
2012	5,812,227	104,933	1.84
2013	5,784,738	(27,490)	(0.47)
2014	5,662,482	(122,256)	(2.11)
2015	5,719,952	57,470	1.01
2016	5,729,257	9,305	0.16

Source: City of San Antonio, Department of Aviation.

\* \* \*

# APPENDIX B

# SAN ANTONIO WATER SYSTEM

# ANNUAL FINANCIAL REPORT

For the Year Ended December 31, 2017

The information contained in this Appendix consists of the San Antonio Water System Annual Financial Report for the Year Ended December 31, 2017, but is not intended to be a complete statement of the System's financial condition. Reference is made to the complete report for further information.





### INDEPENDENT AUDITORS' REPORT

To the Board of Trustees San Antonio Water System San Antonio, Texas

### Report on the Financial Statements

We have audited the accompanying financial statements of the business-type activities and the aggregate remaining fund information of San Antonio Water System (SAWS), a component unit of the City of San Antonio, Texas, as of and for the year ended December 31, 2017, and the related notes to the financial statements, which collectively comprise SAWS' basic financial statements as presented on pages 13 through 73.

### Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

#### Auditors' Responsibility

Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to SAWS' preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of SAWS' internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

#### **Opinions**

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the business-type activities and the aggregate remaining fund information of SAWS, as of December 31, 2017, and the respective changes in financial position and, where applicable, cash flows thereof for the year then ended, in accordance with accounting principles generally accepted in the United States of America.



#### **Prior Period Financial Statements**

The financial statements of SAWS as of December 31, 2016, were audited by other auditors whose report dated May 31, 2017, expressed an unmodified opinion on those statements.

### Emphasis of Matter

As discussed in Note A, SAWS Other Postemployment Benefit Plan adopted the provisions of GASB Statement No. 74, *Financial Reporting for Other Postemployment Benefits Plans Other Than Pension* in fiscal year 2017. Our opinion is not modified with respect to this matter.

#### Other Matter

#### Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis. Texas Municipal Retirement System - San Antonio Water System - Schedule of Changes in Net Pension Liability and Related Ratios. Texas Municipal Retirement System - San Antonio Water System - Schedule of Contributions, San Antonio Water System Retirement Plan - Defined Benefit Component - Schedule of Changes in Net Pension Liability and Related Ratios, San Antonio Water System Retirement Plan - Defined Benefit Component - Schedule of Contributions, San Antonio Water System Retirement Plan - Defined Benefit Component - Schedule of Investment Returns, District Special Project Retirement Income Plan - Schedule of Changes in Net Pension Liability and Related Ratios, District Special Project Retirement Income Plan - Schedule of Contributions, District Special Project Retirement Income Plan -Schedule of Investment Returns, Other Post Employment Benefit Plan - Schedule of Changes in Net OPEB Liability and Related Ratios, Other Post Employment Benefit Plan - Schedule of Contributions, Other Post Employment Benefit Plan - Schedule of Investment Returns, Other Post Employment Benefit Plan - Schedule of Funding Progress and Other Post Employment Benefit Plan - Schedule of Employer Contributions be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

# Other Reporting Required by Government Auditing Standards

Baker Tilly Virchaw Krause, LLP

In accordance with *Government Auditing Standards*, we have issued our report dated March 30, 2018, on our consideration of SAWS' internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering SAWS' internal control over financial reporting and compliance.

Austin, Texas March 30, 2018

#### Management's Discussion and Analysis

#### (Unaudited)

This Management's Discussion and Analysis (MD&A) serves as an introduction to the basic financial statements and provides a narrative overview and analysis of financial activities and performance as detailed in the Annual Financial Report (AFR) for the fiscal year ending December 31, 2017. Please read it in conjunction with SAWS' financial statements including the notes to the financial statements, which follow this section.

#### FINANCIAL HIGHLIGHTS

- SAWS' net position increased by \$240.9 million during 2017, including an increase in unrestricted net position of \$91.0 million.
- Total assets and deferred outflows of resources increased \$166.5 million from 2016 to 2017, including net capital asset growth of \$165.7 million and an increase in unrestricted cash and investments of \$74.8 million.
- SAWS refunded \$200.5 million in long-term debt, reducing future debt service payments by nearly \$10 million and resulting in an economic gain of \$7.5 million.
- Operating revenues increased \$44.3 million or 7% from 2016 to 2017 primarily due to rate adjustments implemented during the year.
- Current year total debt coverage ratio was 1.89x for 2017 compared to 1.74x for 2016.

#### **OVERVIEW OF THE FINANCIAL STATEMENTS**

MD&A is intended to serve as an introduction to the basic financial statements, which are comprised of the following components:

- Statements of Net Position present information on all of SAWS' assets, deferred outflows of resources, liabilities and deferred inflows of resources as of the end of each calendar year, with the net amount reported as SAWS' net position. Over time, increases or decreases in net position may serve as a useful indicator of whether the financial position of SAWS is improving or deteriorating.
- Statements of Revenues, Expenses and Changes in Net Position present information showing how SAWS' net position changed during the years presented on an accrual basis. This statement measures the success of SAWS' activities and can be used to determine whether SAWS has successfully recovered all its costs through its rates and other charges.
- Statements of Cash Flows reflect cash receipts and payments for operating, non-capital financing, capital and related financing, and investing activities for the years presented.
- San Antonio Water System Fiduciary Funds Statements of Fiduciary Net Position present information on SAWS single-employer postretirement benefit plans' assets and liabilities, with the difference between the two reported as net position held in trust for pension and other postemployment benefits.
- San Antonio Water System Fiduciary Funds Statements of Changes in Fiduciary Net Position present information showing how the fiduciary funds' net position changed during the years presented on an accrual basis.
- Notes to financial statements provide additional information that is essential to a full understanding of
  the data provided in the financial statements, such as SAWS' accounting policies, significant account
  balances and activities, material risks, obligations, commitments, contingencies and subsequent events,
  if any.
- Required Supplemental Information Historical information is presented concerning SAWS' defined benefit pension plans including changes in the net pension liabilities, annual contributions made to

pension plans, annual investment returns, and SAWS' progress in funding its obligations to provide pension and other postemployment benefits to its employees.

#### FINANCIAL ANALYSIS - FINANCIAL POSITION

CONDENSED NET POSITI	NDENSED NET POSITION INFORMATION			2017-2	016	2016-2015		
	A	s of December	31,	Increase	%	Increase	%	
(amounts in thousands)	2017	2016	2015	(Decrease)	Change	(Decrease)	Change	
Current assets	\$ 643,337	\$ 560,924	\$ 488,023	\$ 82,413	15%	\$ 72,901	15%	
Capital assets, net	5,051,777	4,886,091	4,647,786	165,686	3%	238,305	5%	
Other non-current assets	369,151	448,645	447,283	(79,494)	(18%)	1,362	0%	
Total Assets	6,064,265	5,895,660	5,583,092	168,605	3%	312,568	6%	
Deferred outflows of resources	93,340	95,397	62,580	(2,057)	(2%)	32,817	52%	
Total Assets and Deferred								
Outflows of Resources	6,157,605	5,991,057	5,645,672	166,548	3%	345,385	6%	
Current liabilities	215,280	222,787	218,178	(7,507)	(3%)	4,609	2%	
Non-current liabilities	3,085,719	3,152,128	3,020,807	(66,409)	(2%)	131,321	4%	
Total Liabilities	3,300,999	3,374,915	3,238,985	(73,916)	(2%)	135,930	4%	
Deferred inflows of resources	2,328	2,793	6,783	(465)	-	(3,990)	-	
Total Liabilities and Deferred								
Inflows of Resources	3,303,327	3,377,708	3,245,768	(74,381)	(2%)	131,940	4%	
Net Position:								
Net investment in capital assets	2,217,283	2,106,957	1,939,292	110,326	5%	167,665	9%	
Restricted	358,453	318,889	334,260	39,564	12%	(15,371)	(5%)	
Unrestricted	278,542	187,503	126,352	91,039	49%	61,151	48%	
Total Net Position	\$ 2,854,278	\$ 2,613,349	\$ 2,399,904	\$ 240,929	9%	\$ 213,445	9%	

**Net Position:** SAWS' net position increased \$240.9 million from 2016 to 2017 and increased \$213.5 million from 2015 to 2016. Over time, increases or decreases in net position may serve as a useful indicator of whether the financial position of SAWS is improving or deteriorating. Other considerations, both financial and non-financial, should also be evaluated such as economic conditions, population growth, availability of water supplies and credit ratings. These considerations are addressed in MD&A or other sections of this CAFR.

The largest portion of SAWS' net position reflects its net investment in capital assets. SAWS' net investment in capital assets represents the carrying value of capital assets and capital related deferred outflows of resources, less capital related borrowings. The primary reasons for an increase in the net investment in capital assets are capital assets acquired with non-debt resources, including assets contributed by developers, and repayments of debt. Depreciation expense serves to decrease the net investment in capital assets. SAWS' net investment in capital assets increased by \$110.3 million between 2016 and 2017 and \$167.7 million from 2015 to 2016.

Funds that have been restricted for a specific purpose by legally enforceable legislation and bond covenants are classified as restricted net position. In accordance with City of San Antonio Ordinance 75686, SAWS must maintain an operating reserve equal to two months of the annual maintenance and operations budget. SAWS is also required to make monthly transfers to a Debt Service Fund sufficient to make the semi-annual debt service payments on outstanding bonds. Cash and investments restricted for construction purposes, net of any related liabilities, are also reflected in these totals. Finally, SAWS must accumulate and maintain a Debt Service Reserve equal to 100% of the maximum annual debt service requirements for senior lien debt obligations plus the average annual debt service on all junior lien debt obligations secured by the Debt Service Reserve. SAWS may provide surety policies equal to all or part of the required debt service reserve. Restricted net position

increased \$39.6 million from 2016 to 2017 and decreased \$15.4 million from 2015 to 2016 primarily due to changes in amounts restricted for construction.

The remaining balance of SAWS' net position is unrestricted and may be used for any allowable purpose as outlined in Ordinance 75686. Unrestricted net position increased \$91.0 million from 2016 to 2017 and \$61.2 million from 2015 to 2016 as funds provided by operations exceeded transfers to the Debt Service Fund and capital expenditures paid with renewal and replacement funds.

#### FINANCIAL ANALYSIS - REVENUES, EXPENSES AND CHANGES IN NET POSITION

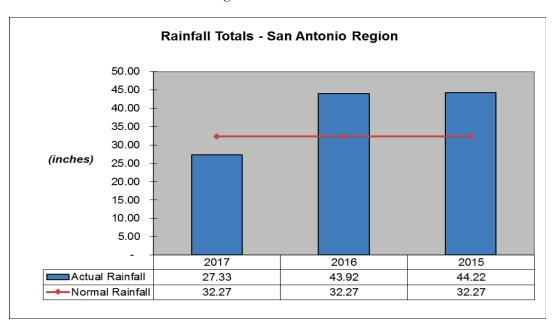
During 2017, SAWS' net position increased by \$240.9 million which consisted of income before capital contributions of \$99.5 million and capital contributions of \$141.4 million. In 2016, SAWS' net position increased \$213.4 million which consisted of income before capital contributions of \$67.7 million and capital contributions of \$145.7 million.

							2017-2016			2016-2015		
			As of	December 3	l <b>,</b>		Incre	ase	%	Increase	%	
(amounts in thousands)	2	2017		2016		2015	(Decre	ease)	Change	(Decrease)	Change	
Operating revenues											_	
Water delivery system	\$	202,264	\$	190,913	\$	168,338	\$ 11	,351	6%	\$ 22,575	13%	
Water supply system		202,143		185,037		163,759	17	,106	9%	21,278	13%	
Wastewater system		250,977		234,966		213,833	16	,011	7%	21,133	10%	
Chilled water		11,368		11,541		11,102		(173)	(1%)	439	4%	
Total operating revenues		666,752		622,457		557,032	44	,295	7%	65,425	12%	
Non-opertating revenues		10,407		8,146		6,079	2	,261	28%	2,067	34%	
Total Revenues		677,159		630,603		563,111	46	,556	7%	67,492	12%	
Operating expenses												
Salaries and fringe benefits		148,058		142,315		133,681	5	,743	4%	8,634	6%	
Contractual services		168,350		170,845		163,768	(2	,495)	(1%)	7,077	4%	
Materials and supplies		23,159		21,959		23,490	1	,200	5%	(1,531)	(7%)	
Other charges		11,150		12,702		8,129		,552)	(12%)	4,573	56%	
Less costs capitalized to												
construction in progress		(32,275)		(32,426)		(37,822)		151	0%	5,396	(14%)	
Depreciation expense		152,072		142,856		141,259	9	,216	6%	1,597	1%	
Total operating expenses		470,514		458,251		432,505	12	,263	3%	25,746	6%	
Non-operating expenses												
Interest expense		86,615		86,566		89,971		49	0%	(3,405)	(4%)	
Debt issue costs		1,385		4,716		3,831	(3	,331)	(71%)	885	23%	
Other finance charges		2,697		2,121		2,041		576	27%	80	4%	
Gain on sale of capital assets		(951)		(3,087)		(4,674)	2	,136	(69%)	1,587	(34%)	
Payments to City of San Antonio		17,276		14,228		12,683	3	,048	21%	1,545	12%	
Payments to other entities		108		109		106		(1)	(1%)	3	3%	
Total non-operating expenses		107,130		104,653		103,958	2	,477	2%	695	1%	
Total Expenses		577,644		562,904		536,463	14	,740	3%	26,441	5%	
Increase in net position												
before capital contributions		99,515		67,699		26,648	31	,816	47%	41,051	154%	
Capital Contributions		141,414		145,746		136,023	(4	,332)	(3%)	9,723	7%	
Change in Net Position		240,929		213,445		162,671	27	,484	13%	50,774	31%	
Net Position, beginning of year		2,613,349	_	2,399,904	_	2,237,233	213	,445	9%	162,671	7%	
Net Position, end of year	\$	2,854,278	\$	2,613,349	\$	2,399,904	\$ 240	.929	9%	\$ 213,445	9%	

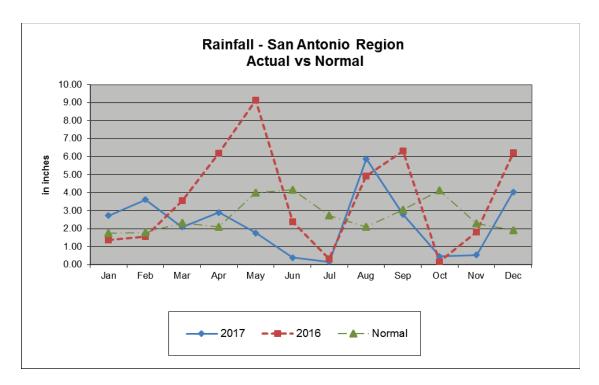
Operating Revenues: SAWS' operating revenues are provided by its four core businesses: Water Delivery, Water Supply, Wastewater, and Chilled Water. Changes in operating revenues from year to year are largely the result of weather conditions, customer growth and changes in rates for service. SAWS' operating revenues increased from \$622.5 million in 2016 to \$666.8 million in 2017. An average water rate increase of 6.8% and an increase in water usage of 2.7% contributed to the increase in revenue from 2016. Beginning in 2017, a class of SAWS customers located in the former District Special Project (DSP) service area moved to the rates paid by all other SAWS customers.

SAWS' operating revenues increased from \$557 million in 2015 to \$622.5 million in 2016. The biggest contributor to the increase in revenues was an average rate increase of 7.5% that went into effect in 2016 for most SAWS customers. Customer growth averaged 1.7% during 2016, contributing to the growth in operating revenues.

The Water Delivery core business is responsible for the actual distribution of water from its source to the customer's premises. Operating revenues for this business are derived through a combination of a monthly service charge that is dependent upon the size of the customer's water meter and a volume charge that relates to the customer's metered water usage. Water Delivery operating revenues increased \$11.4 million or 6% to \$202.3 million for 2017. Beginning in 2017, a class of SAWS customers located in the former District Special Project (DSP) service area moved to the rates paid by all other SAWS customers. The impact of this change somewhat offset the impact from a water delivery rate increase of 8.6% and increased water usage. Water Delivery operating revenues increased \$22.6 million or 13% to \$190.9 million for 2016, largely driven by rate increase of 9.9% and an increase in water usage of 1.65%.



Total rainfall was 27.33 inches for 2017, approximately 15% below normal rainfall of 32.27 inches and nearly 40% less than 2016 rainfall of 43.92 inches. 2016 total rainfall was consistent with 2015.



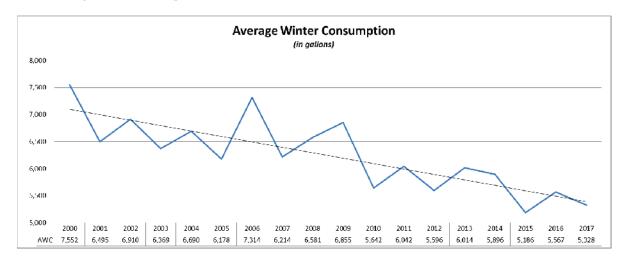
The Water Supply core business is responsible for all functions related to the development and provision of additional water resources. In order to support the costs associated with these initiatives, in 2000, SAWS implemented a separate funding mechanism, known as the Water Supply Fee, for water supply development and water quality protection. Certain other charges are also included in Water Supply operating revenues including the following:

- pass-through fee designed to recoup the annual fees paid to the Edwards Aquifer Authority (EAA) for permitted water rights
- meter fees and volumetric charges to customers utilizing recycled water for industrial or irrigation purposes
- allocated portions of water delivery revenues designed to fund residential and commercial conservation programs and debt service associated with water supply and recycle projects in progress prior to the implementation of a separate Water Supply Fee

Water Supply operating revenues increased \$17.1 million or 9% from 2016 to \$202.1 million for 2017 as a result of a 6.9% water supply rate increase and increased usage. The transition of DSP customers to SAWS rates also served to increase Water Supply operating revenues in 2017. Water Supply operating revenues increased \$21.3 million or 13% from 2015 to \$185 million for 2016 as a result of a 9.3% rate increase and increased water usage.

The collection and treatment of wastewater is the primary function of the Wastewater core business. Approximately 60% of Wastewater operating revenues are generated by residential customers. The residential portion of Wastewater operating revenue is calculated based upon the average metered water usage of each residential wastewater customer during a three consecutive month billing period from November 15th through March 15th. This average, referred to as the average winter consumption (AWC) goes into effect with the April billing each year and continues for a period of twelve months.

The following chart depicts SAWS AWC since 2000. While periods of extremely dry weather lead to spikes in the AWC, water conservation efforts have resulted in an overall downward trend in the AWC. Due to heavy rainfall in 2015, the AWC that went into effect in April 2015 fell to 5,186 gallons which is the lowest level in SAWS' history. More normal rainfall during the 2016 winter average measurement period resulted in a 7.3% increase in the AWC that went into effect in April 2016. Heavier rainfall during the beginning of the 2017 winter average measurement period resulted in a decrease in the AWC of 4.2%.

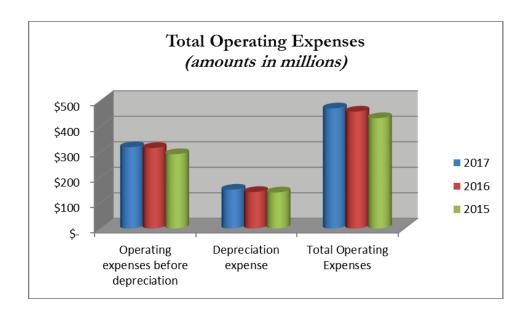


Wastewater operating revenues increased \$16 million of 7% to \$251 million in 2017 primarily due to a rate increase of 5.6% and customer growth of 1.7%. Wastewater operating revenues increased \$21.1 million or 10% to \$235 million in 2016 primarily due to a rate increase of 5.3%, the increase in the residential AWC and customer growth of 1.8%.

The Chilled Water core business is responsible for providing cooling services to customers, including various downtown hotels, City of San Antonio facilities, the Alamodome, Port Authority of San Antonio tenants and Hemisfair Plaza tenants. Operating revenues for this core business consist of a fixed base load demand charge for each customer and a pass-through charge to recover utility costs. Operating revenues for this core business decreased slightly to \$11.4 million for 2017 from \$11.5 million for 2016. Chilled Water operating revenues for 2016 were slightly more than the \$11.1 million for 2015.

Non-operating revenues: Non-operating revenues, which primarily represent interest income earned on investments and the federal interest subsidy on SAWS Build America Bonds (BABs), increased \$2.3 million in 2017 from 2016 due to an increase in investment income associated with both an increase in the average investment balance and an increase in the yield on investments. Non-operating investments increased \$2.1 million in 2016 from 2015 as the increase in the yield on investments more than offset a decrease in the average investment balance.

Operating Expenses: Total 2017 operating expenses of \$470.5 million increased \$12.3 million or 2.7% from 2016 levels as increases in salaries and benefits, and depreciation were partially offset by decreases in contractual services and other charges.



Salary and benefit related costs increased \$5.7 million or 4.0% from 2016 to 2017 largely as a result of merit adjustments given to employees and a 1.7% increase in filled positions. Contractual services decreased \$2.5 million or 1.5% in 2017 as a decrease in purchased water payments and contractual services related to sewer line condition assessment and cleaning more than offset the increase in electrical expenses associated with SAWS new groundwater desalination facility. Other charges decreased \$1.5 million or 12% in 2017 primarily due to a decrease in claims expenses, including workers compensation. Depreciation expense increased \$9.2 million or 6% as result of capital additions during the year, including the groundwater desalination plant that came online in early 2017.

Total 2016 operating expenses of \$458.3 million increased \$25.7 million or 6% from 2015 levels primarily due to increases in salaries and benefits, contractual services and other charges combined with a decrease in costs capitalized to construction in progress. The increase in salaries and benefits was primarily due to an increase in pension expense as a result of differences between actual and projected investments earnings during the measurement periods. The increase in contractual services was due to an increase in purchased water payments and outsourcing of a portion of the meter reading function. A write off of \$2.1 million in design and project costs that had previously been capitalized contributed to the increase in other charges from 2015.

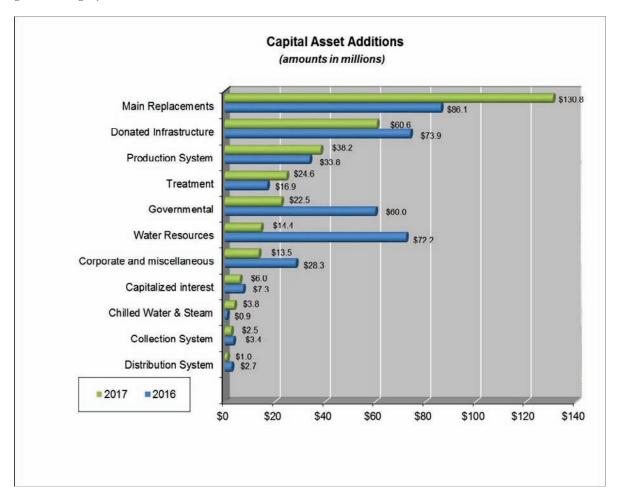
Non-operating Expenses: Non-operating expenses increased \$2.5 million or 2% in 2017 as an increase in payments to the City of San Antonio and a reduction in the gain on sale of assets was partially offset by a decrease in debt issue costs. Interest expense for 2017 was comparable to 2016 as a 2% increase in the average debt outstanding was offset by a decrease in the average cost of debt from 3.18% in 2016 to 3.07% in 2017. In 2016 non-operating expenses increased \$0.7 million or 1% from 2105 as a decrease in interest expense resulting from bond refundings was more than offset by increases in debt issue costs and payments to the City of San Antonio as well as a decrease in gains on sales of capital assets. Average debt outstanding decreased 1% as debt repayments exceeded borrowings and the average cost of debt decreased from 3.24% in 2015 to 3.18% in 2016.

Capital Contributions: Capital contributions for 2017 totaled \$141.4 million which represents a decrease of \$4.3 million from 2016. While capital recovery fees increased 7% from 2016, plant contributions from developers decreased 18%. In 2016, capital contributions totaled \$145.7 million, an increase of \$9.7 million from 2015. Development activity was strong in 2016, resulting in a 3% increase in plant contributions and a 6% increase in capital recovery fees.

CAPITAL CONTRIBUTIONS											
							2017-	2016		2016-2	015
		As of	December 3	1,		I	ncrease	%	In	crease	%
(\$ in thousands)	2017		2016		2015	(D	ecrease)	Change	(De	ecrease)	Change
Plant Contributions	\$ 60,643	\$	73,889	\$	71,967	\$	(13,246)	(18%)	\$	1,922	3%
Capital Recovery Fees	72,846		67,991		64,056		4,855	7%		3,935	6%
Contributions in Aid of Construction	 7,925		3,866			_	4,059	105%		3,866	-
Total Capital Contributions	\$ 141,414	\$	145,746	\$	136,023	\$	(4,332)	(3%)	\$	9,723	7%

#### **CAPITAL ASSET ACTIVITY**

During 2017 SAWS' total capital assets (net of accumulated depreciation) grew from \$4.9 billion to \$5.1 billion, while during 2016, net capital assets increased from \$4.6 billion to \$4.9 billion. Capital asset additions were \$317.9 million in 2017 and \$385.6 million in 2016. The graph below shows the additions for each year by general category.



SAWS is committed under various contracts for completion of construction or acquisition of capital assets totaling \$369.9 million as of December 31, 2017. For further detail information on capital assets, refer to Note F.

#### LONG-TERM DEBT ACTIVITY

In 2017, SAWS issued \$190.5 million in junior lien bonds in two transactions. The proceeds of the bonds, including premiums, were used to refund \$200.5 million in bonds and pay the cost of issuance. Additionally, SAWS issued \$40 million in commercial paper to provide funds for capital improvement projects.

In 2016, SAWS issued a total of \$647.1 million in bonds through six transactions. All bonds issued during 2016 were at the junior lien level. The proceeds of the bonds, including premiums, were used to refund \$538.2 million in bonds, including \$155.4 million of outstanding SAWS DSP debt; refund \$9 million of commercial paper; pay the cost of issuance; make deposits to the Reserve Fund; and provide \$167.1 million in funds for capital improvement projects. Additionally, SAWS issued \$118.7 million in commercial paper of which \$88.7 million was used to refund all outstanding SAWS DSP flexible rate notes and \$30 million was used for capital improvement projects.

SAWS intends to reissue maturing commercial paper and ultimately refund such maturities with proceeds from the issuance of long-term revenue bonds. Consistent with this intent, SAWS classifies outstanding commercial paper notes as long-term debt.

In January 2017, the three major credit rating agencies, Standard & Poor's Rating Service, Moody's Investors Services, and Fitch Ratings, affirmed SAWS' credit ratings. SAWS' high quality credit ratings are based on its large and diverse service area, sound financial management, long-term planning of water supply and infrastructure needs, and competitive water and sewer rates. SAWS' commercial paper ratings were last updated in June and July 2015 based on new revolving credit agreements with Bank of Tokyo-Mitsubishi UFJ, Ltd., acting through its New York branch, and Wells Fargo Bank, N.A. For additional information on the commercial paper program, refer to Note H.

BOND AND COMMERCIAL	PAPER RATIN	GS			
			Tax-E	xempt	
			Commercial		
	Senior	Junior	Pa	per	
	Lien Debt	Lien Debt	Series A	Series B	
Fitch Ratings	AA+	AA	F1	F1+	
Moody's Investors Serviæ, Inc.	Aa1	Aa2	P-1	P-1	
Standard & Poor's Ratings Service	AA+	AA	A-1+	A-1+	

SAWS' bond ordinance requires the maintenance of a debt coverage ratio of at least 1.25x the current annual debt service on outstanding senior lien debt. As of December 31, 2017 and 2016 SAWS was in compliance with the terms and provisions of the ordinances and documents related to its outstanding bonds and commercial paper.

FINANCIAL RATIOS			
	2017	2016	2015
Current Year Debt Coverage‡:			
Senior Lien Debt	6.06x	3.88x	2.68x
All Debt	1.89x	1.74x	1.53x
Maximum Annual Debt Coverage‡:			
Senior Lien Debt	4.30x	3.66x	2.31x
All Debt	1.89x	1.66x	1.45x
Net Position Ratio			
(net position/total liabilities + net position)	46.4%	43.6%	42.5%
‡Debt service is net of federal interest subsidy.			

#### ECONOMIC OUTLOOK FOR THE FUTURE

In December 2017 the San Antonio City Council approved rate increases projected to increase the bill of the average residential customer 5.8% effective January 1, 2018 and 4.7% effective January 1, 2019. In November 2015, City Council also pre-approved rate adjustments based on the average residential customer's bill in an amount not to exceed 9.9% for 2020 to support the continued development of additional water supplies, including the Vista Ridge project.

Customer connections grew 1.6% in 2017 and 1.7% in 2016. The San Antonio region is positioned to see continued growth during the foreseeable future. While customer growth can help offset increasing operating costs, continuing costs to address infrastructure issues could require rate adjustments in the future in addition to those adjustments already approved by City Council.

#### CONTACTING SAWS' FINANCIAL MANAGEMENT

This Annual Financial Report is provided to our citizens, customers, investors and creditors as a general overview of SAWS' financial condition and results of operation with a general explanation of the factors affecting the finances of the organization. It is provided to demonstrate SAWS' accountability for the revenues it collects and the expenditures it makes for the services provided. If you have questions about this report or need additional financial information, contact either of the following:

Mary Bailey

Vice President - Accounting & Business Planning

Email: Mary.Bailey@saws.org

Douglas P. Evanson

Sr.Vice President/Chief Financial Officer

Email: <u>Doug.Evanson@saws.org</u>

Mailing address: San Antonio Water System PO Box 2449 San Antonio, TX 78298

Information about the San Antonio Water System can also be obtained through the Internet at www.saws.org.

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BASIC FINANCIAL STATEMENTS

## San Antonio Water System STATEMENTS OF NET POSITION

(amounts in thousands)

		Decem	ber 31,	2016
	2	017		2016
CURRENT ASSETS				
Unrestricted Current Assets				
Cash and cash equivalents	\$	36,688	\$	54,045
Investments		349,074		256,919
Accounts receivable, net of allowances for uncollectible accounts		74,378		67,027
Other current assets		11,809		11,318
Total unrestricted current assets		471,949	-	389,309
Restricted Current Assets:				
Cash and cash equivalents		350		2,450
Investments		171,038		169,165
Total restricted current assets	-	171,388		171,615
Total Current Assets		643,337	-	560,924
NONCURRENT ASSETS				
Unrestricted Noncurrent Assets				
Accounts receivable, non current		1,343		2,631
Restricted Noncurrent Assets:				
Cash and cash equivalents		92,663		100,241
Investments		275,145		345,773
Capital Assets:				
Utility plant in service		6,491,982		6,296,468
Less allowance for depreciation		2,128,882		1,989,093
		4,363,100		4,307,375
Land, water rights and other intangible assets		356,042		350,121
Construction in progress		332,635		228,595
Total capital assets (net of accumulated depreciation)		5,051,777		4,886,091
Total Noncurrent Assets		5,420,928		5,334,736
TOTAL ASSETS		6,064,265		5,895,660
DEFERRED OUTFLOWS OF RESOURCES				
Deferred charge on bond refunding		48,055		54,317
Deferred outflows - pension		33,428		28,115
Accumulated decrease in fair value of hedging derivative		11,857		12,965
	<del></del>	93,340		95,397
TOTAL ASSETS AND DEFERRED OUTFLOWS OF RESOURCES	\$	6,157,605	\$	5,991,057

The accompanying notes to financial statements form an integral part of this statement.

#### San Antonio Water System STATEMENTS OF NET POSITION (continued)

(amounts in thousands)

Decembe	er 31,

	 2017	2016		
CURRENT LIABILITIES	 			
Current Liabilities To Be Paid From Unrestricted Assets				
Accounts payable	\$ 36,012	\$	45,376	
Customers' deposits	14,135		13,381	
Accrued vacation payable	5,422		5,451	
Accrued payroll and benefits	4,775		4,138	
Accrued claims payable	7,187		7,273	
Sundry payables and accruals	 1,638		1,638	
Total unrestricted current liabilities	69,169		77,257	
Current Liabilities To Be Paid From Restricted Assets				
Accrued interest payable	15,624		16,390	
Payables under construction contracts	41,902		42,550	
Commercial paper notes	3,710		3,550	
Revenue bonds payable within one year	84,875		83,040	
Total restricted current liabilities	146,111		145,530	
Total Current Liabilities	 215,280		222,787	
NONCURRENT LIABILITIES				
Accrued vacation payable	4,122		3,402	
Net pension liability	72,056		63,022	
Net OPEB obligation	68,933		73,539	
Derivative instrument	15,394		16,863	
Commercial paper notes	274,350		238,060	
Revenue bonds payable after one year, net of	,		,	
unamortized premiums and discounts	2,650,864		2,757,242	
Total Noncurrent Liabilities	 3,085,719	-	3,152,128	
TOTAL LIABILITIES	3,300,999		3,374,915	
DEFERRED INFLOWS OF RESOURCES				
Deferred inflows - pension	 2,328		2,793	
TOTAL LIABILITIES & DEFERRED INFLOWS OF RESOURCES	 3,303,327		3,377,708	
NET POSITION				
Net investment in capital assets	2,217,283		2,106,957	
Restricted for operating reserve	54,143		52,279	
Restricted for debt service	59,719		60,396	
Restricted for debt service reserve	56,364		56,016	
Restricted for construction	188,227		150,198	
Unrestricted	 278,542		187,503	
TOTAL NET POSITION	\$ 2,854,278	\$	2,613,349	

The accompanying notes to financial statements form an integral part of this statement.

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# San Antonio Water System STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION

#### For the Years Ended December 31,

(amounts in thousands)

OPERATING REVENUES	2017	2016
Water delivery system	\$ 202,264	\$ 190,913
Water supply system	202,143	185,037
Wastewater system	250,977	234,966
Chilled water and steam system	11,368	11,541
Total operating revenues	 666,752	622,457
OPERATING EXPENSES		
Salaries and fringe benefits	148,058	142,315
Contractual services	168,350	170,845
Material and supplies	23,159	21,959
Other charges	11,150	12,702
Less costs capitalized to construction in progress	 (32,275)	 (32,426)
Total operating expenses before depreciation	 318,442	315,395
Depreciation expense	 152,072	 142,856
Total operating expenses	470,514	458,251
Operating income	196,238	164,206
NONOPERATING REVENUES		
Interest earned and miscellaneous	10,407	8,146
NONOPERATING EXPENSES		
Interest expense	86,615	86,566
Debt issue costs	1,385	4,716
Other finance charges	2,697	2,121
Gain on sale of capital assets	(951)	(3,087)
Payments to the City of San Antonio	17,276	14,228
Payments to other entities	108	109
Total nonoperating expenses	107,130	104,653
Increase in net position, before capital contributions	99,515	67,699
Capital contributions	 141,414	 145,746
CHANGE IN NET POSITION	240,929	213,445
NET POSITION, BEGINNING OF YEAR	 2,613,349	2,399,904
NET POSITION, END OF YEAR	\$ 2,854,278	\$ 2,613,349

The accompanying notes to financial statements form an integral part of this statement.

## San Antonio Water System STATEMENTS OF CASH FLOWS

#### For the years ended December 31,

(amounts in thousands)

	2017	2016
CASH FLOWS FROM OPERATING ACTIVITIES		
Cash received from customers	\$ 655,310	\$ 618,134
Cash paid to vendors for operations	(193,126)	(191,712)
Cash paid to employees for services	(126,581)	(122,649)
Net cash provided by operating activities	335,603	303,773
CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES		
Payments to the City of San Antonio	(12,075)	(9,749)
Payments to other entities	(107)	(108)
Net cash used for noncapital financing activities	(12,182)	(9,857)
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES	S	
Proceeds from sale of capital assets	1,125	5,315
Proceeds from capital recovery fees	72,846	67,991
Proceeds from contributions in aid of construction	7,925	3,866
Payments to employees for construction of plant	(21,633)	(20,931)
Payments to vendors for construction of plant	(10,643)	(11,565)
Payments for acquisition of equipment and furniture	(10,375)	(8,584)
Payments for acquisition of property and plant	(216,375)	(264,300)
Proceeds from commercial paper	40,000	118,700
Payments for retirement of commercial paper	(3,550)	(3,395)
Payments to refund flexible rate bank notes	=	(88,700)
Proceeds from revenue bonds	2,112	172,518
Payments for retirement of revenue bonds	(82,840)	(78,570)
Payments of interest on commercial paper	(4,875)	(4,336)
Payments of interest on revenue bonds	(106,424)	(107,775)
Payments for bond related expenses	(1,385)	(4,716)
Payments for bank charges	(2,660)	(2,130)
Net cash used for capital and related financing activities	(336,752)	(226,612)
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchase of investments	(856,812)	(986,499)
Maturity of investments	831,638	787,174
Investment income and other	11,470	7,956
Net cash used for investing activities	(13,704)	(191,369)
NET DECREASE IN CASH AND CASH EQUIVALENTS	(27,035)	(124,065)
CASH AND CASH EQUIVALENTS, AT BEGINNING OF YEAR	156,736	280,801
CASH AND CASH EQUIVALENTS, AT END OF YEAR	\$ 129,701	\$ 156,736

The accompanying notes to financial statements form an integral part of this statement.

#### San Antonio Water System

#### STATEMENTS OF CASH FLOWS (continued)

## For the years ended December 31, (amounts in thousands)

		2017	2016		
RECONCILIATION OF CASH AND CASH EQUIVALENTS PER STATE	MENTS	S OF CASH F	LOWS		
TO STATEMENTS OF NET POSITION					
Cash and Cash Equivalents	45	27,700	<b>*</b>	54045	
Unrestricted Restricted - Current	\$	36,688 350	\$	54,045	
Restricted - Noncurrent		92,663		2,450 100,241	
Restricted - Moneument	\$	129,701	\$	156,736	
RECONCILIATION OF OPERATING INCOME TO NET CASH PROVID	DED BY	OPERATIN	G ACTI	VITIES	
Operating Income	\$	196,238	\$	164,206	
Adjustments to reconcile operating income to net cash					
provided by operating activities:					
Non-cash revenues from City of San Antonio		(5,202)		(4,480)	
Provision for uncollectible accounts		3,860		4,359	
Charge-off of prior year construction expenditures to operating expense		1,663		2,144	
Depreciation expense		152,072		142,856	
Change in assets, deferred outflows of resources, liabilities and					
deferred inflows of resources:					
Increase in accounts receivable		(9,923)		(5,320)	
Decrease in other current assets		220		1,602	
Increase in deferred outflows - pension		(5,313)		(12,032)	
Decrease in accounts payable		(3,971)		(3,684)	
Increase in customers' deposits		754		910	
Increase in accrued vacation payable		691		47	
Increase in accrued payroll and benefits		637		881	
Increase/(decrease) in claims payables		(86)		2,486	
Increase in sundry payables and accruals		-		205	
Increase in net pension liability		9,034		20,394	
Decrease in net OPEB obligation		(4,606)		(6,811)	
Decrease in deferred inflows - pension		(465)		(3,990)	
Total adjustments		139,365		139,567	
Net cash provided by operating activities	\$	335,603	\$	303,773	
NONCASH CAPITAL, FINANCING AND INVESTING ACTIVITIES					
Plant contributions received from developers	\$	60,643	\$	73,889	
Accrued but unpaid liabilities related to capital acquisitions		41,902		42,550	
Unrealized loss on investments		1,774		56	
Bond proceeds deposited into an escrow account for purposes of refunding:					
Revenue Bonds		202,495		565,219	
Commercial Paper		-		9,000	
Noncash payments to City of San Antonio		5,202		4,480	
Total noncash capital and financing activities	\$	312,016	\$	695,138	

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# San Antonio Water System Fiduciary Funds STATEMENTS OF FIDUCIARY NET POSITION

(amounts in thousands)

		1,		
		2017		2016
ASSETS				
Cash and cash equivalents	\$	1,733	\$	891
Employer contributions receivable		-		1,067
Investments, at fair value				
Mutual funds - stock		168,814		144,472
Mutual funds - bonds		103,297		78,204
Other investments		1,765		1,639
Total Investments	_	273,876		224,315
TOTAL ASSETS		275,609		226,273
LIABILITIES		-		-
NET POSITION RESTRICTED FOR POST				
EMPLOYMENT BENEFITS	\$	275,609	\$	226,273

# STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION For the years ended December 31, (amounts in thousands)

	 2017	 2016
ADDITIONS		
Employer contributions	\$ 22,890	\$ 23,583
Participant contributions	4,250	3,772
Investment income, net of investment expense	 39,033	 10,132
Total additions	66,173	37,487
DEDUCTIONS		
Benefit payments	16,292	16,419
Administrative expenses	 545	 327
Total deductions	 16,837	 16,746
NET INCREASE IN NET POSITION	49,336	20,741
NET POSITION RESTRICTED FOR POST		
EMPLOYMENT BENEFITS - BEGINNING	 226,273	205,532
NET POSITION RESTRICTED FOR POST		
EMPLOYMENT BENEFITS - ENDING	\$ 275,609	\$ 226,273

The accompanying notes to financial statements form an integral part of these statements.

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#### NOTE A - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

**Reporting Entity:** On April 30, 1992, the San Antonio City Council approved Ordinance No. 75686 which provided for the consolidation of all city owned utilities related to water including the water, wastewater, and water reuse systems as the San Antonio Water System (SAWS). Management and control of SAWS is vested in the SAWS Board of Trustees (Board) consisting of the Mayor of San Antonio and six members who are appointed by the San Antonio City Council. In addition to the Board, the City Council must approve all changes in SAWS rates and any debt issued by SAWS.

SAWS has been defined in City Ordinance No. 75686 (City Ordinance) as all properties, facilities, and plants currently owned, operated and maintained by the City and/or the Board, for the supply, treatment, transmission and distribution of treated potable water, chilled water and steam, for the collection and treatment of wastewater and for water reuse, together with all future extensions, improvements, purchases, repairs, replacements and additions thereto, and any other projects and programs of SAWS.

The City of San Antonio, Texas (the City) currently manages a storm water system. The City has not incorporated the storm water system within SAWS; however, SAWS administers certain aspects of the storm water program on behalf of the City, including billing accounts and providing certain technical services, for a fee.

The fiduciary financial statements include three fiduciary funds related to SAWS employee benefit plans: the San Antonio Water System Retirement Plan (SAWSRP), the District Special Project Retirement Income Plan (DSPRP) and the San Antonio Water System Retiree Health Trust (SAWS OPEB Plan). All three plans are governed by the Board which may amend plan provisions, and which is responsible for the management of plan assets. SAWSRP and DSPRP are single-employer pension plans and are tax-qualified plans under Section 401 (a) of the Internal Revenue Code. SAWS OPEB Plan assets are held in a trust established under the provisions of the Internal Revenue Code of 1986 Section 115.

SAWS has no component units, however, the operations of SAWS as reported herewith are included as a discretely presented component unit of the City.

Basis of Accounting: The financial statements of SAWS are prepared using the accrual basis of accounting with the economic resources measurement focus as prescribed by the Governmental Accounting Standards Board (GASB). SAWS operates as a proprietary fund and applies all applicable GASB pronouncements and presents its financial statements in accordance with the GASB Codification of Governmental Accounting and Financial Reporting Standards. Under this approach, all assets, deferred outflows of resources, liabilities and deferred inflows of resources of SAWS are reported in the statement of net position, revenues are recorded when earned and expenses are recorded at the time liabilities are incurred.

The fiduciary fund financial statements are prepared using the accrual basis of accounting. Employer contributions to the plan are recognized when due and the employer has made a formal commitment to provide the contributions. Benefit payments and plan expenses are recognized when due and payable in accordance with the terms of the plan.

SAWS implemented the following new GASB pronouncements during the current year:

- GASB Statement No. 73, Accounting and Financial Reporting for Pensions and Related Assets That Are Not Within the Scope of GASB Statement 68, and Amendments to Certain Provision of GASB Statements 67 and 68. The portions of the this Statement that apply to SAWS relate to:
  - o accounting and reporting for defined contribution pensions, and
  - o information to be provided for investment factors that significantly affect trends in the amounts reported in required supplementary information for pensions

Pension expense and related disclosures for the defined contribution portion of SAWSRP found in Note J as well as information provided in required supplemental information are in accordance with the requirements of this Statement. There was no effect on the 2016 financial statements as a result of implementing this Statement.

- GASB Statement No. 74, Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans. This Statement replaces Statements No. 43, Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans, as amended, and No. 57, OPEB Measurements by Agent Employers and Agent Multiple-Employer Plans. SAWS fiduciary financial statements and related note disclosures for SAWS OPEB Plan have been prepared in accordance with this Statement. As a result of implementing this Statement in 2017, the fiduciary financial statements for 2016 were restated to include OPEB payments made directly by SAWS outside of the OPEB trust as both employer contributions and benefit payments. There was no impact on Net Position Restricted for Post-Employment Benefits at December 31, 2016.
- GASB Statement No. 80, Blending Requirements for Certain Component Units an Amendment of GASB Statement 14.
   This Statement amends the blending requirements for the financial statement presentation of component units of all state and local governments. The guidance provided by this Statement has no current impact for SAWS.
- GASB Statement No. 81, Irrevocable Split-Interest Agreements. This Statement provides recognition and
  measurement guidance for situations in which a government is a beneficiary of an irrevocable split-interest
  agreement. The guidance provided by this Statement has no current impact for SAWS.
- GASB Statement No. 82, Pension Issues, an Amendment of GASB Statements No. 67, No. 68 and No. 73. This Statement addresses issues regarding (1) the presentation of payroll-related measures in required supplementary information, (2) the selection of assumptions and the treatment of deviations from the guidance in an Actuarial Standard of Practice for financial reporting purposes, and (3) the classification of payments made by employers to satisfy employee (plan member) contribution requirements. The information presented in the financial statements, including notes and required supplementary information is in accordance with this statement. There was no effect on the 2016 financial statements as a result of implementing this Statement.

- GASB Statement No. 84, Fiduciary Activities. This Statement establishes criteria for identifying fiduciary activities of all state and local governments. Activity meeting the criteria should be reported in a fiduciary fund in the basic financial statements. Governments with activities meeting the criteria should present a statement of fiduciary net position and a statement of changes in fiduciary net position. The Statements of Fiduciary Net Position and Statements of Changes in Fiduciary Net Position include all fiduciary activities of SAWS.
- GASB Statement No. 85, Omnibus 2017. The objective of this Statement is to address issues that have been identified during implementation and application of certain GASB Statements. This Statement addresses a variety of topics including issues related to blending component units, goodwill, fair value measurement and application, and postemployment benefits (pensions and other postemployment benefits [OPEB]). The information presented in the financial statements, including notes and required supplementary information is in accordance with this Statement.

The additional GASB pronouncements noted below will be implemented in the future. Once implemented, application of these standards may restate portions of these financial statements.

- GASB Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions. This Statement replaces the requirements of Statement No. 45, Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions, as amended, Statement No. 57, OPEB Measurements by Agent Employers and Agent Multiple-Employer Plans, for OPEB, and Statement No. 74, Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans and establishes new accounting and financial reporting requirements for OPEB plans. This Statement is effective for fiscal years beginning after June 15, 2017. SAWS will implement this Statement in 2018.
- GASB Statement No. 83, Certain Asset Retirement Obligations. This Statement establishes criteria for determining the timing and pattern of recognition of a liability and a corresponding deferred outflow of resources for Asset Retirement Obligations (AROs). An ARO is a legally enforceable liability associated with the retirement of a tangible capital asset. This Statement requires that recognition occur when the liability is both incurred and reasonably estimable. The determination of when the liability is incurred should be based on the occurrence of external laws, regulations, contracts, or court judgments, together with the occurrence of an internal event that obligates a government to perform asset retirement activities. This Statement requires the measurement of an ARO to be based on the best estimate of the current value of outlays expected to be incurred. This Statement requires the current value of a government's AROs to be adjusted for the effects of general inflation or deflation at least annually. The requirements of this Statement are effective for reporting periods beginning after June 15, 2018. SAWS will implement this Statement in 2019.
- GASB Statement No. 86, Certain Debt Extinguishment Issues. This Statement provides guidance for in-substance
  defeasance of debt in which cash and other monetary assets acquired with only existing resources—resources
  other than the proceeds of refunding debt—are placed in an irrevocable trust for the sole purpose of

extinguishing debt. In financial statements using the economic resources measurement focus, governments should recognize any difference between the reacquisition price (the amount required to be placed in the trust) and the net carrying amount of the debt defeased in substance using only existing resources as a separately identified gain or loss in the period of the defeasance. The requirements of this Statement are effective for reporting periods beginning after June 15, 2017. SAWS will implement this Statement in 2018.

• GASB Statement No. 87, *Leases*. This Statement requires the recognition of certain lease assets and liabilities for leases that previously were classified as operating leases. It establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. Under this Statement, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources, thereby enhancing the relevance and consistency of information about governments' leasing activities. The requirements of this Statement are effective for reporting periods beginning after June 15, 2019. SAWS will implement this Statement in 2020.

**Recognition of Revenues:** Revenues are recognized as goods or services are provided. Customers' meters are read and bills are prepared monthly based on billing cycles. SAWS uses historical information to estimate and record earned revenue not yet billed.

Revenue and Expense Classification: Proprietary funds distinguish operating revenues and expenses from non-operating items. Operating revenues and expenses generally result from providing services in connection with a proprietary fund's principal ongoing operations. The principal operating revenues of SAWS are charges to customers for water supply, water delivery, wastewater, and chilled water services. Operating expenses include costs of service, administrative expenses and depreciation on capital assets. All revenues and expenses not meeting this definition are reported as non-operating revenues and expenses.

**Pensions:** For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the SAWSRP, TMRS and DSPRP plans and additions to/from the SAWSRP, TMRS and DSPRP fiduciary net position have been determined using the same basis as they are reported by SAWSRP, TMRS, and DSPRP. For this purpose, benefit payments, including refunds of employee contributions, are recognized when due and payable in accordance with benefit terms. Investments are reported at fair value.

**Annual Budget:** Approximately sixty days prior to the beginning of each fiscal year, an annual budget is presented to the Board for consideration. This budget is prepared on an accrual basis and serves as a tool in controlling and administering the management and operation of the organization. The annual budget reflects an estimate of gross revenues and disposition of these revenues in accordance with the flow of funds required by Ordinance No. 75686 (See Note B). Once the annual budget has been approved by the Board, the budget is submitted to City Council for review and consultation.

**Restricted Resources:** When an expenditure is made for purposes for which both restricted and unrestricted resources are available, it is SAWS policy to choose the appropriate resource based on the availability of resources and funding goals established by management for those expenditures.

**Cash Equivalents:** SAWS considers investments with an original maturity of three months or less at the time of purchase to be cash equivalents.

Investments: City Ordinance No. 75686, SAWS' Investment Policy, and Texas state law allow SAWS to invest in direct obligations of the United States or its agencies and instrumentalities. Other allowable investments include direct obligations of the State of Texas or its agencies and instrumentalities; secured certificates of deposit issued by depository institutions that have their main office or a branch office in the State of Texas; defined bankers acceptances and commercial paper; collateralized direct repurchase agreements, reverse repurchase agreements; no-load money market mutual funds; investment pools; municipal bonds; and other types of secured or guaranteed investments. These investments are subject to market risk, interest rate risk, and credit risk which may affect the value at which these investments are recorded. Under the provisions of GASB Statement No. 31, money market investments, including US Treasury and agency obligations, with a remaining maturity at time of purchase of one year or less are reported at amortized cost. All other investments are reported at fair value.

Accounts Receivable: Accounts receivable are recorded at the invoiced amounts plus an estimate of unbilled revenue receivable. The allowance for uncollectible accounts is management's best estimate of the amount of probable credit losses based on account delinquencies and historical write-off experience. Account balances are written off against the allowance when it is probable the receivable will not be recovered. SAWS wrote off account balances totaling \$1.5 million in 2017 and \$3.9 million in 2016. A provision to increase the allowance for uncollectible accounts is recorded as an offset to operating revenue. The provision for uncollectible accounts was \$3.9 million in 2017 and \$4.4 million in 2016.

**Inventory:** Inventories are valued at the lower of weighted average cost or market. Inventories are reported in the Statements of Net Position in Other Current Assets. Inventories totaled \$5.6 million at December 31, 2017 and \$5.1 million at December 31, 2016.

**Restricted Assets:** Assets restricted by City Ordinance, which incorporates the bond indentures, to pay current liabilities are reported as current assets in the Statement of Net Position, regardless of their relative liquidity. Assets restricted for the acquisition of capital assets or to pay noncurrent liabilities are reported as noncurrent assets in the Statement of Net Position.

Capital Assets: Assets in service are capitalized when the unit cost is greater than or equal to \$5,000. Utility plant additions are recorded at cost, which includes materials, labor, direct internal costs, and interest capitalized during construction. Included in capital assets are intangible assets, which consist of purchased water rights and land

easements, costs associated with acquiring additional Certificates of Convenience and Necessity (CCN) related to new service areas and development costs for internally generated computer software. Assets acquired through capital leases are recorded on the cost basis and included in utility plant in service. Assets acquired through contributions, such as those from developers, are recorded at estimated acquisition value at date of donation. Maintenance, repairs, and minor renewals are charged to operating expense; major plant replacements are capitalized. Capital assets are depreciated on the straight-line method. This method is applied to all individual assets except distribution mains and intangible assets. Groups of mains are depreciated on the straight-line method over an estimated average useful life of 50 years. Mains are included in the Distribution and Transmission System asset category. Intangible assets not considered to have indefinite useful lives are amortized over their estimated useful life. Capital assets are tested for impairment when a significant unexpected decline in its service utility occurs. The following table shows an estimated range of useful lives used in providing for depreciation of capital assets:

Structures and improvements	25 - 50	years
Pumping and purification equipment	10 - 50	years
Distribution and transmission system	17.5 - 50	years
Collection system	50	years
Treatment facilities	25	years
Equipment and machinery	5 - 20	years
Furniture and fixtures	3 - 10	years
Computer equipment	5	years
Software	3 - 10	years
Intangible assets (definite useful life)	20	years

**Capitalized Interest:** Interest expense during the construction period is capitalized as part of the cost of capital assets. SAWS capitalized \$6 million of interest in 2017 and \$7.3 million in 2016.

Capital Contributions: Capital Contributions consist of plant contributions from developers, capital recovery fees, and contributions in aid of construction and/or grant proceeds received from governmental agencies for facility expansion. Capital Contributions are recognized in the Statement of Revenues, Expenses, and Changes in Net Position, after non-operating revenues (expenses), when eligibility requirements are met.

Capital recovery fees are charged to customers to connect to the water or wastewater system. By Texas law, these fees are to be used for capital expenditures that expand infrastructure capacity or to reimburse SAWS for the cost associated with existing excess infrastructure capacity. In certain instances, infrastructure that facilitates expansion of SAWS' service capacity is contributed by developers. In these instances, SAWS records the donated infrastructure as plant contributions and may abate future capital recovery fees due from the developer equal to a portion of the acquisition value of the of the infrastructure contributed. SAWS abated future capital recovery fees of \$4,377,000

in 2017 and \$4,508,000 in 2016. These abatements are conditional based on the type of development and in certain instances, time requirements and geographic restrictions.

Deferred Outflows and Inflows of Resources: In addition to assets, liabilities, and net position, the Statement of Net Position includes separate sections for deferred outflows and inflows of resources. A deferred outflow of resources represents a consumption of net position that applies to a future period(s) and therefore, will not be recognized as an outflow of resources until the applicable future period. A deferred inflow of resources is an acquisition of net position that is applicable to future reporting period(s) and therefore, will not be recognized as an inflow of resources until the applicable future period.

Deferred charge on bond refunding results from the difference in the carrying value of refunded debt and its reacquisition price. This amount is deferred and amortized to interest expense over the shorter of the life of the refunded or refunding debt using the interest method.

Deferred outflows – pension and Deferred inflows – pension result from contributions made by SAWS to its defined benefit pension plans after the measurement date of net pension liability as well as changes in the net pension liability not yet reflected in pension expense. Changes in the net pension liability not yet reflected in pension expense include differences between projected and actual earnings on pension plan investments, expected and actual experience with regard to economic or demographic factors and changes in assumptions about future economic or demographic factors. Differences between projected and actual earnings are recognized in pension expense over a closed five year period. Other changes are recognized in pension expense using a systematic and rational manner over a closed period equal to the average of the expected remaining service lives of all employees participating in the plans.

SAWS is a party to an interest rate swap agreement which serves to hedge interest rates on a portion of SAWS' variable rate debt. The agreement qualifies as a derivative instrument and meets the requirements of an effective hedge in accordance with GASB Statements No. 53 and 64. As a result, hedge accounting is used to account for the changes in the fair value of the swap agreement. *Accumulated decrease in fair value of hedging derivative* represents the change in the fair value of the interest rate swap that has not been recognized in the Statement of Revenues, Expenses and Changes in Net Position due to the use of hedge accounting. For more information about this derivative instrument see Note G.

**Compensated Absences:** It is SAWS' policy to accrue earned but unused employee vacation pay as well as the employer portion of Social Security taxes and required employer pension contributions related to the accrued vacation pay. Sick leave is not accrued as a terminating employee is not paid for accumulated sick leave.

**Self-Insurance**: SAWS is self-insured for a portion of workers' compensation, employee's health, employer's liability, public officials' liability, property damage, and certain elements of general liability. A liability has been

recorded for the estimated amount of eventual loss which will be incurred on claims arising prior to the end of the period including incurred but not reported claims.

**Derivative Instruments**: As noted above, SAWS is a party to an interest rate swap agreement that qualifies as a derivative instrument. Additionally, mutual fund investments held by SAWS fiduciary funds may use derivatives as part of their investment strategy. These mutual funds are comingled pools, rather than individual securities.

**Estimates:** The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results could differ from those estimates.

**Reclassifications:** Certain amounts presented in the prior year data have been reclassified in order to be consistent with the current year's presentation.

#### NOTE B - CITY ORDINANCE NO. 75686

Funds Flow: City Ordinance requires that SAWS' gross revenues be applied in sequence to: (1) System Fund for payment of current maintenance and operating expenses including a reserve equal to two months of budgeted maintenance and operating expenses for the current fiscal year; (2) Debt Service Fund requirements of Senior Lien Obligations; (3) Reserve Fund requirements of Senior Lien Obligations; (4) Interest and Sinking Fund and Reserve Fund requirements of Junior Lien Obligations; (5) Interest and Sinking Fund and Reserve Fund requirements of Subordinate Lien Obligations; (6) Payment of amounts required on Inferior Lien Obligations, and (7) Transfers to the City's General Fund and to the Renewal and Replacement Fund.

Payments to the City's General Fund: The City Ordinance requires SAWS to make payments to the City each month after making all other payments required by the City Ordinance. The amount of the payment is determined by City Council from time to time and cannot exceed 5% of Gross Revenues. Gross Revenues consist of all revenue with respect to the operation and ownership of SAWS with the exception of capital contributions, payments received under the CPS Energy contract, the federal subsidy of interest on Build America Bonds and earnings on funds deposited in the Project Fund and Reserve Fund until the Reserve Fund contains the required reserve amount. Currently SAWS pays 2.7% of Gross Revenues to the City. Payments to the City are reported as non-operating expense in the Statement of Revenues, Expenses and Changes in Net Position.

**Reuse Contract:** SAWS has a contract with CPS Energy, the city owned electricity and gas utility, for the provision of reuse water. According to the City Ordinance, the revenues derived from the contract have been restricted in use to only reuse activities and are excluded from gross revenue for purposes of calculating any payments to the City's General Fund.

**Pledged Revenues:** Net Revenues of SAWS have been pledged to the payment and security of its debt obligations. Net Revenues are defined by the City Ordinance as SAWS' Gross Revenues after deducting operating expenses before depreciation.

No Free Service: The City Ordinance also provides for no free services except for municipal fire-fighting purposes.

#### NOTE C - CASH AND INVESTMENTS

#### San Antonio Water System

The following is a reconciliation of cash and investments reported in the Statements of Net Position to deposits and investments disclosed in this note for December 31, 2017 and 2016.

(amounts in thousands)	December 31,						
		2017		2016			
Reported in Statements of Net Position:							
Cash and Cash Equivalents:							
Unrestricted	\$	36,688	\$	54,045			
Restricted - current		350		2,450			
Restricted - noncurrent		92,663		100,241			
Total cash and cash equivalents		129,701		156,736			
Investments:							
Unrestricted		349,074		256,919			
Restricted - current		171,038		169,165			
Restricted - noncurrent		275,145		345,773			
Total investments		795,257		771,857			
Total Cash, Cash Equivalents and Investments	\$	924,958	\$	928,593			
Reported amounts in note for:							
Deposits	\$	35,258	\$	31,959			
Investments		889,700		896,634			
Total Deposits and Investments	\$	924,958	\$	928,593			

Deposits: As of December 31, 2017, SAWS' funds are deposited in demand and savings accounts at Frost Bank, SAWS' general depository bank. As required by state law, all SAWS' deposits are fully collateralized and/or are covered by federal depository insurance. At December 31, 2017 and 2016, the collateral pledged was held by the Federal Reserve Bank of Boston under SAWS' name so SAWS incurred no custodial credit risk. At December 31, 2017, the bank balance of SAWS' demand and savings accounts was \$10,955,000 and the reported amount was \$35,258,000 which included \$29,000 of cash on hand. The primary reason for the difference between the bank balance and the reported balance relates to two investments totaling \$23,021,000 that matured on December 31,

2017 but were not posted as by the bank until January 2, 2018. At December 31, 2016, the bank balance of SAWS' demand and savings accounts was \$33,189,000 and the reported amount was \$31,959,000 which included \$29,000 of cash on hand.

Investments: As of December 31, 2017, investments include securities issued by the United States government and its agencies and instrumentalities along with funds held in money market funds. Securities issued by the U.S. government and its agencies and instrumentalities are held in safekeeping by SAWS' depository bank, Frost Bank and registered as securities of SAWS. Money Market Funds are managed by Frost Bank, US Bank, and Bank of New York Mellon and are invested in securities issued by the U.S. government or by U.S. Agencies. Funds in investment pools are invested in TexPool Prime. TexPool Prime may invest in commercial paper and certificates of deposit, as well as obligations of the U.S. government or its agencies and instrumentalities, and repurchase agreements as allowed under the Public Funds Investment Act (PFIA)

The following tables provide information related to SAWS investments at December 31, 2017 and 2016.

December 31, 2017							
(dollars in thousands)							
Investment Type	R	eported Value	Fa	ir Value	Allocation Based on Fair Value	Standard & Poors Rating	Weighted Averge Maturity (in days)
U.S. Treasury Securities	\$	178,534	\$	178,523	20%	AA+	279
U.S. Agency Notes		616,724		616,574	69%	AA + / A - 1 +	285
Money Market Mutual Funds held in Escrow:							
Bank of New York Mellon		20,356		20,356	2%	AAAm	1
US Bank-Fidelity MMF		8,281		8,281	1%	AAAm	1
Frost Bank		525		525	0%	AAAm	1
Texpool Prime Local Government Pool		65,280		65,280	7%	AAAm	1
Total Investments	\$	889,700	\$	889,539	100%	=	254

December 31, 2016 (dollars in thousands)  Investment Type	R	eported Value	Fa	iir Value	Allocation Based on Fair Value	Standard & Poors Rating	Weighted Averge Maturity (in days)
U.S. Treasury Securities	\$	198,216	\$	198,202	22%	AA+	219
U.S. Agency Notes		579,640		579,513	65%	AA+/A-1+	156
Money Market Mutual Funds held in Escrow:							
Bank of New York Mellon		37,042		37,042	4%	AAAm	1
US Bank-Fidelity MMF		25,860		25,860	3%	AAAm	1
Frost Bank		55,876		55,876	6%	AAAm	1
Total Investments	\$	896,634	\$	896,493	100%		150

**Interest Rate Risk:** As a means of limiting its exposure to fair value losses due to rising interest rates, SAWS' investment policy limits its investments maturities to no more than five years. At December 31, 2017 the longest remaining maturity for any investment was slightly over four years and 73% of the investment portfolio matures in less than one year.

**Credit Risk:** In accordance with its investment policies, SAWS manages exposure to credit risk by limiting its investments in long-term obligations of other states and cities to those with a credit rating of "A" or better. Additionally, any short-term investments require a rating of at least "A-1" or "P-1".

Concentration of Credit Risk: SAWS' investment policy does not limit the amount it may invest in U.S. Treasury securities, government-guaranteed securities, or government-sponsored entity securities. However, in order to manage its exposure to concentration of credit risk, the investment policy does limit the amount that can be invested in any one government-sponsored issuer to no more than 50% of the total investment portfolio, and no more than 30% of the total investment portfolio in any non-government issuer unless it is fully collateralized.

As of December 31, 2017 and 2016, SAWS the percentage of the investment portfolio for government-sponsored issuers was as follows:

	Decem	ıber 31,
_	2017	2016
Federal Home Loan Bank	32%	30%
Federal National Mortgage Association	15%	9%
Federal Home Loan Mortgage Corporation	11%	17%
Federal Farm Credit Bank	11%	3%
Federal Agricultural Mortgage Corporation	0%	6%

Fair Value Measurement: SAWS categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; Level 3 inputs are significant unobservable inputs. The following tables summarize SAWS investments by the fair value hierarchy as of December 31, 2017 and 2016.

(amounts in thousands)	Dec	December 31,			Fair Value Measurements Using						
		2017	Le	vel 1		Level 2		vel 3			
Investments by fair value level											
U.S. Treasury Securities	\$	178,523	\$	-	\$	178,523	\$	-			
U.S. Agency Notes		616,574		-		616,574		-			
Total investments measured at fair value		795,097	\$	-	\$	795,097	\$	-			
Investments measured at net asset value (NAV)											
Money Market Mutual Funds		29,162									
Texpool Prime Local Government Pool		65,280									
Total invesments measured at NAV		94,442									
Total investments at fair value and NAV	\$	889,539									

December 31,			ts Using	ng			
	2016	Level 1		Level 2		Le	vel 3
\$	198,202	\$	-	\$	198,202	\$	-
	579,513		-		579,513	_	-
	777,715	\$	-	\$	777,715	\$	
	118,778						
\$	896,493						
		\$ 198,202 579,513 777,715	2016 Le  \$ 198,202 \$ 579,513  777,715 \$	2016 Level 1  \$ 198,202 \$ - 579,513 - 777,715 \$ -	2016 Level 1  \$ 198,202 \$ - \$ 579,513 - \$ 777,715 \$ - \$	2016 Level 1 Level 2  \$ 198,202 \$ - \$ 198,202 579,513 - 579,513 777,715 \$ - \$ 777,715	2016 Level 1 Level 2 Level 2  \$ 198,202 \$ - \$ 198,202 \$ 579,513 - 579,513

Securities classified in Level 2 of the fair value hierarchy are valued using interest rate curves and credit spreads applied to the terms of the debt instruments (maturity and coupon interest) and consider the counterparty rating.

**Restricted Cash and Investments:** Cash and investments are restricted for a variety of purposes based on the requirement set forth in City Ordinance 75686, state law or SAWS policy. The following table summarizes both current and noncurrent restricted cash and investments by purpose at December 31, 2017 and 2016.

		Decen	nber 31	,	
(amounts in thousands)		2017	2016		
Restricted for:					
Operations	\$	54,143	\$	52,279	
Debt Service		75,343		76,786	
Debt Service Reserve		88,944		88,402	
Construction - accrued liabilities		41,902		42,550	
Construction - capital recovery fees		188,227		150,198	
Construction - bond proceeds		90,637		207,414	
Total Restricted Cash & Investments	\$	539,196	\$	617,629	

The requirements of City Ordinance 75686 stipulate that SAWS must accumulate and maintain a reserve equal to 100% of the maximum annual debt service requirements for senior lien debt obligations. Additional City ordinances require SAWS to maintain a debt service reserve equal to the average annual debt service on all junior lien debt obligations secured by a reserve fund. Not all SAWS junior lien debt obligations require the security of a debt service reserve. Increases in the required reserve amount may be deposited into a reserve account over a five year period. Ordinance 75686 allows for SAWS to provide surety policies equal to all or part of the required reserve. SAWS may use bond proceeds to make the required deposits related to new debt issued. Debt service reserve deposits are required to be maintained until a) the revenue bonds mature, b) the surety policy provider's credit ratings improve to the minimum ratings required under SAWS bond ordinance, or c) new surety policies are provided that meet the requirements of the bond ordinance.

The following table summarizes the cash and investments restricted for Debt Service Reserve at December 31, 2017 and 2016 based on the allocation of the funds between junior lien and senior lien bond requirements.

		,		
(amounts in thousands)	2017 2016		2016	
Deposits	\$	12,984	\$	48
Restricted for Junior Lien Bonds		13,185		20,901
Restricted for Senior Lien Bonds		62,775		67,453
Total Cash & Investments - Debt Service Reserve	\$	88,944	\$	88,402

Funds restricted for construction include amounts needed to pay accrued construction liabilities, collected but unspent capital recovery fees and unspent bond proceeds. Funds restricted for accrued construction liabilities and unspent bond proceeds are completely offset by related liabilities. By state law, capital recovery fees are restricted for the construction of the infrastructure upon which the calculation of the fee is based.

#### San Antonio Water System Fiduciary Funds

The fiduciary financial statements include three fiduciary funds related to SAWS employee benefit plans: the San Antonio Water System Retirement Plan (SAWSRP), the District Special Project Retirement Income Plan (DSPRP) and the San Antonio Water System Retiree Health Trust.

While the SAWSRP and DSPRP plans have no specific policy relating to plan investments, plan trustees have instituted a plan to invest approximately 60% of plan assets in equity securities and the remainder in fixed income securities. Plan investments are not automatically rebalanced, however, contributions to the plan are invested in a manner to adhere to the investment plan.

In 2012, SAWS established the San Antonio Water System Retiree Health Trust (SAWS OPEB Plan) for the exclusive purpose of funding health and life benefits provided to eligible retirees and their dependents. It is the policy of

SAWS OPEB Plan to invest 50% - 70% of its assets in equity securities, 25% - 50% in fixed income securities and 0% - 5% in cash. SAWS OPEB Plan utilizes an investment manager to make recommendations as to the appropriate target portfolio weightings among major asset classes. Additionally, the investment manager has full discretionary authority to buy, hold, and sell investments subject to the guidelines as defined in SAWS OPEB Plan's investment policy.

The following tables summarize fiduciary fund investments by plan and in total at December 31, 2017 and 2016.

December 31, 2017									
(dollars in thousands)									
					0.4.77	wa o pup			Allocation
	0	A WILLIAM		CDDD	SAV	VS OPEB	1	otal All	Based on Fair
Investment Type	5.	AWSRP	D	DSPRP		Plan		Plans	Value
Collective, Pooled & Mutual Funds:									
Domestic Equity	\$	126,660	\$	3,420	\$	26,778	\$	156,858	56.9%
International Equity		2		135		8,686		8,823	3.2%
Domestic Debt		81,597		386		21,314		103,297	37.5%
Balanced/Asset Allocation		3,133		-		-		3,133	1.1%
Commodities		-		69		-		69	0.0%
Money Market Mutual Funds		-		-		1,733		1,733	0.6%
Standard Insurance Company:									
Guaranteed Long-term Fund		-		1,696		-		1,696	0.6%
Total Investments	\$	211,392	\$	5,706	\$	58,511	\$	275,609	100.0%

December 31, 2016													
(dollars in thousands)													
Investment Type	SAWSRP		DSPRP		SAWS OPEB Plan		Total All Plans		Allocation Based on Fair Value				
Collective, Pooled & Mutual Funds:													
Domestic Equity	\$	112,979	\$	3,225	\$	20,216	\$	136,420	60.6%				
International Equity		-		115		6,444		6,559	2.9%				
Domestic Debt		61,296		431		16,477		78,204	34.7%				
Balanced/Asset Allocation		1,493		-		-		1,493	0.7%				
Commodities		-		78		-		78	0.0%				
Money Market Mutual Funds		-		-		891		891	0.4%				
Standard Insurance Company:													
Guaranteed Long-term Fund		-		1,561		-		1,561	0.7%				
Total Investments	\$	175,768	\$	5,410	\$	44,028	\$	225,206	100.0%				

All fiduciary fund investments are reported at net asset value at December 31, 2017 and 2016. Money market funds are reported as Cash and Cash Equivalents in the Statements of Fiduciary Net Position.

Fiduciary Fund investments are not subject to the Public Funds Investment Act. The investments are subject to the following risks:

**Credit Risk:** Credit Risk is the risk that an issuer will not fulfill its obligations. The individual investments held by the Collective, Pooled and Mutual funds at December 31, 2017 and December 31, 2016 were not rated. The Standard Insurance Company Guaranteed Long-term Fund had a rating of A- by Standard & Poors at December 31, 2017 and 2016.

Concentration of Credit Risk: Concentration of credit risk for investments is the risk of loss attributable to the magnitude of an investment in a single issuer. As of December 31, 2017 and 2016, more than 99% of fiduciary fund investments were in collective, pooled and mutual funds. The following funds exceeded 5% of fiduciary net position at December 31, 2017 and 2016.

- Principal LDI Intermediate Duration Separate Account Z
- Principal LDI Long Term Duration Separate Account Z
- Principal Extended Duration Separate Account Z
- Principal LargeCap S&P 500 Index Fund

**Interest Rate Risk:** Interest rate risk is the risk that changes in interest rates of fixed income securities will adversely affect the fair value of an investment. The effective duration of the debt funds was 15.3 years at December 31 2017 and 15 years at December 31, 2016. The Standard Insurance Company Guaranteed Long-term Fund had an effective duration of 5.0 years at December 31, 2017 and December 31, 2016.

#### NOTE D - ACCOUNTS RECEIVABLE

Accounts receivable consisted of the following at December 31, 2017 and 2016:

(amounts in thousands)		2017	2016		
Current:					
Receivable from customers	\$	53,449	\$	44,716	
Unbilled revenue		27,274		25,298	
Receivable from other governmental agencies		1,872		2,881	
Less: Allowance for doubtfull accounts		(8,217)		(5,868)	
		74,378		67,027	
Noncurrent:					
Receivable from other governmental agencies		1,343		2,631	
Total accounts receivable	\$	75,721	\$	69,658	

In connection with a settlement agreement, Lower Colorado River Authority (LCRA) is required to make eight annual payments of \$1.4 million to SAWS beginning November 1, 2012 through November 1, 2019. The discounted value of the payments to be received from LCRA in the future is reported in accounts receivable, of which \$1.3 million and \$2.6 million was classified as noncurrent at December 31, 2017 and 2016, respectively.

**NOTE E – CAPITAL ASSETS** 

A summary of capital asset activity for the year ended December 31, 2017 is as follows:

(amounts in thousands)	December 31, 2016	Increases	Transfers	Decreases	December 31, 2017
Capital Assets, not being depreciated:					
Land	\$ 101,074	\$ -	\$ 5,959	\$ 38	\$ 106,995
Water rights purchased	248,677	¥ -		ψ 50 -	248,677
Other intangible assets	370	_	_	_	370
Construction in progress	228,595	309,263	(203,560)	1,663	332,635
Total capital assets, not being			(200,000)	1,000	
depreciated/amortized	578,716	309,263	(197,601)	1,701	688,677
Capital assets, being depreciated					
Structures and improvements	872,002	54	118,331	153	990,234
Pumping and purification equipment	336,421	515	(89,861)	160	246,915
Distribution and transmission system	2,623,479	2	837	-	2,624,318
Treatment facilties	2,186,893	-	70,379	27	2,257,245
Equipment and machinery	185,956	7,814	104,348	4,522	293,596
Furniture and fixtures	6,124	-	471	-	6,595
Computer equipment	31,324	1,418	(7,713)	491	24,538
Software	52,915	529	809	7,066	47,187
Other intangible assets	1,354				1,354
Total capital assets being					
depreciated/amortized	6,296,468	10,332	197,601	12,419	6,491,982
Less accumulated depreciation					
Structures and improvements	(235,680)	(23,620)	-	(153)	(259,147
Pumping and purification equipment	(62,288)	(7,998)	-	(34)	(70,252
Distribution and transmission system	(776,744)	(47,299)	-	-	(824,043
Treatment facilties	(746,566)	(47,640)	-	(27)	(794,179
Equipment and machinery	(113,455)	(18,631)	-	(4,522)	(127,564
Furniture and fixtures	(5,945)	(120)	-	-	(6,065
Computer equipment	(17,370)	(2,200)	-	(491)	(19,079
Software	(30,603)	(4,495)	-	(7,056)	(28,042
Other intangible assets	(442)	(69)			(511
Total accumulated depreciation	(1,989,093)	(152,072)	-	(12,283)	(2,128,882
Total capital assets, being					
depreciated/amortized	4,307,375	(141,740)	197,601	136	4,363,100
Capital assets, net	\$ 4,886,091	\$ 167,523	\$ -	\$ 1,837	\$ 5,051,777

A summary of capital asset activity for the year ended December 31, 2016 is as follows:

(amounts in thousands)	December 31, 2015	Increases	Transfers	Decreases	December 31, 2016
Capital Assets, not being depreciated:					
Land	\$ 98,932	\$ -	\$ 4,237	\$ 2,095	\$ 101,074
Water rights purchased	248,603	-	74		248,677
Other intangible assets	370	_	-	_	370
Construction in progress	485,962	376,916	(632,139)	2,144	228,595
Total capital assets, not being			(***)		
depreciated/amortized	833,867	376,916	(627,828)	4,239	578,716
Capital assets, being depreciated					
Structures and improvements	790,159	2	82,970	1,129	872,002
Pumping and purification equipment	195,683	421	140,317	-	336,421
Distribution and transmission system	2,347,276	-	276,592	389	2,623,479
Treatment facilties	2,081,721	-	105,172	-	2,186,893
Equipment and machinery	176,712	5,753	11,838	8,347	185,956
Furniture and fixtures	6,133	-	-	9	6,124
Computer equipment	21,479	2,017	8,221	393	31,324
Software	53,078	424	2,718	3,305	52,915
Other intangible assets	1,354	-	-	-	1,354
Total capital assets being					
depreciated/amortized	5,673,595	8,617	627,828	13,572	6,296,468
Less accumulated depreciation					
Structures and improvements	(216,088)	(20,588)	-	(996)	(235,680)
Pumping and purification equipment	(55,101)	(7,187)	-	-	(62,288)
Distribution and transmission system	(728,675)	(48,458)	-	(389)	(776,744)
Treatment facilties	(701,287)	(45,279)	-	-	(746,566)
Equipment and machinery	(107,483)	(14,319)	-	(8,347)	(113,455)
Furniture and fixtures	(5,928)	(26)	-	(9)	(5,945)
Computer equipment	(15,443)	(2,320)	-	(393)	(17,370)
Software	(29,298)	(4,610)	-	(3,305)	(30,603)
Other intangible assets	(373)	(69)			(442)
Total accumulated depreciation	(1,859,676)	(142,856)	-	(13,439)	(1,989,093)
Total capital assets, being					
depreciated/amortized	3,813,919	(134,239)	627,828	133	4,307,375
Capital assets, net	\$ 4,647,786	\$ 242,677	\$ -	\$ 4,372	\$ 4,886,091

**Asset Impairment:** SAWS periodically reviews its capital assets for possible impairment. As part of SAWS' capital improvement program, SAWS incurs costs to design capital improvement projects. These costs are included in capital assets as Construction in Progress. Periodically the actual construction of these projects may not occur due to changes in plans. Once it has been determined that construction will not proceed, any capitalized costs are charged off to operating expenses. Design and project costs written off totaled \$1.7 million in 2017 and \$2.1 million in 2016.

SAWS owns a water treatment plant in southwest Bexar County to treat water supplied from Medina Lake and the Medina River. During the height of the 2011 - 2014 drought, Medina Lake water levels were greatly diminished leading to poor water quality. As a result, the treatment plant was idled from April 2013 through August 2015. Due to heavy rainfall during the summer of 2015, lake levels increased to a peak of nearly 80% of capacity. SAWS restarted the treatment plant on September 1, 2015 and treated approximately 500 acre-feet of Medina River water. Water quality concerns persisted and SAWS elected to idle the treatment plant again in October 2015. Additional investments in the treatment process may be required in order to eliminate these water quality concerns in the future. Current available water supplies are expected to be sufficient to meet customers' demand in the foreseeable future without utilizing the Medina supplies. The book value of the treatment plant at December 31, 2017 was \$13.0 million. SAWS is continuing to depreciate the treatment plant and management does not currently believe the plant has been permanently impaired.

#### **NOTE F - OTHER LIABILITIES**

**Accrued Vacation Payable:** SAWS records an accrual for vacation payable for all full time employees and pays unused vacation hours available at the end of employment with the final paycheck. Changes in the liability amount for 2017 and 2016 were as follows:

		(amounts in thousands)												
	Ва	alance at					Ba	lance at	Est	timated				
	Beg	ginning of	Curr	ent-Year			Ε	End of	Du	e Within				
		Year	A	ccruals	Pa	yments		Year	Or	ne Year				
Year Ended December 31, 2017	\$	8,853	\$	6,113	\$	(5,422)	\$	9,544	\$	5,422				
Year Ended December 31, 2016	\$	8,806	\$	5,498	\$	(5,451)	\$	8,853	\$	5,451				

#### Risk Management:

Health Care Benefits:

SAWS provides health care benefits to eligible employees and retirees through a self-insured plan that includes medical, prescription drug and dental benefits. The payment of claims associated with these benefits is handled by third party administrators. Plan participants contribute a portion of the cost of providing these benefits through

payroll deductions or monthly premiums, annual deductibles and other co-payments. SAWS was self-insured for the first \$325,000 of medical claims per person during 2017 and \$300,000 during 2016.

#### Other Risks:

SAWS is exposed to various risks of financial loss related to torts; theft of, damage to, and destruction of assets; errors and omissions; injuries to employees; and natural disasters. SAWS is self-administered and self-insured for the first \$2,000,000 of each workers compensation and general liability claim, and is fully self-insured for automobile liability. Claims that exceed the self-insured retention limit for workers' compensation and general liability are covered through SAWS' comprehensive commercial insurance program (CCIP). Additionally, under the CCIP, SAWS maintains deductible programs for public officials and employment practices liability, fiduciary liability, pollution legal liability, drone liability, cyber liability and crime with varying deductibles. Property coverage is on a replacement cost basis with a deductible of \$250,000 per occurrence. Settled claims during the last three years have not exceeded the insurance coverage in any year.

The claims liability for health care benefits and other risks, including incurred but not reported claims, is based on the estimated ultimate cost of settling the claims. Changes in the liability amount for the last three fiscal years were as follows:

	(amounts in thousands)													
	Ва	lance at					Ва	lance at	Es	timated				
	Beg	inning of	Cur	rent-Year			E	End of	Du	e Within				
		Year	Α	ccruals	P	ayments		Year	One Year					
Year Ended December 31, 2017	\$	7,273	\$	22,586	\$	(22,672)	\$	7,187	•	7,187				
December 31, 2017	Þ	1,2/3	ф	22,360	Þ	(22,672)	Þ	/,10/	\$	/,10/				
Year Ended														
December 31, 2016	\$	4,787	\$	28,063	\$	(25,577)	\$	7,273	\$	7,273				
Year Ended														
December 31, 2015	\$	7,054	\$	21,796	\$	(24,063)	\$	4,787	\$	4,787				

#### NOTE G – DERIVATIVE INSTRUMENT

In 2003, SAWS entered into an interest rate swap agreement in connection with its City of San Antonio, Texas, Water System Subordinate Lien Revenue and Refunding Bonds, Series 2003-A and 2003-B (the "Series 2003 Bonds") issued in a variable interest rate mode. The Series 2003 Bonds were issued to provide funds for SAWS' capital improvements program and to refund certain outstanding commercial paper notes.

**Objective of the Interest Rate Swap:** The swap was used to hedge interest rates on the Series 2003 Bonds to a synthetic fixed rate that produced a lower interest rate cost than a traditional long term fixed rate bond issued at that time. In August 2008, SAWS used commercial paper notes to redeem \$110,615,000 of the \$111,615,000 outstanding

principal of the Series 2003 Bonds due to unfavorable market conditions relating to the ratings downgrade of the 2003 Bond insurer, MBIA Insurance Corporation. In 2009, SAWS redeemed the remaining \$1 million of the Series 2003 Bonds through the issuance of additional commercial paper. The interest rate swap agreement was not terminated upon the redemption of the 2003 Bonds and instead serves as an off-market hedge for that portion of the commercial paper notes outstanding which pertain to the redemption of the 2003 Bonds. SAWS currently intends to maintain a portion of its outstanding commercial paper in amounts matching the notional amounts of the swap. SAWS did not recognize any economic gain or loss as a result of this refunding since the debt service requirements of the commercial paper notes are expected to closely match the debt service requirements of the refunded debt. Commercial paper notes totaling \$84,705,000 at December 31, 2017 and \$88,255,000 at December 31, 2016 were hedged by the interest rate swap agreement.

**Terms:** The swap agreement contains scheduled reductions to the outstanding notional amounts that are expected to follow the original scheduled reductions of the Series 2003 Bonds. The Series 2003 Bonds were issued on March 27, 2003, with a principal amount of \$122,500,000. The swap agreement matures on May 1, 2033. At the time the swap was entered into, the counterparty was Bear Stearns Financial Products, Inc. ("Bear Stearns FPI"), with the index for the variable rate leg of the SWAP being the Securities Industry and Financial Markets Association ("SIFMA") Municipal Swap Index.

In 2008, JPMorgan Chase & Co. announced its acquisition of The Bear Stearns Companies Inc., the parent of Bear Stearns FPI. JPMorgan Chase guaranteed the trading obligations of Bear Stearns and its subsidiaries. Effective June 16, 2009, the swap agreement was amended between SAWS, JPMorgan Chase & Co, and MBIA to provide for JPMorgan Chase Bank N.A. to become the swap counterparty and allow for the remainder of outstanding Series 2003 Bonds to be redeemed, while maintaining the swap agreement as an obligation to all parties. The amendment provides for the conditional release of MBIA's swap insurance policy upon the occurrence of certain future events.

The combination of commercial paper notes and a floating-to-fixed swap creates a synthetic fixed-rate of 4.18%. The synthetic fixed-rate protects against the potential of rising interest rates.

**Fair Value:** The swap had a fair value of approximately negative \$15,394,000 at December 31, 2017 and negative \$16,863.000 at December 31, 2016. This value is based on Level 2 inputs in the fair value hierarchy using the zero-coupon valuation method. This method calculates the future net settlement payments required by the swap, assuming that the current forward rates implied by the yield curve correctly anticipate future spot interest rates. These net payments are then discounted using the spot rates implied by the current yield curve for hypothetical zero-coupon bonds due on the date of each future net settlement on the swap.

The swap agreement meets the criteria of an effective hedge under GASB Statement No. 53 and therefore qualifies for hedge accounting treatment. Since the fair value is negative, the fair value is recorded as a non-current liability.

Changes in the swap's fair value are recorded as a deferred outflow of resources and included on the Statement of Net Position. At the time the 2003 Bonds were redeemed in 2008, the fair value of the swap was negative \$6.2 million. The deferred outflow at the time of redemption was included in the carrying value of the 2003 Bonds and resulted in a loss on redemption of \$6.2 million. This loss is included in the deferred charge on bond refunding on the Statement of Net Position and is being amortized over the remaining life of the 2003 Bonds. The unamortized deferred charge on bond refunding related to the swap was \$3,537,000 at December 31, 2017 and \$3,898,000 at December 31, 2016.

Credit Risk: SAWS was not exposed to credit risk on its outstanding swap at December 31, 2016 and 2017 because the swap had a negative fair value. However, should interest rates change and the fair value of the swap become positive, SAWS would be exposed to credit risk in the amount of the swap's fair value. The swap counterparty, JPMorgan Chase Bank, N.A. was rated Aa3 by Moody's Investors Services, A+ by Standard and Poor's, and AA- by Fitch Ratings as of December 31, 2017. The amended swap agreement contains a credit support annex which will become effective upon the release of MBIA from the swap insurance policy. Collateralization would be required by either party should the fair value of the swap reach applicable thresholds as stated in the amended swap agreement.

**Basis Risk:** SAWS is exposed to basis risk to the extent that the interest payments on its hedged commercial paper notes do not match the variable-rate payments received on the associated swap. SAWS attempts to mitigate this risk by (a) matching the outstanding hedged commercial paper notes associated with the redemption of the variable-rate debt to the notional amount and amortization schedule of the swap and (b) selecting an index for the variable-rate leg of the swap that is reasonably expected to closely match the interest rate on the hedged commercial paper notes.

**Termination Risk:** SAWS may terminate the Swap at any time for any reason. JPMorgan Chase may terminate the swap if SAWS fails to perform under the terms of the agreement. SAWS' ongoing payment obligations under the swap are insured as provided for in the swap amendment and JPMorgan Chase cannot terminate as long as the insurer does not fail to perform. Also, if at the time of the termination the swap has a negative fair value, SAWS would be liable to the counterparty for a payment equal to the swap's fair value.

Market-access Risk: SAWS is subject to market-access risk as the variable-rate debt hedged by the swap is commercial paper notes. At December 31, 2017, \$84,705,000 of outstanding commercial paper with current maturities of approximately 32 days was hedged by the interest rate swap. The amount of commercial paper hedge at December 31, 2016 totaled \$88,255,000 with maturities of approximately 33 days. As previously noted, SAWS intends to reissue the commercial paper notes in amounts matching the notional amounts of the swap.

**Swap Payments and Associated Debt**: As of December 31, 2017, debt service requirements of the hedged commercial paper notes and net swap payments, assuming current interest rates remain the same, are as detailed

below. As rates vary, variable-rate interest payments and net swap payments will vary. Principal payments assume that commercial paper notes will be repaid in accordance with the amortization schedule of the swap.

E	Pay-Fixed, Receive-Variable Interest Rate Swap Estimated Debt Service Requirements of Variable-Rate Debt Outstanding and Net Swap Payments  (amounts in thousands)											
Year	P	rincipal		rest Paid 1 Debt		erest Rate vap, Net		Total				
2018	\$	3,710	\$	896	\$	2,031	\$	6,637				
2019		3,880		855		1,936		6,671				
2020		4,055		811		1,838		6,704				
2021		4,240		766		1,735		6,741				
2022		4,435		718		1,627		6,780				
2023 - 2027		25,405		2,795		6,334		34,534				
2028 - 2032		31,740		1,233		2,793		35,766				
2033		7,240		26		60		7,326				
Total	\$	84,705	\$	8,100	\$	18,354	\$	111,159				

#### **NOTE H - LONG TERM DEBT**

#### **REVENUE BONDS**

On February 28, 2017, SAWS issued \$90,915,000 City of San Antonio, Texas Water System Revenue Refunding Bonds, Series 2017A (No Reserve Fund). The proceeds from the sale of the bonds were used to (i) refund the remaining City of San Antonio, Texas Water System Revenue Refunding Bonds, Series 2007 (Series 2007), (ii) refund a portion of the City of San Antonio, Texas Water System Junior Lien Revenue and Refunding Bonds, Series 2007A (Series 2007A), and (iii) pay the cost of issuance. The refunding of the Series 2007 and Series 2007A bonds reduced total future debt service payments by approximately \$9.9 million and resulted in an economic gain of \$7.5 million. The bonds are secured together with other outstanding Junior Lien Obligations solely by a lien on a pledge of net revenues and are subordinate to outstanding Senior Lien Obligations.

On November 1, 2017, SAWS remarketed \$99,590,000 City of San Antonio, Texas Water System Variable Rate Junior Lien Revenue and Refunding Bonds, Series 2014B Bonds (No Reserve Fund). The proceeds from the sale of the bonds were used to (i) pay the principal of the maturity bonds, and (ii) pay the cost of issuance. The bonds are secured together with other outstanding Junior Lien Obligations solely by a lien on a pledge of net revenues and are subordinate to outstanding Senior Lien Obligations. There was no economic gain or loss on this transaction.

Senior lien water system revenue bonds, comprised of Series 2009, Series 2009B, Series 2010B, Series 2011, Series 2011A, Series 2012A, and Series 2012A, outstanding in the amount of \$742,025,000 at December 31, 2017, are collateralized by a senior lien and pledge of the gross revenues of SAWS after deducting and paying the current expenses of operation and maintenance of SAWS and maintaining a two-month operating reserve for such expenses. Interest rates on senior lien bonds range from 3.000% to 6.220%, exclusive of any federal interest subsidy on the Series 2009B and 2010B Build America Bonds.

The junior lien water system revenue bonds are composed of two categories of debt: fixed rate debt and variable rate debt. The junior lien fixed rate debt is similar to the senior lien bonds, as they have fixed interest rates for the life of the bonds. The junior lien variable rate bonds have interest rates that are periodically reset throughout the life of the bonds. All the junior lien water system revenue bonds are collateralized by a junior lien and pledge of the gross revenues of SAWS after deducting the current expenses of operation and maintenance of SAWS, maintaining a two-month operating reserve for such expenses, and paying debt service on senior lien debt.

The junior lien fixed rate bonds, comprised of Series 2007, Series 2008, Series 2008A, Series 2009, Series 2009A, Series 2010, Series 2010A, Series 2011, Series 2011A, Series 2012 (No Reserve Fund), Series 2012, Series 2013A, Series 2013B (No Reserve Fund), Series 2013C, Series 2013D, Series 2013E (No Reserve Fund), Series 2014A (No Reserve Fund), Series 2014C, Series 2014D, Series 2015B, Series 2015B (No Reserve Fund), Series 2016A (No Reserve Fund), Taxable Series 2016B, Series 2016C (No Reserve Fund), Series 2016D, Series 2016E, and Series 2017A (No Reserve Fund), is outstanding in the amount of \$1,597,110,000 at December 31, 2017. Interest rates on the junior lien fixed rate bonds range from 0.000% to 5.000%

The junior lien variable rate bonds, comprised of the Series 2013F (No Reserve Fund) (the Series 2013F Bonds) and the Series 2014B (No Reserve Fund) (the Series 2014B Bonds), are outstanding in the amount of \$198,385,000 at December 31, 2017. The Series 2013F Bonds are tax-exempt variable rate notes initially issued in a Securities Industry and Financial Markets Association (SIFMA) Index Mode, with the interest rate reset weekly, through the initial interest period which expired October 31, 2016. On November 1, 2016, SAWS remarketed \$98,795,000 in Series 2013F Bonds into a five-year interest rate period that ends October 31, 2021, the new interest period. During the new interest period, the Series 2013F Bonds bear interest at 2.00% with a yield of 1.63%. The Series 2014B Bonds are tax-exempt variable rate notes initially issued in a SIFMA Index Mode, with the interest rate reset weekly, through the initial interest period expiring October 31, 2017. On November 1, 2017, SAWS remarketed \$99,590,000 in Series 2014B Bonds into a five-year interest rate period that ends October 31, 2022, the new interest period. During the new interest period, the Series 2014B Bonds bear interest at 2.00% with a yield of 1.80%.

Upon conclusion of the initial interest period, or any subsequent new interest period, SAWS is permitted to change the mode for all or any portion of the junior lien variable interest bonds (the Bonds) to a different mode or to a SIFMA Index Mode of different duration. The Bonds are subject to a mandatory tender without right of retention at the conclusion of the initial interest period or any subsequent new interest period. During the initial interest period and any subsequent new interest period the Bonds are not subject to the benefit of a liquidity facility provided by a third party. Accordingly, a failure to remarket the Bonds at the end of the initial interest period or subsequent new interest period will result in the rescission of the notice of mandatory tender with respect to the Bonds and SAWS has no obligation to purchase the Bonds at such time. The occurrence of a failed remarketing will not result in an event of default under the ordinance. Until SAWS redeems or remarkets the Bonds that had a failed remarketing, the Bonds shall bear interest at the stepped rate of 8.0%.

The Federal Tax Reform Act of 1986 requires issuers of tax-exempt debt to make payments to the United States Treasury for investment income received at yields that exceed the issuer's tax exempt borrowing rates. The Treasury requires payment for each issue every five years. The estimated liability is updated annually for all tax-exempt issuances or changes in yields until such time payment of the calculated liability is due. A liability is recorded once payment appears to be probable. As of December 31, 2017, SAWS has no arbitrage rebate liability associated with any outstanding bonds.

The following tables summarize revenue bond transactions for the years ended December 31, 2017 and 2016.

(amounts in thousands)		Balance	Reductions/					Balance	Due Within		
	Jan	uary 1, 2017	Additions		Amortization		Dece	mber 31, 2017	О	ne Year	
Bonds Payable	\$	2,630,350	\$	190,505	\$	283,335	\$	2,537,520	\$	84,875	
Unamortized premium		211,847		12,102		24,309		199,640			
Unamortized discount		(1,915)		-		(494)		(1,421)			
Total Bonds Payable, Net	\$	2,840,282	\$	202,607	\$	307,150	\$	2,735,739	\$	84,875	

(amounts in thousands)		Balance			Re	eductions/		Balance		e Within	
	Jan	uary 1, 2016	Additions		Amortization		Dece	mber 31, 2016	One Year		
Bonds Payable	\$	2,600,096	\$	647,060	\$	616,806	\$	2,630,350	\$	83,040	
Unamortized premium		132,971		99,931		21,055		211,847			
Unamortized discount		(2,704)		(254)		(1,043)		(1,915)			
Total Bonds Payable, Net	\$	2,730,363	\$	746,737	\$	636,818	\$	2,840,282	\$	83,040	

The following table shows the annual debt service requirements on SAWS' debt obligations for each of the next five years and then in five year increments after that.

## Annual Debt Service Requirements Revenue and Refunding Bonds (amounts in thousands)

Year Ended December 31,			Fixed	Variable Rate						
	<u>Р</u>	rincipal	<u>Interest</u>	Interest e Subsidy‡ Net Interest		<u>I</u>	Principal	<u>I</u> 1	nterest*	
2018	\$	84,875	\$ 99,237	\$ 3,547	\$	95,690	\$	-	\$	3,968
2019		85,930	96,451	3,481		92,970		-		3,968
2020		89,800	93,245	3,412		89,833		-		3,968
2021		94,425	89,461	3,336		86,125		-		3,968
2022		98,005	85,364	3,255		82,109		-		4,462
2023 - 2027		527,240	360,303	14,819		345,484		-		24,800
2028 - 2032		456,510	247,417	11,816		235,601		30,825		23,781
2033 - 2037		505,170	142,067	5,865		136,202		66,620		16,877
2038 - 2042		332,145	39,372	685		38,687		76,625		7,934
2043 - 2046		65,035	4,687	 		4,687		24,315		496
	\$ 2	2,339,135	\$ 1,257,604	\$ 50,216	\$ 1	,207,388	\$	198,385	\$	94,222

<sup>‡</sup> Federal interest rate subsidy on Build America Bonds is utilized to pay interest on those bonds but is reported as nonoperating revenue. The federal budget approved by the U.S. Congress for the fiscal year ending September 30, 2018, reduced the BAB subsidy paid during the fiscal year by 6.6%. The BABs subsidy to be received by SAWS is reduced by this amount for all future payments.

#### **COMMERCIAL PAPER PROGRAM**

SAWS maintains a commercial paper program that is used to provide funds for the interim financing of a portion of its capital improvements. The City Council of the City of San Antonio has authorized the commercial paper program in an amount of \$500 million. Notes payable under the program cannot exceed maturities of 270 days.

The City has covenanted in the Ordinance authorizing the commercial paper program (the "Note Ordinance") the issuance of "City of San Antonio, Texas Water System Commercial Paper Notes, Series A" (the "Series A Notes"), the issuance of "City of San Antonio, Texas Water System Commercial Paper Notes, Series B" (the "Series B Notes"), and the maintenance at all times of credit facilities with banks or other financial institutions which would

<sup>\*</sup>The variable rate bonds are currently in a fixed rate Term Mode through October 31, 2021 and October 31, 2022. Interest shown above is based on a 2.00% fixed rate through the fixed term and 2.50% thereafter.

provide available borrowing capacity sufficient to pay the principal of the commercial paper program. The credit facility is maintained under the terms of a revolving credit agreement.

The borrowings under the commercial paper program are equally and ratably secured by and are payable from (i) the proceeds from the sale of bonds or additional borrowing under the commercial paper program and (ii) borrowing under and pursuant to the revolving credit agreement. The capacity of the combined revolving credit agreements is \$450 million with the Revolving Credit Agreement with Bank of Tokyo-Mitsubishi UFJ, Ltd in the amount of \$350 million, supporting the Series A Notes expiring October 4, 2018; and the Revolving Credit Agreement with Wells Fargo Bank, N.A. in the amount of \$100 million, supporting the Series B Notes expiring January 15, 2021.

The issuance of commercial paper is further supported by the following agreements and related participants:

- Dealer Agreements with Goldman, Sachs & Co., J.P. Morgan Securities LLC., Ramirez & Co., Inc., and Mitsubishi UFJ Securities (USA), Inc.
- Issuing and Paying Agency Agreement with The Bank of New York Mellon Trust Company, N.A.

Commercial paper notes of \$278,060,000 are outstanding as of December 31, 2017. Interest rates on the notes outstanding at December 31, 2017 range from 0.99% to 1.16% and maturities range from 32 to 180 days. The outstanding notes had an average rate of 1.08% and averaged 73 days to maturity.

SAWS intends to reissue maturing commercial paper, in accordance with the refinancing terms of the revolving credit agreement, and ultimately refund such maturities with proceeds from the issuance of long-term revenue bonds. Consistent with this intent, and since SAWS has the available \$450 million revolving credit agreement described above, SAWS has classified nearly all outstanding commercial paper notes as long-term debt. In accordance with the amortization schedule of the interest rate swap agreement discussed in Note G, SAWS intends to redeem \$3,710,000 of commercial paper in 2018. Therefore, this portion of the commercial paper is classified as a current liability.

The following table summarizes transactions of the commercial paper program for the years ended December 31, 2017 and 2016.

				(amoun	ts in thousands)					
	Οι	itstanding				Οι	utstanding	P	ayable	
	N	Notes at				Notes	Within			
	В	eginning	Notes		Notes		at End	One		
		of Year	Issued	]	Retired		of Year	Year		
Year Ended										
December 31, 2017	\$	241,610	\$ 40,000	\$	3,550	\$	278,060	\$	3,710	
Year Ended										
December 31, 2016	\$	135,305	\$ 118,700	\$	12,395	\$	241,610	\$	3,550	

#### OTHER DEBT MATTERS

**Debt Covenants:** SAWS is required to comply with various provisions included in the ordinances which authorized the bond issuances. SAWS management believes it is in compliance with all significant provisions of the bond ordinances.

Under these bond ordinances SAWS is required to establish and maintain rates and charges for services sufficient to produce Net Revenues sufficient to pay 1.25 times the annual debt service requirements on Senior Lien debt obligations (senior lien debt coverage ratio). SAWS senior lien debt coverage ratio was 6.06 at December 31, 2017 and 3.88 at December 31, 2016.

#### **NOTE I - CONTINGENCIES AND COMMITMENTS**

#### Water Agreements

As of December 31, 2017, SAWS has entered into various water leases to obtain rights to pump water from the Edwards Aquifer. The term of these agreements vary, with some expiring as early as 2018 and others continuing until 2023. Some of the leases include price escalations and the annual cost per acre foot ranges from \$100 to \$140. Under these various leases, SAWS paid \$4.7 million in 2017 and 2016. The future commitments under these leases are as follows:

(dollars in thousands)						
	2018	2019	2020	2021	2022	Thereafter
Edwards Aquifer - lease payments	\$ 4,456	\$ 3,232	\$ 2,873	\$ 2,674	\$ 2,101	\$ 564
Edwards Aquifer - acre feet leased	28,121	21,498	20,588	19,108	15,008	4,026

SAWS also has commitments to purchase water supplies under various contracts. All water provided under these contracts is subject to availability.

Under a contract with Guadalupe Blanco River Authority (GBRA), SAWS will receive 4,000 acre feet of water annually through the end of the contract in 2037. Additionally, SAWS must purchase water not sold by GBRA to other third parties. The additional amount of water available in 2018 is estimated to be 4,800 acre feet and is projected to decline over the remaining term of the contract as the demand increases for other GBRA customers. The cost of the water escalates over time with projected prices ranging from \$970 per acre foot in 2018 to approximately \$1,451 per acre foot by 2037. SAWS has an option to extend this contract until 2077 under new payment terms.

Under a contract with the Massah Development Corporation, SAWS has a minimum take or pay commitment to purchase 100 acre-feet per month or 1,200 acre-feet per year of raw water from the Lower Glen Rose/Cow Creek

formations of the Trinity Aquifer in northern Bexar County at projected prices ranging from \$621 to \$764 per acre foot. This agreement expires in 2025 and SAWS has a unilateral option to extend the contract for 10 years.

Under a contract with Sneckner Partners, Ltd., SAWS has a take or pay commitment to purchase 1,500 acre-feet of water annually from the Trinity Aquifer at a minimum annual cost of \$225 per acre-foot through 2020. SAWS has a unilateral option to extend the contract through 2026. As part of this contract, SAWS agreed to make quarterly defined payments for any residential customers that are connected to the system within a defined geographical area that begin taking water service from SAWS. SAWS began making these payments during 2012 as the area has begun to experience some development. SAWS has made payments totaling \$340,000 for new customer connections under the terms of this contract. While it is impossible to estimate the exact amount of any potential future payments associated with this provision of the agreement, management estimate of this potential contingent liability is less than \$5 million.

In 2012, SAWS entered into an agreement with Water Exploration Company, Ltd. (WECO) to purchase groundwater produced by WECO from the Trinity Aquifer. In connection with this agreement, two prior water purchase agreements between DSP and WECO were terminated. The 2012 agreement has a term of 15 years, with two optional 5 year extensions. SAWS is obligated to purchase up to 17,000 acre-feet per year in monthly increments not to exceed 1,417 acre-feet if water is available to be produced. SAWS only pays for delivered water meeting all state and federal drinking water standards. Pumping by WECO may not reduce the Trinity Aquifer below 600 feet Mean Sea Level at test wells on the tracts. The projected price to be paid per acre-foot of raw water ranges from \$965 in 2018 to \$1,153 by 2027.

In 2010, SAWS was granted a permit by the Gonzales County Underground Water Conservation District ("District") to produce 11,688 acre feet of water from the Carrizo Aquifer in Gonzales County. SAWS has entered into 23 separate agreements with land owners to produce water under that permit. These agreements remain in force indefinitely as long as SAWS continues to make payments in accordance with the terms of the agreements. SAWS makes payments to the landowners based on actual water produced. SAWS expects to produce the maximum water available under its permit in 2018 and projects payments to landowners will be \$1,134,000. These payments escalate annually based on the average of the increase in the Consumer Price Index and Producers Price Index.

In 2011, SAWS entered into an agreement with the Schertz Seguin Local Government Corporation (SSLGC) to 1) treat water produced by SAWS under its permit with the District at its treatment plant in Guadalupe County and transport that water through SSLGC's existing transportation pipeline to a SAWS facility in Schertz, Texas and 2) purchase up to 5,000 acre feet of wholesale water annually from SSLGC. As part of this agreement, SSLGC agreed to expand its treatment facilities to handle the volume of water supplied by SAWS. SSLGC issued contract revenue bonds in 2012 to finance the expansion. SAWS is unconditionally obligated to make monthly payments to SSLGC

beginning in December 2014 equal to 1/12<sup>th</sup> the annual debt service payment owed by SSLGC on the contract revenue bonds regardless of the amount of water actually provided by SAWS to SSLGC for treatment and transportation. In addition to the payment made to SSLGC for the expansion of the treatment plant, SAWS makes payments to SSLGC for treating and transporting the SAWS produced water.

The initial term of the agreement with SSLGC expires in 2050 and is automatically renewed for successive terms of 5 years unless SAWS chooses to cancel the contract upon the expiration of any term. The projected price paid to SSLGC to treat and transport water provided by SAWS is projected to be \$499 per acre foot in 2018 increasing to \$636 per acre foot by 2050. This projected price includes the debt service associated with the expansion of SSLGC's treatment plant. Payments for any wholesale water purchased from SSLGC are based on SSLGC's wholesale water rates.

Under a contract with Bexar-Medina-Atascosa Counties W.C.I.D. No. 1 (BMA), SAWS has a take or pay commitment to purchase 19,974 acre feet of untreated water annually from Medina Lake. If BMA is unable to deliver water to SAWS, BMA issues a credit for the undelivered water which can be used to offset payments due to BMA during the next calendar year. The price of the water is based on the rate charged by Guadalupe Blanco River Authority (GBRA) for raw water. GBRA's rate for raw water at December 31, 2017 was \$145 per acre foot. The agreement has been amended several times with the current agreement being effective in 2008 and ending in 2049.

Under a contract with Canyon Regional Water Authority (CRWA), SAWS is required to make certain contractually required minimum payments each year to fund capital and operating expenses of CRWA. Additionally, SAWS makes payments based on the number of acre feet of water SAWS commits to take in a given year. SAWS currently has access to 6,300 acre feet through 2023 and 6,800 acre feet annually from 2024 through 2042. For 2018, SAWS has committed to taking 5,300 acre feet with a projected cost of \$1,391 per acre foot.

Total payments under these water purchase agreements were \$38.5 million in 2017 and \$41.9 million in 2016. A summary of all estimated future payments under all these agreements is provided in the following table. The estimated fixed water payments consist of the take or pay commitments under the agreements. The estimated variable water payments will be made only if water is made available to SAWS. The estimates assume price escalations but do not assume the extension of any water purchase agreement. As with any estimate, the actual amounts paid could differ materially.

(dollars in thousands)							
	2018	2019	2020	2021	2022	,	Thereafter
Purchased water payments - fixed Acre feet purchased - fixed	\$ 22,110 43,031	\$ 22,290 44,031	\$ 22,687 44,031	\$ 22,822 42,531	\$ 23,238 42,531	\$	600,395 1,047,390
Purchased water payments - variable Acre feet purchased - variable	\$ 14,928 15,962	\$ 15,032 15,786	\$ 15,144 15,614	\$ 14,718 14,944	\$ 14,834 14,779	\$	97,905 90,157

In October 2014, the City Council adopted an ordinance, approving the execution of a Water Transmission and Purchase Agreement (the "Agreement") between the City, acting by and through SAWS, and Vista Ridge LLC, pursuant to which Vista Ridge LLC has committed to make available to SAWS, and SAWS has agreed to pay for, up to 50,000 acre-feet of potable water ("Project Water") per year for an initial period of 30 years plus a limited (10 year) extension period under certain circumstances (hereinafter referred to as the "operational" phase). To produce and deliver the Project Water, Vista Ridge LLC will develop well fields to withdraw water from the Carrizo and Simsboro aquifers in Burleson County, Texas pursuant to currently-held long-term leases with landowners and construct (or cause to be constructed) a 142-mile pipeline from this well field to northern Bexar County (the well fields and the pipeline, together, the "Project"). The pipeline will be connected to the SAWS distribution system at a delivery point in northern Bexar County (the "Connection Point"). The execution of the Agreement represents a significant diversification of the City's water source, as SAWS projects that Project Water, if delivered at the maximum amount, will account for approximately 20% of the System's current annual usage.

The Project achieved financial close in November 2016 and is now in the construction phase. During this phase, Vista Ridge LLC will complete the construction of the Project and SAWS must construct any improvements necessary to accept and integrate Project Water. The anticipated capital cost of SAWS improvements was initially estimated at approximately \$145 million. As design of these improvements has not been completed, the potential cost of these improvements could materially differ from the initial estimate. The construction phase is scheduled to be completed in 2020 and will result in the commencement of the aforementioned 30-year operational phase, during which period SAWS is obligated to pay for water (up to 50,000 acre-feet annually) made available to it by Vista Ridge LLC at the Connection Point.

Pursuant to the terms of the Agreement, SAWS will pay costs arising under the Agreement, as a maintenance and operating expense of the System for rate setting purposes, only for Project Water made available at the Connection Point (which payment will include the costs of operating and maintaining the Project). SAWS will have no obligation to pay for any debt issued by Vista Ridge LLC, and any such debt will be non-recourse to SAWS.

On May 17, 2016, SAWS exercised its contractual right to fix the Capital and Raw Groundwater Unit Price under the Agreement based on the methodology provided for therein. This action served to lock in the price of the Project Water component of SAWS annual payment requirement at \$1,606 per acre foot for the entire 30 year term (and any extension of that term) of the Agreement.

In addition to the Capital and Raw Groundwater Unit Price, SAWS will pay operations and maintenance costs as a direct pass through under the Agreement and electricity cost (paid directly by SAWS to the utility providers). It is estimated that the water will initially cost approximately \$2,000 per acre foot, resulting in an estimated initial annual cost of approximately \$100 million for 50,000 acre feet of delivered water. Delivery of water from the Project is

expected to begin in 2020. In 2015, the City Council approved a series of increases to the water supply fee through 2020 to support the acquisition of new water supplies, including water supplied from the Project.

SAWS has the right to terminate the Agreement at any time by purchasing the Project for the aggregate amount of the outstanding Project Company debt, contract breakage costs and return of and return on equity contributions by Vista Ridge's principals. The termination payment as of December 31, 2017 was estimated to be approximately \$540 million. The termination payment will continue to increase throughout the construction phase as additional funds are expended by the Project Company on the construction of the project. By the time the operational phase is reached in 2020 the termination payment could be as much as \$1 billion. At the end of the operational phase, ownership of the Project will be transferred to SAWS at no cost. SAWS has also entered into a separate agreement with Blue Water Vista Ridge, LLC, the lessee of the Project Water, to continue to acquire the 50,000 acre-feet of untreated groundwater upon the termination of the Agreement and transfer of the Project to SAWS, and the cost of such water at the end of the Agreement will be tied to prevailing Edwards Aquifer leases.

#### Other Contingencies and Commitments

SAWS is also committed under various contracts for completion of construction or acquisition of utility plant totaling approximately \$369.9 million as of December 31, 2017. Funding of this amount will come from excess revenues, contributions from developers, restricted assets and available commercial paper capacity.

In connection with desalination injection well permits obtained by SAWS from the Texas Commission on Environmental Quality (TCEQ), SAWS has an obligation to plug the injection wells once the wells are no longer in service. These wells became operational in 2016 and have an expected useful life of 50 years based on SAWS experience with other wells throughout the system. At December 31, 2017, SAWS has recorded a liability of \$457,000 related to this post-closure obligation based on the current projected cost to plug wells of similar size, depth and diameter.

In March 2007, SAWS was orally notified by Region 6 of the United States Environmental Protection Agency (the "EPA") of alleged failures to comply with the Clean Water Act due to the occurrence of sanitary sewer overflows (SSOs). The EPA subsequently referred the matter to the United States Department of Justice (the "DOJ") for enforcement action. SAWS engaged in settlement negotiations with the EPA and the DOJ to resolve the allegations. In June 2013, the Board approved a Consent Decree between SAWS and the United States of America and the State of Texas to resolve this enforcement action. During the 10 to 12 year term of the Consent Decree, SAWS estimates the cost to perform the operating and maintenance requirements of the Consent Decree will be approximately \$250 million. SAWS initially estimated that capital investments of approximately \$850 million would be required over the Consent Decree term. During the last several years, through flow monitoring during significant rainfall events, physical inspection and televising, SAWS has accumulated additional information relative to the performance of its

collection system. Based upon this additional information, as well as inflationary cost increases, SAWS currently estimates that capital expenditures associated with the requirements of the Consent Decree could range from \$1.2 billion to \$1.3 billion. As with any estimate, the actual amounts incurred could differ materially.

Through December 31, 2017, capital expenditures related to the Consent Decree total \$304 million. Since entry into the Consent Decree, SAWS has performed its obligations under terms of the Consent Decree and management believes SAWS is in material compliance with such terms, conditions and requirements. Since 2010, SAWS has seen a significant reduction in SSOs, from 538 in 2010 to 193 in 2017.

SAWS operates the Mitchell Lake Site Wastewater Treatment Facility pursuant to a Texas Pollutant Discharge Elimination Permit (Permit) issued by the TCEQ under a delegation of authority from the EPA. On August 18, 2016 SAWS received an Administrative Order from EPA that alleges that SAWS violated the Permit by failing to meet effluent limits as required by the Permit.

Mitchell Lake is not a standard brick and mortar wastewater treatment facility. Instead, the Lake is a unique and environmentally sensitive facility that has become a wildlife refuge and an active tourist destination within San Antonio. The Lake surface area covers approximately 600 acres and provides an essential habitat where migrating birds can rest and feed. Discharges from the Lake only occur after significant rainfall events. The intermittent nature of the discharges after rainfall makes traditional treatment options impractical.

Upon receiving the Administrative Order, SAWS began working with consulting experts and conducted preliminary feasibility evaluations of two potential solutions: a) reconstructing the existing dam and spillway and b) constructing extensive treatment wetlands below the Lake. SAWS has hired a nationally recognized wetlands firm to develop and conduct a three year pilot wetlands program. This program will evaluate the viability of the proposed wetlands as a solution and, if appropriate, guide the optimization of potential full scale wetlands. Concurrently, improvements to the dam and spillway structures are being evaluated and cost projections are being developed.

SAWS will also continue to explore other treatment and operational alternatives and work with the EPA and TCEQ to develop an appropriate plan that ensures compliance with the Permit. At this time, SAWS does not know what actions may ultimately be required or the costs associated with those actions.

#### NOTE J - PENSION AND RETIREMENT PLANS

SAWS' pension program includes benefits provided by the Texas Municipal Retirement System (TMRS), the San Antonio Water System Retirement Plan (SAWSRP) and the District Special Project Retirement Income Plan (DSPRP).

#### Texas Municipal Retirement System

SAWS participates as one of 872 plans in the nontraditional, joint contributory, hybrid defined benefit pension plan administered by the Texas Municipal Retirement System (TMRS). TMRS is an agency created by the State of Texas and administered in accordance with the TMRS Act, Subtitle G, Title 8, Texas Government Code (the TMRS Act) as an agent multiple-employer retirement system for municipal employees in the State of Texas. The TMRS Act places the general administration and management of the System with a six-member Board of Trustees. Although the Governor, with the advice and consent of the Senate, appoints the TMRS Board, TMRS is not fiscally dependent on the State of Texas. TMRS's defined benefit pension plan is a tax-qualified plan under Section 401 (a) of the Internal Revenue Code. TMRS issues a publicly available comprehensive annual financial report that can be obtained at <a href="https://www.tmrs.com">www.tmrs.com</a>

TMRS provides retirement benefits to eligible SAWS employees. At retirement, the benefit is calculated as if the sum of the employee's contribution, with interest, and the SAWS financed monetary credits with interest were used to purchase an annuity. Members choose to receive their benefit in one of seven payment options. Members may also choose to receive a portion of their benefit as a partial lump sum distribution in an amount equal to 12, 24 or 36 monthly payments, which cannot exceed 75% of the member's deposits and interest.

The plan provisions that have been adopted by SAWS are within the options available in the governing state statutes of TMRS. Plan provisions for SAWS for the 2017 and 2016 plan years were as follows:

Years required for vesting	5
Service retirement eligibility (expressed as age/years of service)	60/5, any/20
Updated Service Credit	100% Repeating
Annuity increase (to retirees)	70% of CPI Repeating

Total number of SAWS participants in TMRS as of the last two actuarial valuation dates is summarized below:

	December 31,				
	2016	2015			
Active employees	1,648	1,666			
Retirees and beneficiaries currently receiving benefits	1,175	1,117			
Inactive members	595	528			
Total	3,418	3,311			

Under the state law governing TMRS, SAWS' contribution rate is determined annually by the actuary using the Entry Age Normal (EAN) cost method. The actuarially determined rate is the estimated amount necessary to finance the cost of benefits earned by employees during the year, with an additional amount to finance any unfunded accrued

liability. Eligible SAWS employees are required to contribute 3% of their annual gross earnings. The employer required contribution rates for SAWS were 3.67% and 3.69% in calendar years 2017 and 2016, respectively. SAWS' contributions to TMRS totaled \$3,852,000 and \$3,609,000 for the years ended December 31, 2017 and 2016, respectively. These contributions equaled the required contributions.

SAWS Net Pension Liability for the TMRS plan as of December 31, 2017 and 2016 was measured as of December 31, 2016 and 2015, respectively. The Total Pension Liability used to calculate the Net Pension Liability was determined by an actuarial valuation performed as of the measurement date.

The December 31, 2016 and 2015 valuations included the following actuarial assumptions:

Annual inflation 2.50%
Annual wage growth 3.00%

Investment rate of return 6.75%, net of pension plan investment expense, including inflation

Salary increases were based on a service-related table. Mortality rates for active members, retirees, and beneficiaries were based on the gender-distinct RP2000 Combined Healthy Mortality Table with Blue Collar Adjustment, with male rates multiplied by 109% and female rates multiplied by 103%. The rates are projected on a fully generational basis by scale BB to account for future mortality improvements. For disabled annuitants, the gender-distinct RP2000 Combined Healthy Mortality Tables with Blue Collar Adjustment are used with males rates multiplied by 109% and female rates multiplied by 103% with a 3-year set-forward for both males and females. In addition, a 3% minimum mortality rate is applied to reflect the impairment for younger members who become disabled. The rates are projected on a fully generational basis by scale BB to account for future mortality improvements subject to the 3% floor.

Actuarial assumptions used in the December 31, 2016 and 2015 valuations were based on the results of actuarial experience studies. The experience study in TMRS was for the period December 31, 2010 through December 31, 2014. Healthy post-retirement mortality rates and annuity purchase rates were updated based on a Mortality Experience Investigation Study covering 2009 through 2011, and dated December 31, 2013. These assumptions were first used in the December 31, 2013 valuation, along with a change to the Entry Age Normal (EAN) actuarial cost method. Assumptions are reviewed annually. Plan assets are managed on a total return basis with an emphasis on both capital appreciation as well as the production of income, in order to satisfy the short-term and long-term funding needs of TMRS.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-

term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. In determining their best estimate of a recommended investment return assumption under the various alternative asset allocation portfolios, the plan actuary focused on the area between (1) arithmetic mean (aggressive) without an adjustment for time (conservative) and (2) the geometric mean (conservative) with an adjustment for time (aggressive). At its meeting on July 30, 2015, the TMRS Board approved a new portfolio target allocation. The target allocation and best estimates of real rates of return for each major asset class for each of the actuarial valuations are summarized in the following table:

	December	r 31, 2016	December 31, 2015		
		Long-term	· ·	Long-term	
		Expected Real		Expected Real	
Asset Class	Target Allocation	Rate of Return	Target Allocation	Rate of Return	
Domestic Equity	17.5%	4.55%	17.5%	4.55%	
International Equity	17.5%	6.35%	17.5%	6.10%	
Core Fixed Income	10.0%	1.00%	10.0%	1.00%	
Non-Core Fixed Income	20.0%	4.15%	20.0%	3.65%	
Real Return	10.0%	4.15%	10.0%	4.03%	
Real Estate	10.0%	4.75%	10.0%	5.00%	
Absolute Return	10.0%	4.00%	10.0%	4.00%	
Private Equity	5.0%	7.75%	5.0%	8.00%	
Total	100.0%		100.0%		

The discount rate of 6.75% was used to measure the Total Pension Liability in the December 31, 2016 and 2015 actuarial valuations. The projection of cash flows used to determine the discount rate assumed that employee and employer contributions will be made at the rates specified in statute. Based on that assumption, the TMRS pension plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the Total Pension Liability.

The following table summarizes the changes in the TMRS Net Pension Liability for the year ended December 31, 2017 and 2016 based on the measurement date of December 31, 2016 and 2015, respectively.

Changes in Net Pension Liability - TMRS
(\$\mathbb{S}\$ in thousands)

	2017 Increase (Decrease)			2016 Increase (Decrease)			
	Pension	Fiduciary	Net Pension	Pension	Fiduciary	Net Pension	
	Liability	Net Position	Liability	Liability	Net Position	Liability	
	(a)	(b)	(a) - (b)	(a)	(b)	(a) - (b)	
Balances at January 1,	\$ 188,624	\$ 161,452	\$ 27,172	\$ 179,549	\$ 161,858	\$ 17,691	
Changes for the year:							
Service Cost	4,979	=	4,979	4,810	=	4,810	
Interest	12,623	-	12,623	12,480	-	12,480	
Differences between expected							
and actual experience	29	-	29	(1,311)	-	(1,311)	
Changes in assumptions	=	=	-	433	=	433	
Contributions - employer	-	3,609	(3,609)	-	3,953	(3,953)	
Contributions - employee	-	2,935	(2,935)	-	2,892	(2,892)	
Net investment income	-	10,909	(10,909)	-	239	(239)	
Benefit payments	(8,186)	(8,186)	-	(7,337)	(7,337)	-	
Administrative expense	-	(123)	123	-	(146)	146	
Other charges	-	(7)	7	-	(7)	7	
Net Changes	9,445	9,137	308	9,075	(406)	9,481	
Balances at December 31, *	\$ 198,069	\$ 170,589	\$ 27,480	\$ 188,624	\$ 161,452	\$ 27,172	

<sup>\*</sup>Based on measurement date of December 31, 2016 and December 31, 2015 respectively

The following presents the Net Pension Liability for the TMRS plan as of December 31, 2017 and December 31, 2016 calculated using the discount rate of 6.75%, as well as what the Net Pension Liability would be if it were calculated using a discount rate that is 1-percentage-point lower (5.75%) or 1-percentage-point higher (7.75%) than the current rate:

	TMRS Net Pension Liability (\$ in thousands)						
		1% Decrease 5.75%		Current Discount Rate 6.75%		1% Increase 7.75%	
December 31, 2017	\$	53,499	\$	27,480	\$	5,901	
December 31, 2016	\$	52,195	\$	27,172	\$	6,428	

#### San Antonio Water System Retirement Plan

The San Antonio Water System Retirement Plan (SAWSRP) is a single-employer pension plan, which serves as a supplement to SAWS other retirement benefits. The plan has both a defined benefit and a defined contribution component. SAWS has delegated to Principal Financial Group the authority to manage plan assets and administer the payment of benefits under the plan.

The financial information for SAWSRP is reported in the SAWS Fiduciary Funds financial statements. SAWSRP does not issue stand-alone financial statements. A summary of the plan's financial statements for the years ended December 31, 2017 and 2016 is presented in the following tables.

San Antonio Water System Retirement Plan Net Position Restricted for Pension Benefits (amounts in thousands)

	D	ecember 31, 20	17	December 31, 2016			
	Defined Benefit	Defined Contribution	Total	Defined Benefit	Defined Contribution	Total	
Assets							
Employer contributions receivable	\$ -	\$ -	\$ -	\$ 1,067	\$ -	\$ 1,067	
Investments	208,132	3,260	211,392	174,212	1,556	175,768	
Total Assets	208,132	3,260	211,392	175,279	1,556	176,835	
Liabilities							
Net position restricted for							
pension benefits	\$ 208,132	\$ 3,260	\$ 211,392	\$ 175,279	\$ 1,556	\$ 176,835	

San Antonio Water System Retirement Plan
Changes in Net Position Restricted for Pension Benefits
(amounts in thousands)
For the years ended

	December 31, 2017			December 31, 2016			
	Defined Benefit	Defined Contribution	Total	Defined Benefit	Defined Contribution	Total	
Additions							
Employer Contributions	\$ 7,982	\$ 850	\$ 8,832	\$ 7,367	\$ 551	\$ 7,918	
Employee Contributions	2,484	663	3,147	2,533	421	2,954	
Investment Income (Loss)	30,741	428	31,169	6,971	76	7,047	
Total additions	41,207	1,941	43,148	16,871	1,048	17,919	
Deductions							
Pension payments/distributions	7,974	223	8,197	7,283	109	7,392	
Administrative Expenses	380	14	394	195	15	210	
	8,354	237	8,591	7,478	124	7,602	
Increase in net position	32,853	1,704	34,557	9,393	924	10,317	
Net position restricted for							
pension benefits - beginning	175,279	1,556	176,835	165,886	632	166,518	
Net position restricted for							
pension benefits - ending	\$ 208,132	\$ 3,260	\$ 211,392	\$ 175,279	\$ 1,556	\$ 176,835	

*Defined Benefit Component:* Eligible employees hired prior to June 1, 2014 participate in the defined benefit component of the plan. Eligible employees vest in this plan after the completion of five years of service.

Covered employees are eligible to retire upon attaining the normal retirement age of 65. An employee may elect early retirement, with reduced benefits, upon attainment of (i) 20 years of vesting service regardless of age or (ii) five years of vesting service and at least age 60. An employee is automatically 100% vested upon attainment of age 65 or upon becoming totally and permanently disabled.

The normal retirement benefit is based upon two factors, average compensation and years of vesting service. Average Compensation is defined as the monthly average of total compensation received for the three consecutive years ending December 31, out of the last ten compensation years prior to normal retirement date which gives the highest average. The normal retirement benefit under SAWSRP is equal to the following:

- 1. 1.20% of the Average Compensation, times years of credited service not in excess of 25 years, plus
- 2. 0.75% of the Average Compensation, times years of credited service in excess of 25 years but not in excess of 35 years, plus
- 3. 0.375% of the Average Compensation, times years of credited service in excess of 35 years.

Upon retirement, an employee must select from one of seven alternative payment plans. Each payment plan provides for monthly payments as long as the retired employee lives. The options available address how plan benefits are to be distributed to the designated beneficiary of the retired employee. The program also provides disability benefits.

Participants in the defined benefit component of the SAWSRP as of the last two actuarial valuation dates is summarized below:

	January 1,				
	2017	2016			
Active employees	1,285	1,400			
Retirees and beneficiaries currently receiving benefits	946	868			
Inactive members	522	515			
Total	2,753	2,783			

The funding policy provides for actuarially determined periodic contributions so that sufficient assets will be available to pay benefits when they are due. Contribution requirements are established and may be amended by SAWS Board of Trustees. The actuarially determined contributions for 2017 and 2016 were determined using the Entry Age Normal cost method. The actuarially determined contribution is the estimated amount necessary to finance the cost of benefits earned by participating employees during the year, with an additional amount to finance any unfunded accrued liability. Prior to 2015, active members made no contributions to the plan and all obligations with respect

to the defined benefit feature of the plan were paid solely by SAWS. On January 1, 2015, active members began sharing in the cost of providing benefits under the plan by contributing 3% of their compensation.

The Net Pension Liability for the defined benefit component of the SAWSRP as of December 31, 2017 and 2016 was measured as of January 1, 2017 and 2016, respectively. The Total Pension Liability used to calculate the Net Pension Liability was determined by an actuarial valuation as of that date performed as of the measurement date.

The January 1, 2017 and 2016 valuations included the following actuarial assumptions:

	<u>January 1, 2017</u>	<u>January 1, 2016</u>
Annual inflation	2.00%	2.25%
Investment rate of return	6.50%	6.75%

Real wage growth is based on a service-related table based on SAWS' experience from 2011 to 2013.

Mortality rates for the January 1, 2017 valuation were based on RP-2006 total dataset mortality table projected to future years with historical and assumed mortality improvement (MI) rates using the Principal Mortality Improvement (PMI) Scale. RP-2006 is a baseline mortality rates table underlying the Society of Actuaries (SOA) RP-2014 experience study as of central year of the experience data for 2004-2008 years. The PMI scale is based on the SOA MI model PREC\_2014\_v2016 and Principal selected assumption set published November 2016. Mortality rates for the January 1, 2016 valuation were as of 2006 from the SOA RP-2014 study. MI beyond 2007 was based on the RPEC\_2014 model and assumes a convergence period of 10 years. Long-term MI is the sex-distinct and the age based assumption calibrated to the annual improvement averages, for the period 2010-2088 published by the SOA Trustees Report for 2014.

The expected long-term return on plan assets assumption was developed as a weighted average rate based on target asset allocation of the plan and the Long-Term Capital Market Assumptions (CMA) 2014. The capital market assumptions were developed with a primary focus on forward-looking valuation models and market indicators. The key fundamental economic inputs for these models are future inflation, economic growth, and interest rate environment. Due to the long-term nature of pension obligations, the investment horizon for the CMA 2014 is 20-30 years. Primarily as a result of a change in the target allocation of assets, the long-term expected rate of return used in the January 1, 2017 valuation was reduced to 6.50% from the long-term expected rate of return used in the January 1, 2016 valuation of 6.75%.

The target allocation and best estimates of arithmetic real rates of return for each major asset class including inflation are summarized in the following table:

	January	1, 2017	January	1, 2016
		Long-term		Long-term
		Expected Real		Expected Real
Asset Class	Target Allocation	Rate of Return	Target Allocation	Rate of Return
US Equity - Large Cap	65.0%	6.50%	73.0%	8.80%
Core Bond	6.6%	3.60%	27.0%	4.25%
Cash	0.1%	1.55%		
Aggregate Credit Bond	7.3%	4.05%		
Long Credit Bond	5.5%	4.75%		
Long Gov't Bond	1.8%	2.65%		
Ultra Long Gov't Bond	13.7%	1.85%		
Total	100.0%		100.0%	

The discount rate used to measure the Total Pension Liability at December 31, 2017 was 6.50% and 6.75% at December 31, 2016. The projection of cash flows used to determine the discount rate assumed that contributions will be made based on actuarial determined amounts. Based on that assumption, the SAWSRP defined benefit component's Fiduciary Net Position was projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the Total Pension Liability.

The following table summarizes the changes in the SAWSRP Net Pension Liability for the year ended December 31, 2017 and 2016 based on the measurement date of January 1, 2017 and January 1, 2016, respectively.

Changes in Net Pension Liability - SAWSRP
(\$\sigma\$ in thousands)

	2017 Increase (Decrease)			2016 Increase (Decrease)			
	Pension	Fiduciary	Net Pension	Pension	Fiduciary	Net Pension	
	Liability	Net Position	Liability	Liability	Net Position	Liability	
	(a)	(b)	(a) - (b)	(a)	(b)	(a) - (b)	
Balances at January 1,	\$ 200,206	\$ 165,886	\$ 34,320	\$ 184,435	\$ 160,759	\$ 23,676	
Changes for the year:							
Service Cost	5,724	-	5,724	5,004	-	5,004	
Interest	13,680	-	13,680	12,596	-	12,596	
Differences between expected							
and actual experience	712	-	712	555	-	555	
Changes in assumptions	5,532	-	5,532	(405)	-	(405)	
Changes in terms	-		-	4,339		4,339	
Contributions - employer	-	7,367	(7,367)	-	7,890	(7,890)	
Contributions - employee	-	2,533	(2,533)	-	2,357	(2,357)	
Net investment income	-	6,971	(6,971)	-	1,215	(1,215)	
Benefit payments	(7,283)	(7,283)	-	(6,318)	(6,318)	-	
Administrative expense	-	(195)	195	-	(17)	17	
Other charges	=	-	-	-	-	=	
Net Changes	18,365	9,393	8,972	15,771	5,127	10,644	

<sup>\*</sup>Based on measurement date of January 1, 2017 and January 1, 2016, respectively

Balances at December 31,\*

The following table presents the net pension liability associated with the defined benefit component of the SAWSRP calculated at December 31, 2017 using the discount rate of 6.50%, as well as what the net pension liability would be if it were calculated using a discount rate of one percentage point lower (5.50%) or one percentage point higher (7.50%) than the current rate.

\$ 218,571 \$ 175,279

\$ 43,292

\$ 200,206

\$ 165,886

\$ 34,320

		SAWSRP Net Pension Liability (\$\\$ in thousands)							
	1%	1% Decrease		Discount Rate	1%	Increase			
	5.50%		6.50%		7.50%				
December 31, 2017	\$	72,690	\$	43,292	\$	18,862			

The following table presents the net pension liability associated with the defined benefit component of the SAWSRP calculated at December 31, 2016 using the discount rate of 6.75%, as well as what the net pension liability would be if it were calculated using a discount rate of one percentage point lower (5.75%) or one percentage point higher (7.75%) than the current rate.

	SAWSRP Net Pension Liability (\$\\$ in thousands)						
	1% Decrease 5.75%		Current Discount Rate 6.75%		1% Increase 7.75%		
December 31, 2016	\$	61,359	\$	34,320	\$	11,845	

Defined Contribution Component: Eligible employees hired on or after June 1, 2014 participate in the defined contribution component of the SAWSRP. SAWS contributes 4% of participant's compensation into an individual retirement account. Participants are required to contribute 3% of their compensation into their individual retirement account. Contributions under the defined contribution feature of the plan are made to participants' individual retirement accounts on a bi-weekly basis based on the participants' compensation during the period. An eligible employee totally vests in SAWS contributions to the individual retirement account after one year of service and immediately vests in the employee's contributions to the plan. The employee directs the investments in their individual retirement account. SAWS has no liability for losses under the defined contribution component of the SAWSRP but does have the usual fiduciary responsibilities of a plan sponsor.

During the year ended December 31, 2017, SAWS made contributions to participants' individual retirement accounts totaling \$850,000, net of forfeitures of \$35,000 and employees contributed \$663,000. During the year ended December 31, 2016, SAWS made contributions to participants' individual retirement accounts totaling \$550,000 and employees contributed \$421,000, which included roll-over contributions of \$8,000.

#### District Special Project Retirement Income Plan

District Special Project Retirement Income Plan (DSPRP) is a single-employer defined benefit pension plan that covers all eligible employees. The plan was originally established by Bexar Metropolitan Water District (BexarMet) to provide pension benefits to its employees. In 2008, the BexarMet Board elected to freeze pension benefits and entry into the plan effective September 30, 2008. In 2012, BexarMet was dissolved and all its assets and liabilities were transferred to the San Antonio Water System District Special Project (DSP). The plan was renamed District Special Project Retirement Income Plan. In 2016, DSP was merged into SAWS and DSPRP is now governed by SAWS, which is authorized to establish and amend all plan provisions. SAWS has delegated to Standard Insurance Company the authority to manage plan assets and administer the payment of benefits under the plan.

The financial information for DSPRP is reported in the SAWS Fiduciary Funds financial statements. DSPRP does not issue stand-alone financial statements. A summary of the plan's financial statements for the years ended December 31, 2017 and 2016 is presented in the following tables.

#### District Special Project Retirement Income Plan Net Position Restricted for Pension Benefits (amounts in thousands)

	Decem	ber 31, 2017	December 31, 2010			
Assets						
Investments	\$	5,706	\$	5,410		
Total Assets		5,706		5,410		
Liabilities						
Net position restricted for pension benefits	\$	5,706	\$	5,410		

# District Special Project Retirement Income Plan Changes in Net Position Restricted for Pension Benefits (amounts in thousands) For the years ended

	Deceml	oer 31, 2017	Decemb	er 31, 2016
Additions				
Employer Contributions	\$	315	\$	280
Investment Income (Loss)		764		306
Total additions		1,079		586
Deductions				
Pension payments/distributions		776		324
Administrative Expenses		7_		8
		783		332
Increase in net position		296		254
Net position restricted for				
pension benefits - beginning		5,410		5,156
Net position restricted for				
pension benefits - ending	\$	5,706	\$	5,410

Prior to freezing entry into the plan, employees were eligible to enter on May 1st or November 1st following the completion of 12 months of employment and attaining age 21. Participating employees accrued benefits if they worked at least 1,000 hours per plan year. Eligible employees vested in this plan after the completion of five years of service. Employees are 100% vested in any benefits derived from employee contributions regardless of years of service. A terminating participant who has completed five years of service is entitled to receive a vested benefit starting on his/her normal retirement date.

The normal retirement benefit upon retirement is a percentage of average monthly earnings. Prior to March 1, 1996, the monthly benefit was 60% of average monthly earnings reduced proportionately for less than 15 years of service. Effective March 1, 1996, the monthly benefit is 40% of average monthly earnings reduced proportionately for less

than 20 years of service. Prior to March 1, 1996, average monthly earnings were based on the monthly earnings during the 5 consecutive and complete calendar years that produced the highest average. After March 1, 1996 average monthly earnings are determined by the 10 consecutive and complete calendar years after December 31, 1990 which produce the highest average. Upon retirement, retirees may choose from 3 different types of annuities or receive a single lump sum distribution.

Participants in DSPRP as of the last two actuarial valuation dates is summarized below:

	Janua	ıry 1,
	2017	2016
Active employees	108	115
Retirees and beneficiaries currently receiving benefits	12	12
Inactive members	29	25
Total	149	152

The plan's funding policy provides for actuarially determined periodic contributions so that sufficient assets will be available to pay benefits as they come due. The contribution requirements of plan are established and may be amended by the Board. The unit credit method was used to calculate the actuarial determined contribution for 2017 and 2016. Under this method, the actual or expected accrued benefit of each participant is allocated to the year in which it accrues. The normal cost is the present value of benefits expected to accrue in the current year.

The Net Pension Liability for DSPRP as of December 31, 2017 and 2016 was measured as of January 1, 2017 and 2016, respectively. The Total Pension Liability used to calculate the Net Pension Liability was determined by an actuarial valuation as of that date performed as of the measurement date.

The January 1, 2017 and 2016 valuations included the following actuarial assumptions:

	<u>January 1, 2017</u>	<u>January 1, 2016</u>
Annual inflation	2.75%	2.75%
Investment rate of return	6.50%	7.00%

For 2017, mortality rates are based on the SOA RP-2014 table projected on a fully generational basis using mortality improvement scale MP02016. For 2016, mortality rates are based on the 1994 GAR Table projected to 2002. Due

to the limited size of this plan and the frozen nature of benefits under the plan, an experience study has not been done.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Primarily as a result of a change in the target allocation of assets, the long-term expected rate of return used in the January 1, 2017 valuation was reduced to 6.50% from the long-term expected rate of return used in the January 1, 2016 valuation of 7.0%.

The target allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

	January	1, 2017	January 1, 2016				
		Long-term		Long-term			
		Expected Real		Expected Real			
Asset Class	Target Allocation	Rate of Return	Target Allocation	Rate of Return			
Domestic Equity	56.0%	6.00%	60.0%	6.25%			
International Equity	5.0%	6.00%	5.0%	6.25%			
Fixed Income	39.0%	1.00%	35.0%	1.50%			

The discount rate used to measure the total pension liability at December 31, 2017 was 6.5% and 7.0% at December 31, 2016. The projection of cash flows used to determine the discount rate assumed that contributions will be made equal to the actuarially determined contributions. Based on those assumptions, the defined benefit component's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on the defined benefit component's investments was applied to all periods of projected benefit payments to determine the total pension liability.

The following table summarizes the changes in the DSPRP Net Pension Liability for the year ended December 31, 2017 and 2016 based on the measurement date of January 1, 2017 and 2016, respectively.

Changes in Net Pension Liability - DSPRP (\$\sepsilon\$ in thousands)

2017 2016 Increase (Decrease) Increase (Decrease) Pension Pension Fiduciary Net Pension Fiduciary Net Pension Liability Net Position Liability Liability Net Position Liability (b) (a) - (b) (a) (a) - (b) 5,156 Balances at January 1, 6,686 \$ 1,530 6,359 5,097 \$ 1,262 Changes for the year: 71 71 Service Cost 124 124 418 418 446 Interest 446 Differences between expected and actual experience (381)(381)18 18 224 224 Changes in assumptions Contributions - employer 280 (280)308 (308)306 Net investment income (306)18 (18)Benefit payments (324)(324)(261)(261)Administrative expense (8)8 (6) 6 8 254 327 59 Net Changes (246)268 Balances at December 31,\* 6,694 5,410 1,284 6,686 5,156 1,530

The following table presents the DSPRP net pension liability calculated at December 31, 2017 using the discount rate of 6.5%, as well as what the net pension liability would be if it were calculated using a discount rate that is one percentage point lower (5.5%) or one percentage point higher (7.5%) than the current rate. The discount rate was changed in 2017 to 6.5% from 7% in 2016.

		DSPRP Net Pension Liability (\$ in thousands)									
	-,-	Decrease 5.50%		Discount Rate 5.50%	1% Increase 7.50%						
December 31, 2017	\$	1,568	\$	1,284	\$	1,134					

The following table shows the DSPRP net pension liability calculated at December 31, 2016 at the discount rate of 7% as well as what it would be if it were 1% lower (6%) or 1% higher (8%).

	DSPRP Net Pension Liability (\$\\$ in thousands)										
	1% Dec			Discount Rate 7.00%		Increase 8.00%					
December 31, 2016	\$	1,727	\$	1,530	\$	1,355					

<sup>\*</sup>Based on measurement date of January 1, 2017 and January 1, 2016 respectively

#### Other Pension Disclosures

For the years ended December 31, 2017 and December 31, 2016, SAWS recognized pension expense under the TMRS, SAWSRP and DSPRP plans as follows:

Pension Expense
(\$\secup\$ in thousands)
Year-ended December 31,

	2017	2016
TMRS	\$ 6,005	\$ 5,321
SAWSRP - defined benefit	9,201	10,012
SAWSRP - defined contribution	850	551
DSPRP	203	289
	\$ 16,259	\$ 16,173

Amounts payable to the pension plans by SAWS for contributions totaled \$200,000 at December 2017 and \$1,797,000 at December 31, 2016.

The following table summarizes the Deferred Outflows of Resources, Net Pension Liability and Deferred Inflows of Resources for each of the plans as reported in the Statement of Net Position for December 31, 2017 and 2016.

(\$ in thousands)		Г	ecen	nber 31, 201	17		December 31, 2016							
	Deferred		Deferred			D	eferred			Deferred				
	Ou	tflows of	Ne	et Pension	In	Inflows of		Outflows of		Net Pension		flows of		
Plan	Re	esources	]	Liability	R	Resources Resource		Resources		Resources		Liability	Re	esources
TMRS	\$	11,568	\$	27,480	\$	1,495	\$	14,011	\$	27,172	\$	2,095		
SAWSRP		21,008		43,292		494		13,456		34,320		698		
DSPRP		852		1,284		339		648		1,530		-		
Total - All Plans	\$	33,428	\$	72,056	\$	2,328	\$	28,115	\$	63,022	\$	2,793		

At December 31, 2017, Deferred Outflows of Resources and Deferred Inflows of Resources associated with SAWS pension plans related to the following sources:

		SAWSRP			TMRS			DSPRP				All Plans				
	D	Deferred Deferred		D	eferred	Deferred		Deferred		Deferred		D	eferred	Deferred		
	Ou	tflows of	Inf	Inflows of Out		tflows of	Inflows of		Outflows of		Inflo	ws of	Outflows of		Inflows of	
(\$ in thousands)	Re	esources	Res	sources	Resources		Re	Resources		Resources		urces	Resources		Resources	
Contributions made after the measurement date	\$	7,982	\$	-	\$	3,852	\$	-	\$	315	\$	-	\$	12,149	\$	-
Differences between expected and actual																
experience		890		248		23		1,495		121		339		1,034		2,082
Effects of changes in assumption		5,407		246		257		-		199		-		5,863		246
Net Difference between projected and actual																
earnings on pension plan investments		6,729		-		7,436		-		217				14,382		-
	\$	21,008	\$	494	\$	11,568	\$	1,495	\$	852	\$	339	\$	33,428	\$	2,328

#### NOTES TO FINANCIAL STATEMENTS

At December 31, 2016, Deferred Outflows of Resources and Deferred Inflows of Resources associated with SAWS pension plans related to the following sources:

	SAWSRP			TMRS			DSPRP					All I	Plans	lans		
	D	eferred	d Deferred		D	Deferred Deferred		eferred	Deferred		Deferred		Deferred		De	eferred
	Ou	tflows of	Inf	lows of	Out	tflows of	In	flows of	Outflows of		Inflo	ows of	Outflows of		Inf	lows of
(\$ in thousands)	Re	sources	Res	sources	Resources Resources		Resources		Reso	ources	Resources		Re	Resources		
Contributions made after the measurement date	\$	7,367	\$	-	\$	3,609	\$	-	\$	280	\$	-	\$	11,256	\$	-
Differences between expected and actual experience		446		373		-		2,095		138				584		2,468
Effects of changes in assumption		1,660		325		345		-				-		2,005		325
Net Difference between projected and actual																
earnings on pension plan investments		3,983 -			10,057				230			14,270			_	
	\$	13,456	\$	698	\$	14,011	\$	2,095	\$	648	\$	-	\$	28,115	\$	2,793

Contributions made after the measurement date of \$12,149,000 will be recognized as a reduction of the Net Pension Liability for the year ending December 31, 2018. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year Ended	(\$ in thousands)												
December 31,	SA	NWSRP		TMRS	DS	SPRP	Combined						
2018	\$	(3,400)	\$	(2,105)	\$	(64)	\$	(5,569)					
2019		(3,400)		(2,105)		(64)		(5,569)					
2020		(4,181)		(2,007)		(79)		(6,267)					
2021		(1,551)		(4)		(11)		(1,566)					
2022						1		1					
Thereafter		-		-		19		19					

The following table summarizes the components of the net pension liability at December 31, 2017 and 2016 for the pension plans included in SAWS Fiduciary Fund Statements in accordance with *GASB 67, Financial Reporting for Pension Plans – An Amendment of GASB Statement 25.* 

	December 31, 2017 (a)			December 31, 2016				
(\$ in thousands)	S	AWSRP	D	SPRP	S.	AWSRP	D	SPRP
Total pension liability	\$	229,416	\$	6,566	\$	218,571	\$	6,694
Plan fiduciary net position		208,132		5,706		175,279		5,410
Net pension liability	\$	21,284	\$	860	\$	43,292	\$	1,284
Plan fiduciary net position as a		00.70/		07.007		00.20/		00.00/
percentage of the total pension liability		90.7%		86.9%		80.2%		80.8%
(a) Actuarial valuation performed at January 1, 2017 was rolled forward to December 31, 2017								

#### **Deferred Compensation Plans**

SAWS is the plan sponsor for two deferred compensation plans: the San Antonio Water System Deferred Compensation Plan and the District Special Project Employee's 457 Plan. Both plans were created in accordance with Internal Revenue Code Section 457 and allow employees to defer a portion of their salary until future years. The compensation deferred under these plans is not available to employees until termination, retirement, death, or qualifying unforeseeable emergency. Employee participation is voluntary and SAWS makes no contributions to these plans. The District Special Project Employee's 457 Plan was closed to new contributions effective October 1, 2013. SAWS has no liability for losses under these plans but does have the usual fiduciary responsibilities of a plan sponsor.

#### NOTE K - OTHER POST EMPLOYMENT BENEFITS (OPEB)

In addition to providing pension benefits described in Note J, SAWS provides certain health care and life insurance benefits for eligible retirees, their spouses, and their dependents through San Antonio Water System Retiree Health Trust (SAWS OPEB Plan), a single-employer defined benefit plan administered by SAWS. The authority to establish and amend the SAWS OPEB Plan provisions is vested in the Board.

The financial information for SAWS OPEB Plan is reported in the fiduciary funds statements. SAWS OPEB Plan does not issue stand-alone financial statements. A summary of the plan's financial statements for the years ended December 31, 2017 and 2016 is presented in the following tables.

San Antonio Water System Retiree Health Plan
Net Position Restricted for Post Employment Benefits
(amounts in thousands)

	December 31,			
	2017		2016	
Assets		_	-	_
Cash and cash equivalents	\$	1,733	\$	891
Investments		56,778		43,137
Total assets		58,511		44,028
Liabilities		-		-
Net position restricted for post employment benefits	\$	58,511	\$	44,028

### Changes in Net Position Restricted for Post Employment Benefits For the year ended December 31,

(amounts in thousands)

	2017	2016	
Additions			
Employer contributions	\$ 13,709	\$ 15,385	
Investment income/(loss)	7,127	2,779	
Total additions	20,836	18,164	
Deductions			
Benefit payments	6,209	7,885	
Administrative expenses	144	109	
Total deductions	6,353	7,994	
Increase in net position	14,483	10,170	
Net position restricted for post			
employment benefits - beginning	44,028	33,858	
Net position restricted for post			
employment benefits - ending	\$ 58,511	\$ 44,028	

In conjunction with the adoption of GASB Statement No. 74 in 2017, SAWS restated the plan's financial statements for December 31, 2016 to include current benefit payments taking place outside the trust. These payments were funded with SAWS and participant contributions. This restatement had no impact on the Net Position restricted for post-employment benefits at December 31, 2016.

By state law, any employee that retires under a SAWS retirement plan is eligible, at the time of retirement, to obtain health insurance benefits similar to those offered to active SAWS employees. Retirees may also purchase coverage for their spouse and qualifying dependents at group rates partially subsidized by SAWS. Any plan participant eligible for Medicare is required to enroll in a Medicare Advantage Plan. No supplemental health benefits are provided to those participants enrolled in Medicare Advantage Plans. Employees hired after December 31, 2013 will not be eligible for any subsidized medical benefits upon retirement from SAWS.

Participants in the SAWS OPEB Plan as of January 1, 2017 and 2016 consisted of the following:

	January 1, 2017	January 1, 2016
Active employees	1,501	1,591
Retired employees	833	793
Total	2,334	2,384

The contribution requirements of plan participants are established and may be amended by the Board. Contributions made by retirees for health insurance benefits vary based on retirement date, years of service and the health care options selected. Plan participants made contributions toward plan benefits totaling \$1,103,000 in 2017 and \$818,000 in 2016.

SAWS contributions to the plan are also established by the Board. Prior to 2012, SAWS only funded the shortfall between annual benefit payments and retiree contributions ("current benefit payments"). In March 2012, SAWS established a trust for the purpose of prefunding future benefit payment for eligible retirees and their dependents. In addition to making contributions to the trust, SAWS has continued to fund current benefit payments outside of the trust. SAWS intends to fund current benefit payments as well as make annual contributions to the trust in accordance with a plan that, at a minimum, fully funds the actuarially determined annual required contributions for these benefits thereby improving the funded status of the SAWS OPEB Plan over a period of time.

Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employer and the plan members) and include the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between SAWS and plan members to that point. The actuarial methods and assumptions used include techniques that are designed to reduce the effects of short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations.

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and the healthcare cost trend. Amounts determined regarding the funded status of the plan and the annual required contributions of the employer are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future.

The following table summarizes the actuarial methods and assumptions used in the most recent actuarial valuations for SAWS OPEB Plan.

#### **Actuarial Methods and Assumptions**

Actuarial Valuation Date	January 1, 2017	January 1, 2016
Actuarial Value of Assets	Market Value	Market Value
Actuarial Cost Method	Entry Age Normal	Projected Unit Credit
Amortization Method	Level Dollar	Level Dollar
Remaining Amortization Period	17 Years - Closed	18 Years - Closed
Actuarial Assumptions:		
Investment Rate of Return	6.5%	6.5%
Inflation Rate	2.5%	2.5%
Healthcare Cost Trend:		
Initial	5.50%	7.00%
Ultimate	4.14%	3.84%

Mortality rates were based on PR-2014 Healthy Employee Mortality Tables for males and females for pre-retirement employees and PR-2014 Healthy Annuitant Mortality Table. Historical and assumed mortality improvement (MI) was based on the Principal Mortality Improvement (PMI) Scale used by SAWSRP.

SAWS' annual OPEB cost is calculated based on the annual required contribution of the employer (ARC), an amount actuarially determined in accordance with 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 amortize any unfunded actuarial liabilities over a period of time. The following table shows the components of SAWS' annual OPEB cost, the amount actually contributed to the plan and changes in the net OPEB obligation for the years ended December 31, 2017 and 2016:

	Y	ear Ended I	December 31,			
(amounts in thousands)		2017		2016		
Annual Required Contribution (ARC)	\$	12,412	\$	11,416		
Interest on net OPEB obligation		4,780		5,223		
Adjustment to ARC		(7,273)		(7,704)		
Annual OPEB costs		9,919		8,935		
Employer contributions made (a)		(14,525)		(15,746)		
Increase/(Decrease) in net OPEB obligation		(4,606)		(6,811)		
Net OPEB obligation at beginning of year		73,539		80,350		
Net OPEB obligation at end of year	\$	68,933	\$	73,539		

(a) Amounts reported as employer contributions for life insurance benefits represent actual death benefit payments made during the period. Employer contributions reported in the SAWS OPEB Plan's summary financial statements on page 70 reflect the premiums paid for life insurance benefits.

SAWS' annual OPEB cost and the percentage cost contributed to the plan for December 31, 2017 was as follows:

	Annı	ıal OPEB	N	et OPEB	
Year Ended Cost (amounts in Annual OPE				Obliga	tion (amounts
December 31,	31, thousands) Co		Cost Contributed	in	thousands)
2017	\$	9,919	146.4%	\$	68,933

The funded status of SAWS OPEB Plan as of the most recent actuarial valuation performed as of January 1, 2017 is as follows:

		Actuarial				
	Actuarial	Accrued	Unfunded		Covered	UAAL as a
	Value of Assets	Liability (AAL)	AAL (UAAL)	Funded	Payroll	Percent of
Actuarial	(in thousands)	(in thousands)	(in thousands)	Ratio	(in thousands)	Covered Payroll
Valuation Date	(a)	(b)	(b-a)	(a/b)	(c)	((b-a)/c)
January 1, 2017	\$ 44,028	\$ 144,960	\$ 100,932	30%	\$ 79,417	127%

The schedule of funding progress, presented as required supplementary information following the notes to the financial statements, presents multiyear trend information about whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liability for benefits.

The following disclosures for the SAWS OPEB Plan are provided in accordance with GASB Statement No. 74 since the plan is a single-employer OPEB plan and included in SAWS financial fiduciary fund statements.

The components of the net OPEB liability for the SAWS OPEB Plan at December 31, 2017 and 2016 were as follows:

( in thousands)	Decem	ıber 31,				
(\$ in thousands)	 2017		2016			
Total OPEB liability	\$ 150,369	\$	144,960			
Plan fiduciary net position	58,511		44,028			
Net OPEB liability	\$ 91,858	\$	100,932			
Plan fiduciary net position as a percentage						
of the total OPEB liability	38.9%		30.4%			

The following table presents the change in the SAWS OPEB Plan net OPEB liability calculated at December 31, 2017 assuming healthcare cost trends decrease or increase by one percentage point from the assumptions used in Total OPEB liability.

			(\$ in	thousands)			
_	1%	1% Decrease		t Assumptions	1% Increase		
Net OPEB liability	\$	76,670	\$	91,858	\$	110,318	

The target allocation and best estimates of arithmetic real rates of return for each major asset class including inflation are summarized in the following table:

	Janua	ary 1, 2017
Asset Class	Target Allocation	Long-term Expected Real Rate of Return
Domestic Equity - Large Cap	36.0%	7.72%
Domestic Equity - Small Cap	9.0%	8.55%
Foreign Equity - Large Core	13.5%	7.47%
Foreign Equity - Emerging Markets	1.5%	8.96%
Fixed Income - Core Bond	38.0%	3.12%
Cash	2.0%	2.46%
Total	100.0%	

The discount rate used to measure the Total OPEB Liability was 6.5%. The projection of cash flows used to determine the discount rate assumed that contributions will be made equal to the actuarially determined contributions. Based on those assumptions, the defined benefit component's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on the defined benefit component's investments was applied to all periods of projected benefit payments to determine the Total OPEB Liability.

For the year ended December 31, 2017, the annual money-weighted rate of return on SAWS OPEB Plan investments, net of investment expense was 14.7%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amount actually invested.

The following table presents the SAWS OPEB Plan net OPEB liability calculated at December 31, 2017 using the discount rate of 6.5%, as well as what the net pension liability would be if it were calculated using a discount rate that is one percentage point lower (5.5%) or one percentage point higher (7.5%) than the current rate.

			(\$ in	thousands)		
	1%	Decrease	Current	Discount Rate	1%	Increase
		5.5%		6.5%		7.5%
Net OPEB liability	\$ 110,693		\$	91,858	\$	76,378

Texas Municipal Retirement System - San Antonio Water System
Schedule of Changes in Net Pension Liability and Related Ratios (Unaudited)
(\$\\$ in thousands)

	 2016	 2015	2014
Total pension liability			
Service Cost	\$ 4,979	\$ 4,810	\$ 4,379
Interest	12,623	12,480	11,960
Changes of benefit terms		-	-
Differences between expected and actual experience	29	(1,311)	(1,717)
Changes of assumptions		433	-
Benefit payments	(8,186)	(7,337)	(7,461)
Net change in pension liability	9,445	9,075	7,161
Total pension liability at beginning of year	188,624	179,549	172,388
Total pension liability at end of year (a)	\$ 198,069	\$ 188,624	\$ 179,549
Plan fiduciary net position			
Contributions - Employer	\$ 3,609	\$ 3,953	\$ 3,721
Contributions - Employee	2,935	2,892	2,722
Net investment income	10,909	239	8,818
Benefit payments	(8,186)	(7,337)	(7,461)
Administrative expenses	(123)	(146)	(92)
Other	 (7)	 (7)	(8)
Net change in plan fiduciary net position	9,137	(406)	7,700
Plan fiduciary net position at beginning of year	161,452	161,858	154,158
Plan fiduciary net position at end of year (b)	\$ 170,589	\$ 161,452	\$ 161,858
Net pension liability (a) - (b)	\$ 27,480	\$ 27,172	\$ 17,691
Plan fiduciary net position as a percentage of the total pension liability	86.1%	85.6%	90.1%
Covered payroll	\$ 97,818	\$ 96,389	\$ 90,721
Net pension liability as a percentage of total Covered payroll	28.1%	28.2%	19.5%

#### Notes to Schedule:

Changes of assumptions: In 2015, amounts reported as changes of assumptions resulted primarily from a reduction in the assumed long-term rate of return from 7% to 6.75%. In 2015, mortality rates were updated to reflect updated historical data.

Other: GASB 68 requires 10 years of data to be provided in the Schedule of Contributions. As SAWS adopted GASB 68 in 2014, only 3 years of data is available. A full 10 years of data will be presented by 2023.

# Texas Municipal Retirement System - San Antonio Water System Schedule of Contributions (Unaudited)

(\$ in thousands)

	2017		 2016	2015		 2014
Actuarially determined contribution	\$	3,852	\$ 3,609	\$	3,672	\$ 3,721
Contributions in relation to the actuarially determined contribution		3,852	3,609		3,953	3,721
Contribution deficiency/(excess)	\$	-	\$ -	\$	(281)	\$ 
Covered payroll	\$	104,960	\$ 97,818	\$	96,389	\$ 90,721
Contributions as a percentage of Covered payroll		3.67%	3.69%		4.10%	4.10%

#### Notes to Schedule:

Valuation date: Actuarially determined contributions are calculated as of December 31st and become effective 12 months later on January 1st.

Methods and assumptions used to determine contributions:

Actuarial cost method Entry Age Normal

Amortization method Level percentage of payroll, closed

Remaining amortization period In 2015 the remaining amortization period was adjusted to 30 years from

23 years in 2014

Asset valuation method 10 year smoothed market; 15% soft corridor

Inflation In 2015 the inflation rate was changed to 2.5% from 3.0% in 2014.

Salary increases The assumption was 3.5% to 10.5% in 2015, 2016 and 2017 and 3.5% to

12.0% in 2014.

Investment rate of return In 2015 the investment rate of return was lowered from 7.0% to 6.75%.

Retirement age Experience-based table of rates that are specific to SAWS plan of

benefits. Last updated for the 2015 valuation puruant to an experience

study of the period 2010 - 2014

Mortality RP2000 Combined Mortality Table with Blue Collar Adjustment with

male rates multiplied by 109% and female rates multiplied by 103% and

projected on a fully generational basis with scale BB

Other: GASB 68 requires 10 years of data to be provided in the Schedule of Contributions. As SAWS adopted GASB 68 in 2014, only 4 years of data is available. A full 10 years of data will be presented by 2023.

San Antonio Water System Retirement Plan - Defined Benefit Component Schedule of Changes in Net Pension Liability and Related Ratios (Unaudited) (\$\sin \text{thousands})

(\$ 27	i inousanas)	vousanas)					
		2017	2016		2015		2014
Total pension liability							
Service Cost	\$	5,859	\$ 5,724	\$	5,004	\$	5,204
Interest		14,354	13,680		12,596		11,709
Changes of benefit terms			-		4,339		-
Differences between expected and actual experience		(1,394)	712		555		(622)
Changes of assumptions			5,532		(405)		2,771
Benefit payments		(7,974)	(7,283	)	(6,318)		(5,796)
Net change in pension liability		10,845	18,365		15,771		13,266
Total pension liability at beginning of year		218,571	200,206		184,435		171,169
Total pension liability at end of year (a)	\$	229,416	\$ 218,571	\$	200,206	\$	184,435
Plan fiduciary net position		= 000			=		40.220
Contributions - Employer	\$	7,982	\$ 7,367		,	\$	10,339
Contributions - Employee		2,484	2,533		2,357		-
Net investment income		30,741	6,971		1,215		15,695
Benefit payments		(7,974)	(7,283	_	(6,318)		(5,796)
Administrative expenses		(380)	(195		(17)		
Net change in plan fiduciary net position		32,853	9,393		5,127		20,238
Plan fiduciary net position at beginning of year		175,279	165,886		160,759		140,521
Plan fiduciary net position at end of year (b)	\$	208,132	\$ 175,279	\$	165,886	\$	160,759
		21.221	* 42.202		2122		22.47.6
Net pension liability (a) - (b)	\$	21,284	\$ 43,292	\$	34,320	\$	23,676
Plan fiduciary net position as a percentage of the							
total pension liability		90.7%	80.2%	o	82.9%		87.2%
Covered payroll	\$	79,417	\$ 83,493	\$	85,299	\$	83,812
Net pension liability as a percentage of total							
covered payroll		26.8%	51.9%	o	40.2%		28.2%

#### Notes to Schedule:

Total pension liability at December 31, 2017 is based on a rollforward of the January 1, 2017 actuarial valuation

Benefit Changes: Effective June 1, 2014, the defined benefit plan was frozen to new entrants. In 2015, the normal form of distribution changed and a mandatory employee contribution of 3% of payroll was instituted.

Changes of assumptions: In 2016, the long term rate of return was reduced to 6.5%. In 2014, amounts reported as changes of assumptions resulted from a reduction in the assumed long-term rate of return from 7% to 6.75%. In 2015, mortality rates were updated to reflect historical data.

Other. GASB 68 requires 10 years of data to be provided in the Schedule of Contributions. As SAWS adopted GASB 68 in 2014, only 4 years of data is available. A full 10 years of data will be presented by 2023.

# San Antonio Water System Retirement Plan - Defined Benefit Component Schedule of Contributions (Unaudited)

(\$ in thousands)

	2017		2016		2015		 2014
Actuarially determined contribution	\$	7,982	\$	7,367	\$	7,890	\$ 10,339
Contributions in relation to the actuarially							
determined contribution		7,982		7,367		7,890	 10,339
Contribution deficiency/(excess)	\$	-	\$	-	\$	-	\$ -
Covered payroll	\$	79,417	\$	83,493	\$	85,299	\$ 83,812
Contributions as a percentage of covered payroll		10.1%		8.8%		9.2%	12.3%

#### Notes to Schedule:

Valuation date: Actuarially determined contributions are determined as of January 1 of the year in which the contributions are made.

Methods and assumptions used to determine contributions:

Actuarial cost method Entry Age Normal

Remaining amortization period Unfunded Liability at December 31, 2013 of \$40,551,000 is being

amortized over a 15 fixed year period. The annual impact of experience gains/losses, plan amendments and changes in plan assumptions are

amortized over 10 years.

Asset valuation method 4 year smoothed market

Inflation In 2017, the rate was changed to 2%, previously it was 2.25%

Salary increases Scale based on 2011-2013 SAWS experience

Retirement ages ure adjusted to reflect actual experience

from 2011-2013. Previously, the retirement age was based on experience

from 2011-2012.

Investment rate of return In 2017, the rate was changed friom 6.75% to 6.5%, net of pension

expense, including inflation. In 2014, the rate was change from 7.0% to

6.75%

Mortality Table In 2017, the mortality table was changed to use adjusted RP-2014 mortality

with scale MP-2016 based on data published by the SOA in 2016. In 2016, the mortality table was changed to use adjusted RP-2014 mortality with scale MP-2016 based on data published by the SOA in 2015. Previously

the IRS Prescribed Generational Mortality table was used.

Other: GASB 68 requires 10 years of data to be provided in the Schedule of Contributions. As SAWS adopted GASB 68 in 2014, only 4 years of data is available. A full 10 years of data will be presented by 2023.

# San Antonio Water System Retirement Plan - Defined Benefit Component Schedule of Investment Returns (Unaudited)

	2017	2016	2015	2014
Annual money-weighted rate of return, net of				
investment expense	17.37%	4.21%	0.76%	11.34%

# District Special Project Retirement Income Plan Schedule of Changes in Net Pension Liability and Related Ratios (Unaudited) (\$\mathbb{s}\$ in thousands)

	2017		2016		16 2015			2014
Total Pension Liability								
Service cost	\$	108	\$	71	\$	124	\$	123
Interest		424		418		446		424
Benefit payments		(776)		(324)		(261)		(230)
Changes in assumptions		15		224				
Difference between expected and actual experience		101		(381)		18		153
Net change in Total Pension Liability		(128)		8		327		470
Total Pension Liability - beginning		6,694		6,686		6,359		5,889
Total Pension Liability - ending (a)	\$	6,566	\$	6,694	\$	6,686	\$	6,359
Fiduciary Net Position								
Employer contributions	\$	315	\$	280	\$	308	\$	414
Net investment income		764		306		18		394
Benefit payments		(776)		(324)		(261)		(230)
Administrative expenses		(7)	(8)		(8) (6)		(11)	
Net change in Fiduciary Net Position		296		254		59		567
Fiduciary Net Position - beginning		5,410		5,156		5,097		4,530
Fiduciary Net Position - ending (b)	\$	5,706	\$	5,410	\$	5,156	\$	5,097
Net Pension Liability (a) - (b)	\$	860	\$	1,284	\$	1,530	\$	1,262
Fiduciary Net Position as a percentage of the Total Pension Liability		86.9%		80.8%		77.1%		80.2%
Covered payroll ( frozen plan)		n/a		n/a		n/a		n/a
Net Pension Liability as a percentage of covered payroll		n/a		n/a		n/a		n/a

#### Notes to schedule:

The plan was frozen in 2008. Therefore, current & future wages have no impact on Net Pension Liability.

Total pension liability at December 31, 2017 is based on a rollforward of the January 1, 2017 actuarial valuaiton.

Changes in assumptions: The interest rate of return was modified from 7% to 6.5% in 2017.

Other: GASB 68 requires 10 years of data to be provided in the Schedule of Contributions. As SAWS adopted GASB 68 in 2014, only 4 years of data is available. A full 10 years of data will be presented by 2023.

## District Special Project Retirement Income Plan Schedule of Contributions (Unaudited)

(\$ in thousands)

	2017		2016		2015		 2014
Actuarially determined contribution  Contributions in relation to the actuarially	\$	315	\$	279	\$	274	\$ 307
determined contribution		315		280		308	414
Contribution deficiency/(excess)	\$		\$	(1)	\$	(34)	\$ (107)
Covered payroll (frozen plan)		n/a		n/a		n/a	n/a
Contributions as a percentage of covered payroll		n/a		n/a		n/a	n/a

#### Notes to Schedule:

Valuation date:

Actuarially determined contributions are determined as of January 1 of the year in which the contributions are made.

#### Methods and assumptions used to determine contributions:

recorded with assumptions used to determine	WWW. DOWN ON THE CONTROL OF THE CONT
Actuarial cost method	Unit Credit
Amortization method	Rolling level amortization over a declining period
Remaining amortization period	10 years(2017), 11 years(2016), 12 years(2015), 13 years(2014)
Asset valuation method	Fair value with smoothing
Inflation	In 2015, the inflation rate was changed to 2.75%. Previously, 2% was used.
Salary increase	Earned benefits frozen in 2008
Investment rate of return	In 2017, the rate was changed to 6.5%. Previously, 7.0%, net of pension plan investment expense, including inflation was used.
Retirement age	Normal retirement age - the earlier of (a) age 65 or (b) the "rule of 90" where the participant's age and years of service added together equal 90 or greater
M ortality	In 2017, the table was changed to the RP-2014 table using a mortality improvement scale MP-2016. Previously,1994 GAR projected to 2002 was used.

Other: GASB 68 requires 10 years of data to be provided in the Schedule of Contributions. As SAWS adopted GASB 68 in 2014, only 4 years of data is available. A full 10 years of data will be presented by 2023.

District Special Project Retirement Income Plan Schedule of Investment Returns (Unaudited)

	2017	2016	2015	2014
Annual money-weighted rate of return, net of				
investment expense	14.76%	5.98%	0.29%	8.55%

# San Antonio Water System Other Post Employment Benefit Plan Schedule of Changes in Net OPEB Liability and Related Ratios (Unaudited) (\$\mathcal{S}\$ in thousands)

	<u>,</u>	2017
Total OPEB liability		
Service Cost	S	2,428
Interest		9,190
Benefit payments		(6,209)
Net change in OPEB liability		5,409
Total OPEB liability at beginning of year	100.00	144,960
Total OPEB liability at end of year (a)	\$	150,369
Plan fiduciary net position		
Contributions - Employer	S	13,709
Net investment income		7,127
Benefit payments		(6,209)
Administrative expenses		(144)
Net change in plan fiduciary net position		14,483
Plan fiduciary net position at beginning of year		44,028
Plan fiduciary net position at end of year (b)	\$	58,511
Net OPEB liability (a) - (b)	\$	91,858
Plan fiduciary net position as a percentage of the		
total OPEB liability		38.9%
Covered payroll	\$	79,417
Net OPEB liability as a percentage of total		
covered payroll		115.7%

# Notes to Schedule:

Total OPEB liability at December 31, 2017 is based on a rollforward of the January 1, 2017 actuarial valuation.

GASB 74 requires 10 years of data to be provided in the Schedule of Contributions. As SAWS adopted GASB 74 in 2017, only one year of data is available. A full 10 years of data will be presented by 2026.

# San Antonio Water System Other Post Employment Benefit Plan Schedule of Contributions (Unaudited)

(\$ in thousands)

	 2017
Actuarially determined contribution	\$ 12,412
Contributions in relation to the actuarially	
determined contribution	13,709
Contribution deficiency/(excess)	\$ (1,297)
Covered payroll	\$ 79,417
Contributions as a percentage of	
covered payroll	17.3%

#### Notes to Schedule:

Valuation date: Actuarially determined contributions are determined as of January 1 of the year in which the contributions are made.

Methods and assumptions used to determine contributions:

Actuarial cost method Entry Age Normal

Salary increases Scale based on 2011-2013 SAWS experience

Mortality Assumptions: Adjusted RP-2014 mortality with scale MP-2016 based

on data published by the SOA in 2016.

Pre-retirement PR-2014 Healthy Employee Mortality Tables
Postemployment PR-2014 Healthy Employee Annuitant Tables

Inflation 2.50%

Healthcare cost trend rates:

Current Year 5.50%
Ultimate trend rate 4.14%
Ultimate year 2074
Investment rate of return 6.50%
Remaining amortization period 17 years

GASB 74 requires 10 years of data to be provided in the Schedule of Contributions. As SAWS adopted GASB 74 in 2017, only one year of data is available. A full 10 years of data will be presented by 2026.

San Antonio Water System Other Post Employment Benefit Plan Schedule of Investment Returns (Unaudited)

	2017
Annual money-weighted rate of return, net of	
investment expense	14.69%

# Other Post Employment Benefit Plan Schedule of Funding Progress (Unaudited)

			A	Actuarial						
	A	Actuarial	A	Accrued	$\mathbf{U}$	nfunded		C	overed	UAAL as a
	Valu	ie of Assets	Lial	oility (AAL)	AA	L (UAAL)	Funded	]	Payroll	Percent of
Actuarial	(in	thousands)	(in	thousands)	(in	thousands)	Ratio	(in t	housands)	Covered Payroll
Valuation Date		(a)		(b)		(b-a)	(a/b)		(c)	((b-a)/c)
January 1, 2017	\$	44,028	\$	144,960	\$	100,932	30%	\$	79,417	127%
January 1, 2016	\$	33,858	\$	125,244	\$	91,386	27%	\$	83,493	109%
January 1, 2014	\$	19,259	\$	139,574	\$	120,315	14%	\$	88,895	135%

# Other Post Employment Benefit Plan Schedule of Employer Contributions (Unaudited)

	Net OPEB					
Year Ended Contribution		Percentage	Obligation			
December 31,	(in ti	housands)	Contributed	(in ti	housands)	
2017	\$	12,412	117%	\$	68,933	
2016	\$	11,416	138%	\$	73,539	
2015	\$	12,978	106%	\$	80,350	



# APPENDIX C

SELECTED PROVISIONS OF THE ORDINANCE



#### APPENDIX C

# SELECTED PROVISIONS OF THE ORDINANCE

The following constitutes a summary of certain selected provisions of the Ordinance. This summary should be qualified by reference to other provisions of the Ordinance referred to elsewhere in this Official Statement, and all references and summaries pertaining to the Ordinance in this Official Statement are, separately and in whole, qualified by reference to the exact terms of the Ordinance, a copy of which may be obtained from the City.

SECTION 9: <u>Definitions</u>. For all purposes of this Ordinance (as defined below), except as otherwise expressly provided or unless the context otherwise requires: (i) the terms defined in this Section have the meanings assigned to them in this Section, and certain terms used in Sections 37 and 52 of this Ordinance have the meanings assigned to them in such Sections, and all such terms include the plural as well as the singular; (ii) all references in this Ordinance to designated "Sections" and other subdivisions are to the designated Sections and other subdivisions of this Ordinance as originally adopted; and (iii) the words "herein", "hereof", and "hereunder" and other words of similar import refer to this Ordinance as a whole and not to any particular Section or other subdivision.

- A. The term *Additional Junior Lien Obligations* shall mean (i) bonds, notes, warrants, certificates of obligation or other obligations hereafter issued by the City payable wholly or in part from and equally and ratably secured, together with the currently outstanding Junior Lien Obligations, by a junior and inferior lien and pledge of the Net Revenues of the System, that is junior and inferior to the lien on and pledge thereof securing the payment of the currently outstanding Senior Lien Obligations and any Additional Senior Lien Obligations hereafter issued by the City, all as further provided in Section 21 of this Ordinance, and (ii) any obligations issued to refund the foregoing that are payable from and secured by a junior lien on and pledge of the Net Revenues of the System as determined by the City Council in accordance with any applicable law.
- B. The term *Additional Senior Lien Obligations* shall mean (i) any bonds, notes, warrants, certificates of obligation, or other evidences of indebtedness which the City reserves the right to issue or enter into, as the case may be, in the future under the terms and conditions provided in Section 21 of this Ordinance and which are equally and ratably secured solely by a prior and first lien on and pledge of the Pledged Revenues of the System and (ii) any obligations hereafter issued to refund any of the foregoing if issued in a manner so as to be payable from and secured by a prior and first lien on and pledge of the Pledged Revenues as determined by the City Council in accordance with applicable law.
- C. The term *Additional Subordinate Lien Obligations* means (i) any bonds, notes, warrants, certificates of obligation, or other Debt hereafter issued by the City that are payable, in whole or in part, from and equally and ratably secured by a lien on and pledge of the Net Revenues, such pledge being subordinate and inferior to the lien on and pledge of the Net Revenues that are or will be pledged to the payment of the currently outstanding Senior Lien Obligations and Junior Lien Obligations and any Additional Senior Lien Obligations or Additional Junior Lien Obligations hereafter issued by the City, but prior and superior to the lien

on and pledge of the Net Revenues that are or will be pledged to the payment of any Inferior Lien Obligations hereafter issued by the City, and (ii) obligations hereafter issued to refund any of the foregoing if issued in a manner that provides that the refunding bonds are payable from and equally and ratably secured, in whole or in part, by a subordinate and inferior lien on and pledge of the Net Revenues as determined by the City Council in accordance with applicable law.

- D. The term *Authorized Officials* shall mean any of the Mayor, the City Clerk, the City Manager, the City's Chief Financial Officer, the President/Chief Executive Officer of the Board and/or the Senior Vice President/Chief Financial Officer of the Board.
- E. The term *Average Annual Debt Service Requirements* shall mean that average amount which, at the time of computation, will be required to pay the Debt Service Requirements on the Bonds when due (either at Stated Maturity or mandatory redemption) and derived by dividing the total of such Debt Service Requirements by the number of Fiscal Years then remaining before Stated Maturity of such Bonds. For purposes of this definition, a fractional period of a Fiscal Year shall be treated as an entire Fiscal Year. Capitalized interest payments provided from bond proceeds shall be excluded in making the aforementioned computation.
- F. The term *Board* shall mean the Board of Trustees of the System created and described in Section 41 of this Ordinance.
- G. The term *Bond Fund* shall mean the special Fund or account created and established by the provisions of Section 13 of this Ordinance.
- H. The term *Bonds* shall mean the \$208,825,000 "CITY OF SAN ANTONIO, TEXAS WATER SYSTEM JUNIOR LIEN REVENUE AND REFUNDING BONDS, SERIES 2018A (NO RESERVE FUND)", dated May 1, 2018, authorized by this Ordinance.
- I. The term *City* shall mean the City of San Antonio, Texas, located in the State of Texas and, where appropriate, the City Council of the City.
- J. The term *Closing Date* shall mean the date of physical delivery of the Initial Bond for the payment in full by the Purchaser.
- K. The term *Concurrently Adopted Ordinance* shall mean the ordinance of the City Council adopted on the date of and concurrently with this Ordinance pursuant to which the Series 2018 Variable Rate Bonds, from time to time and in one or more series, are authorized to be issued.
- L. The term *CPS Contract* shall mean the Wastewater Contract executed on September 15, 1990 between the Alamo Conservation and Reuse District and the City Public Service Board of San Antonio. Pursuant to Ordinance No. 74983 the City Council abolished the Alamo Conservation and Reuse District and assumed all of such entity's assets and obligations by creating the Department of Water Reuse as a new City department and a part of the System pursuant to the provisions of the City's Home Rule Charter.
- M. The term *Credit Agreement* shall mean a loan agreement, revolving credit agreement, agreement establishing a line of credit, letter of credit, reimbursement agreement,

insurance contract, commitments to purchase Debt, purchase or sale agreements, interest rate swap agreements, or commitments or other contracts or agreements authorized, recognized, and approved by the City as a Credit Agreement in connection with the authorization, issuance, security, or payment of any Debt.

N. The term *Credit Facility* shall mean (i) a policy of insurance or a surety bond, issued by an issuer of policies of insurance insuring the timely payment of debt service on governmental obligations, provided that a rating agency having an outstanding rating on any Debt would rate such Debt fully insured by a standard policy issued by the insurer in its highest generic rating category for such obligations (provided that, at such time that the Previously Issued Junior Lien Obligations issued prior to January 1, 2010 are no longer Outstanding, the requirement of a credit rating in the highest general category shall no longer be of any effect); or (ii) a letter or line of credit issued by any financial institution, provided that a rating agency having an outstanding rating on any Debt would rate such Debt in one of its two highest generic rating categories for such obligations if the letter or line of credit proposed to be issued by such financial institution secured the timely payment of the entire principal amount of such Debt and the interest thereon.

#### O. The term *Deht* shall mean

- (1) all indebtedness payable from Pledged Revenues and/or Net Revenues incurred or assumed by the City for borrowed money (including indebtedness payable from Pledged Revenues and/or Net Revenues arising under Credit Agreements) and all other financing obligations of the System payable from Pledged Revenues and/or Net Revenues that, in accordance with generally accepted accounting principles, are shown on the liability side of a balance sheet; and
- (2) all other indebtedness payable from Pledged Revenues and/or Net Revenues (other than indebtedness otherwise treated as Debt hereunder) for borrowed money or for the acquisition, construction, or improvement of property or capitalized lease obligations pertaining to the System that is guaranteed, directly or indirectly, in any manner by the City, or that is in effect guaranteed, directly or indirectly, by the City through an agreement, contingent or otherwise, to purchase any such indebtedness or to advance or supply funds for the payment or purchase of any such indebtedness or to purchase property or services primarily for the purpose of enabling the debtor or seller to make payment of such indebtedness, or to assure the owner of the indebtedness against loss, or to supply funds to or in any other manner invest in the debtor (including any agreement to pay for property or services irrespective of whether or not such property is delivered or such services are rendered), or otherwise.

For the purpose of determining *Debt*, there shall be excluded any particular Debt if, upon or prior to the maturity thereof, there shall have been deposited with the proper depository (a) in trust the necessary funds (or investments that will provide sufficient funds, if permitted by the instrument creating such Debt) for the payment, redemption, or satisfaction of such Debt or (b) evidence of such Debt deposited for cancellation; and thereafter it shall not be considered Debt. No item shall be considered Debt unless such item constitutes indebtedness under generally accepted accounting principles applied on a basis consistent with the financial statements of the System in prior Fiscal Years.

- P. The term *Debt Service Requirements* shall mean as of any particular date of computation, with respect to any obligations and with respect to any period, the aggregate of the amounts to be paid or set aside by the City as of such date or in such period for the payment of the principal of, premium, if any, and interest (to the extent not capitalized) on such obligations; assuming, in the case of obligations without a fixed numerical rate, that such obligations bear interest calculated by assuming (i) that the interest rate for every 12-month period on such bonds is equal to the rate of interest reported in the most recently published edition of *The Bond Buyer* (or its successor) at the time of calculation as the "Revenue Bond Index" or, if such Revenue Bond Index is no longer being maintained by *The Bond Buyer* (or its successor) at the time of calculation, such interest rate shall be assumed to be 80% of the rate of interest then being paid on United States Treasury obligations of like maturity and (ii) that the principal of such bonds is amortized such that annual debt service is substantially level over the remaining stated life of such bonds, and further assuming in the case of obligations required to be redeemed or prepaid as to principal prior to Stated Maturity, the principal amounts thereof will be redeemed prior to Stated Maturity in accordance with the mandatory redemption provisions applicable thereto.
- Q. The term *Depository* shall mean one or more official depository banks of the Board.
- R. The term *Designated Financial Officer* shall mean the President/Chief Executive Officer of the Board, the Senior Vice President/Chief Financial Officer of the Board, or such other financial or accounting official of the Board so designated by the City Council.
- S. The term *Engineer* shall mean an individual, firm, or corporation engaged in the engineering profession, being a registered professional engineer under the laws of the State of Texas, having specific experience with respect to water, wastewater, reuse water, and/or stormwater drainage systems similar to the System and such individual, firm, or corporation may be employed by, or may be an employee of, the City or the Board.
- T. The term *Fiscal Year* shall mean the twelve month accounting period used by the Board in connection with the operation of the System, currently ending on December 31 of each year, which may be any twelve consecutive month period established by the Board, but in no event may the Fiscal Year be changed more than one time in any three calendar year period.
- U. The term *Government Securities* means (i) direct noncallable obligations of the United States, including obligations that are unconditionally guaranteed by, the United States of America; (ii) noncallable obligations of an agency or instrumentality of the United States, including obligations that are unconditionally guaranteed or insured by the agency or instrumentality and that, on the date the governing body of the issuer adopts or approves the proceedings authorizing the issuance of refunding bonds, are rated as to investment quality by a nationally recognized investment rating firm not less than "AAA" or its equivalent; (iii) noncallable obligations of a state or an agency or a county, municipality, or other political subdivision of a state that have been refunded and that, on the date the governing body of the issuer adopts or approves the proceedings authorizing the issuance of refunding bonds, are rated as to investment quality by a nationally recognized investment rating firm not less than "AAA" or its equivalent; or (iv) any additional securities and obligations hereafter authorized by the laws

of the State of Texas as eligible for use to accomplish the discharge of obligations such as the Bonds.

- V. The term *Gross Revenues* for any period means all revenue during such period in respect or on account of the operation or ownership of the System, excluding refundable meter deposits, restricted gifts, grants in aid of construction, any amounts payable to the United States as rebate pursuant to the provisions of Section 37, any impact fees charged by the System pursuant to the provisions of Chapter 395, as amended, Local Government Code, payments received pursuant to the CPS Contract together with earnings and interest thereon, and earnings and income derived from the investment or deposit of money in the Construction Fund and, until the Reserve Fund contains the Required Reserve Amount, the Reserve Fund, but including, earnings and income derived from the investment or deposit of money in the Bond Fund, the Reserve Fund after it contains the Required Reserve Amount, and any earnings and income from any special fund or account created and established for the payment or security of the Senior Lien Obligations, the Junior Lien Obligations, the Bonds, the Subordinate Lien Obligations, or Inferior Lien Obligations, unless the ordinance which authorizes the issuance of any such obligations specifically provides that any such earnings and income are to be deposited to another fund or account other than the System Fund.
- W. The term *Holder or Holders* shall mean the registered owner, whose name appears in the Security Register, for any Bond.
- X. The term *Inferior Lien Obligations* means (i) any bonds, notes, warrants, certificates of obligation, or other Debt hereafter issued by the City that are payable from and equally and ratably secured by a lien on and pledge of the Net Revenues that is subordinate and inferior to the pledge thereof securing payment of the currently outstanding Senior Lien Obligations, Junior Lien Obligations, and Subordinate Lien Obligations or any Additional Senior Lien Obligations, Additional Junior Lien Obligations, or Additional Subordinate Lien Obligations hereafter issued by the City, (ii) any obligations that are issued subject to the limitations in Section 1502.052, as amended, Texas Government Code, and (iii) obligations hereafter issued to refund any of the foregoing if issued in a manner that provides that the refunding bonds are payable from and equally and ratably secured, in whole or in part, by an inferior lien on and pledge of the Net Revenues as determined by the City Council in accordance with applicable law.
- Y. The term *Interest Payment Date* shall mean the date semiannual interest is payable on the Bonds, being May 15 and November 15 of each year, commencing November 15, 2018, while any of the Bonds remain Outstanding.
- Z. The term *Junior Lien Obligations* shall mean the Previously Issued Junior Lien Obligations, the Junior Lien Obligations-No Reserve Fund, and any Additional Junior Lien Obligations (whether issued as Junior Lien Obligations-No Reserve Fund or Reserve Fund-Secured Junior Lien Obligations) hereafter issued by the City or bonds issued to refund any of the foregoing (as determined within the sole discretion of the City Council in accordance with applicable law) if issued in a manner so as to be payable from and equally and ratably secured by a junior lien on and pledge of the Net Revenues of the System.

#### AA. The term *Junior Lien Obligations–No Reserve Fund* shall mean the

- (1) "City of San Antonio, Texas Water System Junior Lien Revenue Refunding Bonds, Series 2012 (No Reserve Fund)", dated April 1, 2012, in the original principal amount of \$31,890,000;
- (2) "City of San Antonio, Texas Water System Junior Lien Revenue Refunding Bonds, Series 2013B (No Reserve Fund)", dated May 1, 2013, in the original principal amount of \$82,855,000;
- (3) "City of San Antonio, Texas Water System Junior Lien Revenue and Refunding Bonds, Series 2013E (No Reserve Fund)", dated October 1, 2013, in the original principal amount of \$79,350,000;
- (4) "City of San Antonio, Texas Water System Variable Rate Junior Lien Revenue and Refunding Bonds, Series 2013F (No Reserve Fund)", dated October 1, 2013, in the original principal amount of \$100,000,000;
- (5) "City of San Antonio, Texas Water System Junior Lien Revenue and Refunding Bonds, Series 2014A (No Reserve Fund)", dated April 1, 2014, in the original principal amount of \$103,930,000;
- (6) "City of San Antonio, Texas Water System Junior Lien Revenue and Refunding Bonds, Series 2014B (No Reserve Fund)", dated April 1, 2014, in the original principal amount of \$100,000,000;
- (7) "City of San Antonio, Texas Water System Junior Lien Revenue and Refunding Bonds, Series 2015B (No Reserve Fund)", dated February 1, 2015, in the original principal amount of \$303,235,000;
- (8) "City of San Antonio, Texas Water System Junior Lien Revenue Refunding Bonds, Series 2016A (No Reserve Fund)", dated January 1, 2016, in the original principal amount of \$173,565,000;
- (9) "City of San Antonio, Texas Water System Junior Lien Revenue Refunding Bonds, Taxable Series 2016B (No Reserve Fund)", dated January 1, 2016, in the original principal amount of \$42,775,000;
- (10) "City of San Antonio, Texas Water System Junior Lien Revenue and Refunding Bonds, Series 2016C (No Reserve Fund)", dated October 1, 2016, in the original principal amount of \$305,065,000;
- (11) "City of San Antonio, Texas Water System Junior Lien Revenue Refunding Bonds, Series 2017 (No Reserve Fund)", dated January 1, 2017, in the original principal amount of \$90,915,000
  - (12) Upon issuance, the Bonds; and

any Additional Junior Lien Obligations hereafter issued that are not additionally secured by a lien on and pledge of the Reserve Fund.

- The term Maintenance and Operating Expenses shall mean all current expenses of operating and maintaining the System not paid from the proceeds of any Debt, including (1) the cost of all salaries, labor, materials, repairs, and extensions necessary to render efficient service, but only if, in the case of repairs and extensions, that are, in the judgment of the Board (reasonably and fairly exercised), necessary to maintain operation of the System and render adequate service to the City and the inhabitants thereof and other customers of the System, or are necessary to meet some physical accident or condition which would otherwise impair the payment of Debt, (2) payments to pension, retirement, health, hospitalization, and other employee benefit funds for employees of the Board engaged in the operation or maintenance of the System, (3) payments under contracts for the purchase of water supply, treatment of sewage, or other materials, goods, or services for the System to the extent authorized by law and the provisions of such contract, (4) payments to auditors, attorneys, and other consultants incurred in complying with the obligations of the City or the Board hereunder, (5) the payments made on or in respect of obtaining and maintaining any Credit Facility, and (6) any legal liability of the City or the Board arising out of the operation, maintenance, or condition of the System, but excluding any allowance for depreciation, property retirement, depletion, obsolescence, and other items not requiring an outlay of cash and any interest on the Bonds or any Debt.
- CC. The term *Net Revenues* shall mean Gross Revenues of the System, with respect to any period, after deducting the System's Maintenance and Operating Expenses during such period.
- DD. The term *Ordinance* shall mean this ordinance adopted by the City Council on April 5, 2018.
- EE. The term *Outstanding*, when used in this Ordinance with respect to Bonds shall mean as of the date of determination, all Bonds issued and delivered under this Ordinance, except:
  - (1) those Bonds canceled by the Paying Agent/Registrar or delivered to the Paying Agent/Registrar for cancellation;
  - (2) those Bonds for which payment has been duly provided by the City in accordance with the provisions of Section 39 of this Ordinance by the irrevocable deposit with the Paying Agent/Registrar, or an authorized escrow agent, of money or Government Obligations, or both, in the amount necessary to fully pay the principal of, premium, if any, and interest thereon to maturity or redemption, as the case may be, provided that, if such Bonds are to be redeemed, notice of redemption thereof shall have been duly given pursuant to this Ordinance or irrevocably provided to be given to the satisfaction of the Paying Agent/Registrar, or waived; and
  - (3) those Bonds that have been mutilated, destroyed, lost, or stolen and for which replacement Bonds have been registered and delivered as provided in Section 32 of this Ordinance.

- FF. The term *Pledged Revenues* means (1) the Net Revenues, plus (2) any additional revenues, income, receipts, or other resources, including, without limitation, any grants, donations, or income received or to be received from the United States Government, or any other public or private source, whether pursuant to an agreement or otherwise, which hereafter are pledged by the City to the payment of the Senior Lien Obligations, and excluding those revenues excluded from Gross Revenues.
- GG. The term *Previously Issued Junior Lien Obligations* shall mean (i) the outstanding and unpaid obligations of the City that are payable solely from and equally and ratably secured by a junior and inferior lien on and pledge of the Pledged Revenues of the System, identified as follows:
  - (1) "City of San Antonio, Texas Water System Junior Lien Revenue and Refunding Bonds, Series 2007", dated December 15, 2006, in the original principal amount of \$8,070,000;
  - (2) "City of San Antonio, Texas Water System Junior Lien Revenue Bonds, Series 2009", dated November 1, 2009, in the original principal amount of \$54,300,000;
  - (3) "City of San Antonio, Texas Water System Junior Lien Revenue and Refunding Bonds, Series 2009A", dated November 1, 2009, in the original principal amount of \$35,000,000;
  - (4) "City of San Antonio, Texas Water System Junior Lien Revenue Refunding Bonds, Series 2010", dated February 1, 2010, in the original principal amount of \$59,145,000;
  - (5) "City of San Antonio, Texas Water System Junior Lien Revenue and Refunding Bonds, Series 2010A", dated December 1, 2010, in the original principal amount of \$17,930,000;
  - (6) "City of San Antonio, Texas Water System Junior Lien Revenue Bonds, Series 2011", dated May 15, 2011, in the original principal amount of \$24,550,000;
  - (7) "City of San Antonio, Texas Water System Junior Lien Revenue and Refunding Bonds, Series 2011A", dated May 15, 2011, in the original principal amount of \$18,095,000;
  - (8) "City of San Antonio, Texas Water System Junior Lien Revenue Bonds, Series 2012", dated August 1, 2012, in the original principal amount of \$19,630,000;
  - (9) "City of San Antonio, Texas Water System Junior Lien Revenue Bonds, Series 2013A", dated April 1, 2013, in the original principal amount of \$50,000,000;
  - (10) "City of San Antonio, Texas Water System Junior Lien Revenue Bonds, Series 2013D", dated October 1, 2013, in the original principal amount of \$60,100,000;

- (11) "City of San Antonio, Texas Water System Junior Lien Revenue Bonds, Series 2013C", dated November 1, 2013, in the original principal amount of \$26,370,000;
- (12) "City of San Antonio, Texas Water System Junior Lien Revenue Bonds, Series 2014C", dated May 15, 2014, in the original principal amount of \$38,260,000;
- (13) "City of San Antonio, Texas Water System Junior Lien Revenue Bonds, Series 2014D", dated May 15, 2014, in the original principal amount of \$22,400,000;
- (14) "City of San Antonio, Texas Water System Junior Lien Revenue Bonds, Series 2015A", dated November 15, 2015, in the original principal amount of \$75,920,000;
- (15) "City of San Antonio, Texas Water System Junior Lien Revenue Bonds, Series 2016D", dated December 1, 2016, in the original principal amount of \$12,500,000;
- (16) City of San Antonio, Texas Water System Junior Lien Revenue Bonds, Series 2016E", dated December 1, 2016, in the original principal amount of \$14,175,000;
- and (ii) obligations hereafter issued to refund any of the foregoing if issued in a manner so as to be payable from and equally and ratably secured by a junior and inferior lien on and pledge of the Net Revenues of the System as determined by the City Council in accordance with any applicable law.
- HH. The term *Prudent Utility Practice* shall mean any of the practices, methods, and acts, in the exercise of reasonable judgment, in the light of the facts, including but not limited to the practices, methods, and acts engaged in or previously approved by a significant portion of the public utility industry, known at the time the decision was made, that would have been expected to accomplish the desired result at the lowest reasonable cost consistent with reliability, safety, and expedition. It is recognized that Prudent Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather is a spectrum of possible practices, methods, or acts which could have been expected to accomplish the desired result at the lowest reasonable cost consistent with reliability, safety, and expedition. In the case of any facility included in the System which is operated in common with one or more other entities, the term *Prudent Utility Practice*, as applied to such facility, shall have the meaning set forth in the agreement governing the operation of such facility.
- II. The term *Purchaser* shall mean the initial purchaser or purchasers of the Bonds named in Section 33 of this Ordinance.
- JJ. The term *Rating Agency* shall mean any nationally recognized securities rating agency which has assigned a rating to the Senior Lien Obligations.

#### KK. The term *Refunding Candidates* shall mean:

(1) "City of San Antonio, Texas Water System Junior Lien Revenue Bonds, Series 2008", dated May 15, 2008, in the original principal amount of \$30,000,000, maturing on May 15 in each of the years 2019 through 2038 and which obligations are subject to optional redemption on May 15, 2018; and

- (2) "City of San Antonio, Texas Water System Junior Lien Revenue and Refunding Bonds, Series 2008A", dated May 15, 2008, in the original principal amount of \$23,260,000, maturing on May 15 in each of the years 2019 through 2038 and which obligations are subject to optional redemption on May 15, 2018.
- LL. The term *Refunded Commercial Paper* shall mean those Commercial Paper Notes refunded with Bond proceeds, as indicated on Schedule I hereto.
- MM. The term *Refunded Obligations* shall mean those obligations indicated on Schedule I hereto, consisting of obligations selected from the Refunding Candidates.
- NN. The term *Required Reserve Amount* shall mean the amount required to be deposited and maintained in the Reserve Fund under the respective City ordinances authorizing the issuance of each series of Reserve Fund–Secured Junior Lien Obligations.
- OO. The term *Required Reserve Fund Deposits* shall mean the monthly deposits, if any, required to be deposited and maintained in the Reserve Fund under the respective City ordinances authorizing the issuance of each series of Reserve Fund–Secured Junior Lien Obligations.
- PP. The term *Reserve Fund-Secured Junior Lien Obligations* shall mean the Previously Issued Junior Lien Obligations and any Additional Junior Lien Obligations hereafter issued that are secured by a parity lien on and pledge of the Reserve Fund and specifically excluding the Junior Lien Obligations—No Reserve Fund.
- QQ. The term *Reserve Fund* shall mean the special fund of the City known as the "City of San Antonio, Waterworks and Sewer System Junior Lien Bond Reserve Fund" established and maintained pursuant to the terms and provisions of the respective City ordinances authorizing the issuance of each series of Reserve Fund-Secured Junior Lien Obligations.
- RR. The term *Senior Lien Obligations* shall mean (i) the outstanding and unpaid obligations of the City that are payable solely from and equally and ratably secured by a prior and first lien on and pledge of the Pledged Revenues of the System, identified as follows:
  - (1) "City of San Antonio, Texas Water System Revenue and Refunding Bonds, Series 2009", dated January 15, 2009, in the original principal amount of \$163,755,000;
  - (2) "City of San Antonio, Texas Water System Revenue Bonds, Taxable Series 2009B (Direct Subsidy–Build America Bonds)", dated November 1, 2009, in the original principal amount of \$102,750,000;
  - (3) "City of San Antonio, Texas Water System Revenue Bonds, Taxable Series 2010B (Direct Subsidy–Build America Bonds)", dated November 15, 2010, in the original principal amount of \$110,000,000;
  - (4) "City of San Antonio, Texas Water System Revenue and Refunding Bonds, Series 2011", dated March 15, 2011, in the original principal amount of \$46,555,000;

- (5) "City of San Antonio, Texas Water System Revenue Refunding Bonds, Series 2011A", dated August 15, 2011, in the original principal amount of \$165,090,000;
- (6) "City of San Antonio, Texas Water System Revenue Refunding Bonds, Series 2012", dated February 1, 2012, in the original principal amount of \$225,255,000; and
- (7) "City of San Antonio, Texas Water System Revenue and Refunding Bonds, Series 2012A", dated September 1, 2012, in the original principal amount of \$163,435,000;
- and (ii) obligations hereafter issued to refund any of the foregoing if issued in a manner so as to be payable from and equally and ratably secured by a first lien on and pledge of the Pledged Revenues of the System as determined by the City Council in accordance with any applicable law.
- SS. The term *Series 1992 Bonds* shall mean the "City of San Antonio, Texas Water System Revenue Refunding Bonds, Series 1992" originally issued in the aggregate principal amount of \$635,925,000 pursuant to Ordinance No. 75686 that are no longer outstanding.
- TT. The term *Series 2018 Variable Rate Bonds* shall mean one or more series of variable rate junior lien obligations authorized and issued pursuant to the Concurrently Adopted Ordinance.
- UU. The term *Special Project* shall mean, to the extent permitted by law, any water, sewer, wastewater reuse, or municipal drainage system property, improvement, or facility declared by the City, upon the recommendation of the Board, not to be part of the System, for which the costs of acquisition, construction, and installation are paid from proceeds of a financing transaction other than the issuance of bonds payable from ad valorem taxes, Pledged Revenues, or Net Revenues and for which all maintenance and operation expenses are payable from sources other than ad valorem taxes, Pledged Revenues, or Net Revenues, but only to the extent that and for so long as all or any part of the revenues or proceeds of which are or will be pledged to secure the payment or repayment of such costs of acquisition, construction, and installation under such financing transaction.
- VV. The term *Stated Maturity* shall mean the annual principal payments of the Bonds payable on May 15 of each year, as set forth in Section 2 of this Ordinance.
- WW. The term *Subordinate Lien Obligations* shall mean (i) the currently outstanding and unpaid obligations of the City that are payable wholly or in part from a lien on and pledge of the Net Revenues that is subordinate and inferior to the pledge thereof securing payment of the currently outstanding Senior Lien Obligations and the Junior Lien Obligations or any Additional Senior Lien Obligations or Additional Junior Lien Obligations, all as further provided in Section 21 of the Ordinance, identified as follows:
  - (1) "City of San Antonio, Texas Water System Commercial Paper Notes, Series A" and "City of San Antonio, Texas Water System Commercial Paper Notes, Series B", authorized in the aggregate principal amount of \$500,000,000, and including the currently outstanding Commercial Paper and Loan Notes (each as defined in the ordinance authorizing the issuance of such series of Commercial Paper);

and (ii) obligations hereafter issued to refund any of the foregoing if issued in a manner that provides that the refunding bonds are payable from and equally and ratably secured, in whole or in part, by an inferior lien on and pledge of the Net Revenues as determined by the City Council in accordance with applicable law.

XX. The term *System* shall mean all properties, facilities, and plants currently owned, operated, and maintained by the City and/or the Board for the supply, treatment, and transmission and distribution of treated potable water, chilled water, and steam, for the collection and treatment of wastewater, and for water reuse, together with all future extensions, improvements, purchases, repairs, replacements and additions thereto, whether situated within or without the limits of the City, all water (in any form) owned by the City, and any other projects and programs of the Board; provided, however, that the City expressly retains the right to incorporate (1) a stormwater system as provided by the provisions of Section 552.041 through 552.054, as amended, Local Government Code, or other similar law, and (2) any other related system as provided by the laws of the State of Texas as a part of the System. The System shall not include any Special Project or any water or water-related properties and facilities owned by the City as part of its electric and gas systems.

**SECTION 11:** Rates and Charges. For the benefit of the Holders of the Bonds and in addition to all provisions and covenants in the laws of the State of Texas and in this Ordinance, the City hereby expressly stipulates and agrees, while any of the currently outstanding Junior Lien Obligations are Outstanding, to establish and maintain rates and charges for facilities and services afforded by the System that are reasonably expected, on the basis of available information and experience and with due allowance for contingencies, to produce Gross Revenues in each Fiscal Year sufficient:

- A. To pay all Maintenance and Operating Expenses, or any expenses required by statute to be a first claim on and charge against the Gross Revenues of the System;
- B. To produce Pledged Revenues, together with any other lawfully available funds, sufficient to satisfy the rate covenant contained in the ordinances authorizing the issuance of the currently outstanding Senior Lien Obligations and to pay the principal of and interest on the currently outstanding Senior Lien Obligations and any Additional Senior Lien Obligations hereafter issued by the City and the amounts required to be deposited in any reserve or contingency fund or account created for the payment and security of the currently outstanding Senior Lien Obligations and any Additional Senior Lien Obligations hereafter issued by the City, and any other obligations or evidences of indebtedness issued or incurred that are payable from and secured solely by a prior and first lien on an pledge of the Net Revenues of the System;
- C. To produce Net Revenues, together with any other lawfully available funds, to pay the principal of and interest on the currently outstanding Junior Lien Obligations as the same become due and payable and to deposit the amounts required to be deposited in any special fund or account created and established for the payment and security of the Additional Junior Lien Obligations hereafter issued by the City, and any other obligations or evidences of indebtedness issued or incurred that are payable from and secured solely by a junior lien on and pledge of the Net Revenues of the System;

- D. To produce Net Revenues, together with any other lawfully available funds, to pay the principal of and interest on the currently outstanding Subordinate Lien Obligations and any Additional Subordinate Lien Obligations hereafter issued by the City as the same become due and payable and to deposit the amounts required to be deposited in any special fund or account created and established for the payment and security of the currently outstanding Subordinate Lien Obligations and any Additional Subordinate Lien Obligations, and any other obligations or evidences of indebtedness issued or incurred that are payable from and secured, in whole or in part, by a subordinate lien on and pledge of the Net Revenues of the System;
- E. To produce Net Revenues, together with any other lawfully available funds, to pay the principal of and interest on any Inferior Lien Obligations hereafter issued by the City as the same become due and payable and to deposit the amounts required to be deposited in any special fund or account created and established for the payment and security of any Inferior Lien Obligations hereafter issued by the City, and any other obligations or evidences of indebtedness issued or incurred that are payable from and secured by a lien on and pledge of the Net Revenues of the System in accordance with applicable law;
- F. To produce Net Revenues, together with any other lawfully available funds, to fund the transfers as permitted by the provisions of Section 15 of this Ordinance; and
- G. To pay, together with any other lawfully available funds, any other legally incurred Debt payable from the Net Revenues of the System and/or secured by a lien on the System.
- **SECTION 12:** System Fund. The City hereby covenants, agrees, and reaffirms that the Gross Revenues of the System shall be deposited, as collected and received, into a separate Fund or account (previously created, established, and to be maintained with the Depository) known as the "City of San Antonio, Texas Water System Revenue Fund" (the *System Fund*) and that the Gross Revenues of the System shall be kept separate and apart from all other funds of the City. All Gross Revenues deposited into the System Fund shall be pledged and appropriated to the extent required for the following uses and in the order of priority shown:
  - FIRST: to the payment of all necessary and reasonable Maintenance and Operating Expenses as defined herein or required by statute, including, but not limited to, Chapter 1502, as amended, Texas Government Code (formerly Texas Revised Civil Statutes Annotated Article 1113, as amended), to be a first charge on and claim against the Gross Revenues, including a two-month reserve amount based upon the budgeted amount of Maintenance and Operating Expenses for the current Fiscal Year, which amount shall be retained in the System Fund.
  - SECOND: to the payment of the amounts required to be deposited into the special funds and accounts created and established for the payment, security and benefit of the currently outstanding Senior Lien Obligations and any Additional Senior Lien Obligations hereafter issued by the City.
  - THIRD: to the payment of the amounts required to be deposited into the special funds and accounts created and established for the payment, security and benefit

of the currently outstanding Junior Lien Obligations, and any Additional Junior Lien Obligations hereafter issued by the City.

- FOURTH: to the payment of the amounts that must be deposited in any special funds and accounts created and established for the payment, security and benefit of the currently outstanding Subordinate Lien Obligations and any Additional Subordinate Lien Obligations hereafter issued by the City.
- FIFTH: to the payment of the amounts that must be deposited in any special funds and accounts created and established for the payment, security, and benefit of any Inferior Lien Obligations hereafter issued by the City.
- SIXTH: to the payment of the amounts to be transferred to the City's General Fund as provided in Section 15 hereof and into the Renewal and Replacement Fund created and established by Section 16 hereof.

Any Net Revenues remaining in the System Fund after satisfying the foregoing payments, or making adequate and sufficient provision for the payment thereof, may be appropriated and used for any other City purpose now or hereafter permitted by law and the ordinances authorizing the issuance of the currently outstanding Senior Lien Obligations.

**SECTION 13:** Bond Fund; Excess Bond Proceeds. For purposes of providing funds to pay the principal of and interest on the currently outstanding Junior Lien Obligations as the same become due and payable, the City agrees to maintain, at the Depository, a separate and special Fund or account to be created and known as the "City of San Antonio, Texas Water System Junior Lien Revenue and Refunding Bonds, Series 2018A Interest and Sinking Fund" (the Bond Fund). The City covenants that there shall be deposited by the Designated Financial Officer into the Bond Fund prior to each principal and Interest Payment Date from the available Net Revenues an amount equal to one hundred percent (100%) of the amount required to fully pay the interest on and the principal of the currently outstanding Junior Lien Obligations then falling due and payable, such deposits to pay maturing principal and accrued interest on the currently outstanding Junior Lien Obligations to be made in substantially equal monthly installments on or before the tenth day of each month, beginning on or before the tenth day of the month next following the delivery of the Bonds to the Purchaser. If the Net Revenues in any month are insufficient to make the required payments into the Bond Fund, then the amount of any deficiency in such payment shall be added to the amount otherwise required to be paid into the Bond Fund in the next month.

The required monthly deposits to the Bond Fund for the payment of principal of and interest on the currently outstanding Junior Lien Obligations shall continue to be made as hereinabove provided until such time as (i) the total amount on deposit in the Bond Fund and Reserve Fund is equal to the amount required to fully pay and discharge all outstanding Junior Lien Obligations (principal and interest) or, (ii) the Junior Lien Obligations are no longer Outstanding.

Accrued interest, if any, received from the Purchaser shall be taken into consideration and reduce the amount of the monthly deposits hereinabove required to be deposited into the Bond Fund from the Net Revenues of the System. Additionally, any proceeds of the Bonds, and investment income thereon, not expended for authorized purposes shall be deposited into the Bond Fund and shall be

taken into consideration and reduce the amount of monthly deposits required to be deposited into the Bond Fund from the Net Revenues of the System.

SECTION 14: Reserve Fund. For the benefit of the Reserve Fund-Secured Junior Lien Obligations and not the Junior Lien Obligations—No Reserve Fund (which includes the Bonds), the City has heretofore established and now maintains the Reserve Fund. The Reserve Fund is maintained pursuant to the provisions of the respective City ordinances authorizing the issuance of the Reserve Fund-Secured Junior Lien Obligations. Though the Reserve Fund does not secure the Bonds or the other Junior Lien Obligations—No Reserve Fund, the City hereby acknowledges and affirms its rights, duties, and obligations with respect to the Reserve Fund included in the respective City ordinances authorizing the issuance of the Reserve Fund-Secured Junior Lien Obligations.

The City hereby acknowledges, reserves and confirms its right to issue Additional Junior Lien Obligations as Junior Lien Obligations-No Reserve Fund, being obligations not benefited by the additional pledge of the Reserve Fund, provided that such Additional Junior Lien Obligations issued as Junior Lien Obligations-No Reserve Fund are not sold to the Texas Water Development In such instance, those Additional Junior Lien Obligations issued as Junior Lien Obligations-No Reserve Fund shall be (i) designated as such by including the parenthetical "(No Reserve Fund)" to the style of the subject obligations in all related transaction documentation (including, but not limited to, the City ordinance authorizing the issuance of such Additional Junior Lien Obligations and the Form of Bond therefor) to clearly distinguish such Additional Junior Lien Obligations from those Junior Lien Obligations that are Reserve Fund-Secured Junior Lien Obligations and (ii) excluded from all calculations identified in and requirements of this Section and other applicable sections of any ordinance authorizing the issuance of Additional Junior Lien Obligations concerning amounts at any time required to be deposited to and held in the Reserve Fund. Any disclosure or similar document used to market and sell Additional Junior Lien Obligations issued as Junior Lien Obligations-No Reserve Fund shall clearly indicate that the holders of such Additional Junior Lien Obligations shall have no right to or claim on the funds at any time held in the Reserve Fund.

SECTION 15: Payments to City General Fund. The Designated Financial Officer of the Board shall transfer no later than the last business day of each month, an amount of money calculated, subject to the second paragraph of Section 16, not to exceed 5% (or such lesser amount as may be determined from time to time by the City Council) of the Gross Revenues (after making each of the payments required by the provisions of subparagraphs First through Fifth of Section 12 hereof) for the preceding month to be utilized by the City in the manner permitted by the provisions of Chapter 1502, as amended, Texas Government Code (formerly Texas Revised Civil Statutes Annotated Article 1113a, as amended). The amount so transferred shall be net of all amounts owed by the City to the Board for the utility services described in Section 25E hereof; provided, however, that the Board shall provide the City with a sufficiently detailed statement of charges for such utility services to permit the City to allocate the charges for such utility services to the appropriate office, division, or department of the City.

To the extent that the available Net Revenues in any month are insufficient for the Board to make all or part of the transfer required by the preceding paragraph, the Board shall make up such shortfall (i) in the next month in which available Net Revenues exceed the amounts required to make the transfer to the City pursuant to the preceding paragraph and the *pari passu* payment to the Renewal and Replacement Fund under Section 16 or (ii) to the extent such shortfall has not been made up by the last month of the Fiscal Year, solely from any surplus funds deposited into the Renewal and Replacement Fund for such Fiscal Year. The Board's obligation to make up any shortfall in a Fiscal Year shall not carry over to a subsequent Fiscal Year.

**SECTION 16:** Renewal and Replacement Fund. There has previously been created and established and there shall be maintained on the books of the Board, and accounted for separate and apart from all other funds of the City and the Board, a separate fund to be entitled the "City of San Antonio, Texas Water System Renewal and Replacement Fund" (the Renewal and Replacement Fund). The Renewal and Replacement Fund shall be used for the purpose of (1) paying the costs of improvements, enlargements, extensions, additions, replacements, or other capital expenditures related to the System, or (2) paying the costs of unexpected or extraordinary repairs or replacements of the System for which System funds are not available, or (3) paying unexpected or extraordinary expenses of operation and maintenance of the System for which System funds are not otherwise available, or (4) depositing any funds received by the City pursuant to the CPS Contract, and such funds, including any interest or income thereon, shall be maintained in a separate, segregated account of the Renewal and Replacement Fund and shall only be used to pay Maintenance and Operating Expenses of the water reuse facilities of the System or the debt service requirements on any obligations incurred as permitted by the CPS Contract and in no event shall any such amount, including interest and income thereon, be transferred to the general fund of the City except as permitted by the CPS Contract, or (5) paying bonds or other obligations of the System for which other System revenues are not available, or (6) in the last month of any Fiscal Year to make up any shortfall as required by Section 15B, or (7) for any other lawful purpose in support of the System. The Renewal and Replacement Fund shall be maintained at the Depository.

Deposits to the Renewal and Replacement Fund shall be *pari passu* with the gross amount payable to the City pursuant to Section 15 (prior to the deduction of any charges for utility services provided pursuant to Section 25E) until the full amount payable to the City under such Section has been paid. That is, such deposits to the Renewal and Replacement Fund shall be made equally and ratably, without preference, and on a dollar-for-dollar basis with the gross amount payable to the City pursuant to Section 15, prior to the deduction of any charges for services, until the full amount to be paid to the City in a Fiscal Year under Section 15 has been transferred to the City's General Fund. Thereafter, all surplus Net Revenues shall be deposited to the Renewal and Replacement Fund.

## SECTION 17: <u>Deficiencies - Excess Net Revenues.</u>

A. If on any occasion there shall not be sufficient Net Revenues of the System (after making all payments pertaining to the currently outstanding Senior Lien Obligations or any Additional Senior Lien Obligations hereafter issued by the City) to make the required deposits into the Bond Fund and the Reserve Fund, then such deficiency shall be cured as soon as possible from the next available unallocated Net Revenues of the System, or from any other sources available for such purpose, and such payments shall be in addition to the amounts required to be paid into these Funds or accounts during such month or months.

- B. Subject to making the required deposits to the Bond Fund and the Reserve Fund when and as required by this Ordinance, or any ordinance authorizing the issuance of any Additional Junior Lien Obligations (as applicable), or the payments required by the provisions of the ordinances authorizing the issuance of the currently outstanding Subordinate Lien Obligations and any Additional Subordinate Lien Obligations hereafter issued by the City and any Inferior Lien Obligations hereafter issued by the City, the excess Net Revenues of the System may be used by the City for any lawful purpose in accordance with the provisions of the ordinances authorizing the issuance of the currently outstanding Senior Lien Obligations.
- SECTION 18: Payment of Bonds. While any of the Bonds are outstanding, any Designated Financial Officer or Authorized Official shall cause to be transferred to the Paying Agent/Registrar therefor, from funds on deposit in the Bond Fund, and, if necessary, in the Reserve Fund, amounts sufficient to fully pay and discharge promptly each installment of interest on and principal of the Bonds as such installment accrues or matures; such transfer of funds must be made in such manner as will cause immediately available funds to be deposited with the Paying Agent/Registrar for the Bonds at the close of the business day next preceding the date a debt service payment is due on the Bonds.
- SECTION 21: <u>Issuance of Additional Senior Lien Obligations, Additional Junior Lien Obligations, Additional Subordinate Lien Obligations, and Inferior Lien Obligations.</u> The City hereby expressly reserves the right to hereafter issue bonds, notes, warrants, certificates of obligation, or similar obligations, payable, wholly or in part, as appropriate, from and secured by a pledge of and lien on the Net Revenues of the System with the following priorities, without limitation as to principal amount, but subject to any terms, conditions, or restrictions applicable thereto under existing ordinances, laws, or otherwise:
- A. Additional Senior Lien Obligations payable from and equally and ratably secured by a first and prior lien on and pledge of the Pledged Revenues of the System upon satisfying each of the conditions precedent contained in the ordinances authorizing the issuance of the currently outstanding Senior Lien Obligations;
- B. Additional Junior Lien Obligations (except for Additional Junior Lien Obligations that are insured by a municipal bond insurance policy, which need not satisfy the provisions of paragraph B(2) or B(3) hereof), payable from and equally and ratably secured by a junior and inferior lien on and pledge of the Net Revenues of the System, upon satisfying each of the following conditions precedent:
  - (1) the Chief Financial Officer of the City (or other official of the City having primary responsibility for the fiscal affairs of the City) shall have executed a certificate stating that (i) except for a refunding to cure a default, or the deposit of a portion of the proceeds of any Additional Junior Lien Obligations to satisfy the City's obligations under this Ordinance, the City is not then in default as to any covenant, obligation, or agreement contained in any ordinance or other proceedings relating to any obligations of the City payable from and secured by a lien on and pledge of the Net Revenues of the System and (ii) all payments into all special funds or accounts created and established for the payment and security of all outstanding obligations payable from and secured by a lien on and pledge

of the Net Revenues of the System have been duly made and that the amounts on deposit in such special funds or accounts are the amounts then required to be deposited therein;

- with respect to Additional Junior Lien Obligations sold to the Texas Water Development Board (the TWDB) that are not insured by a municipal bond insurance policy, the City has secured from a Certified Public Accountant a certificate or opinion to the effect that, according to the books and records of the City, the Net Revenues of the System, for the preceding Fiscal Year or for any 12 consecutive months out of the 18 months immediately preceding the month the ordinance authorizing the Additional Junior Lien Obligations is adopted, are at least equal to one and one-fourth (1-1/4) times the average annual requirement for the payment of principal of and interest on all outstanding Junior Lien Obligations after giving effect to the Additional Junior Lien Obligations then proposed. In making a determination of the Net Revenues, the Accountant may take into consideration a change in the rates and charges for services and facilities afforded by the System that became effective at least sixty (60) days prior to the last day of the period for which Net Revenues are to be determined and, for purposes of satisfying the above Net Revenues test, make a pro forma determination of the Net Revenues for the period of time covered by his certification or opinion based on such change in rates and charges being in effect for the entire period covered by the Accountant's certificate or opinion;
- with respect to Additional Junior Lien Obligations sold to any other entity other than the TWDB and that are not insured by a municipal bond insurance policy, the City has secured from a Certified Public Accountant a certificate or opinion to the effect that, according to the books and records of the City, the Net Revenues of the System, for the preceding Fiscal Year or for any 12 consecutive months out of the 18 months immediately preceding the month the ordinance authorizing the Additional Junior Lien Obligations is adopted, are at least equal to the average annual requirement for the payment of principal of and interest on all outstanding Junior Lien Obligations after giving effect to the Additional Junior Lien Obligations then proposed. In making a determination of the Net Revenues, the Accountant may take into consideration a change in the rates and charges for services and facilities afforded by the System that became effective at least sixty (60) days prior to the last day of the period for which Net Revenues are to be determined and, for purposes of satisfying the above Net Revenues test, make a pro forma determination of the Net Revenues for the period of time covered by his certification or opinion based on such change in rates and charges being in effect for the entire period covered by the Accountant's certificate or opinion;
- (4) the ordinance authorizing the issuance of the Additional Junior Lien Obligations provides for deposits to be made to the Bond Fund in amounts sufficient to pay the principal of and interest on such Additional Junior Lien Obligations as the same mature; and
- (5) the ordinance authorizing the issuance of the Additional Junior Lien Obligations that are Reserved Fund–Secured Junior Lien Obligations provides that the amount to be accumulated and maintained in the Reserve Fund shall be in an amount equal to not less than the Average Annual Debt Service Requirements for the payment of the Junior Lien Obligations then outstanding, inclusive of the changes in the amount resulting

from the issuance of the proposed Additional Junior Lien Obligations that are Reserved Fund–Secured Junior Lien Obligations, and provides that any additional amount to be maintained in the Reserve Fund shall be accumulated within sixty (60) months from the date the Additional Junior Lien Obligations that are Reserved Fund–Secured Junior Lien Obligations are delivered; provided, however, that no such requirement as it relates to additional amounts to be deposited to the Reserve Fund shall be applicable to, or serve as a condition to the issuance of, Additional Junior Lien Obligations that are or will be Junior Lien Obligations–No Reserve Fund.

- C. Additional Subordinate Lien Obligations secured by a subordinate and inferior lien on and pledge of the Net Revenues upon satisfying each of the conditions precedent contained in the ordinances authorizing the issuance of the currently outstanding Senior Lien Obligations, outstanding Subordinate Lien Obligations, or this Ordinance, as appropriate.
- D. Inferior Lien Obligations secured by a lien on and pledge of the Net Revenues of the System upon satisfying each of the conditions precedent contained in the ordinances authorizing the issuance of the currently outstanding Senior Lien Obligations or this Ordinance.

SECTION 22: <u>Issuance of Special Project Obligations</u>. Nothing in this Ordinance shall be construed to deny the City the right and it shall retain the right to issue Special Project obligations, provided, however, the City will not issue Special Project obligations unless the City concludes, upon recommendation of the Board, that (i) the plan for developing the Special Project is consistent with sound planning, (ii) the Special Project would not materially and adversely interfere with the operation of the System, (iii) the Special Project can be economically and efficiently operated and maintained, and (iv) the Special Project can be economically and efficiently utilized by the Board to meet water, wastewater, water reuse, or stormwater drainage requirements and the cost of such will be reasonable.

**SECTION 23:** Maintenance of System - Insurance. The City covenants and agrees that while the Junior Lien Obligations remain outstanding the Board will maintain and operate the System in accordance with Prudent Utility Practice and will maintain casualty and other insurance on the properties of the System and its operations of a kind and in such amounts customarily carried by municipal corporations in the State of Texas engaged in a similar type of business (which may include an adequate program of self-insurance); and that it will faithfully and punctually perform all duties with reference to the System required by the laws of the State of Texas. All money received from losses under such insurance policies, other than public liability policies, shall be retained for the benefit of the Holders of the Bonds until and unless the proceeds are paid out in making good the loss or damage in respect of which such proceeds are received, either by replacing the property destroyed or repairing the property damaged, and adequate provision for making good such loss or damage must be made within ninety (90) days after the date of loss. The payment of premiums for all insurance policies required under the provisions hereof and the costs associated with the maintenance of any self-insurance program shall be considered Maintenance and Operating Expenses. Nothing in this Ordinance shall be construed as requiring the City or the Board to expend any funds which are derived from sources other than the operation of the System, but nothing herein shall be construed as preventing the City or the Board from doing so.

SECTION 24: Records and Accounts - Annual Audit. The City covenants, agrees, and affirms its covenants that so long as any of the Bonds remain outstanding, it will keep and maintain separate and complete records and accounts pertaining to the operations of the System in which complete and correct entries shall be made of all transactions relating thereto, as provided by Chapter 1502, as amended, Texas Government Code, or other applicable law. The Holders of the Bonds or any duly authorized agent or agents of such Holders shall have the right to inspect the System and all properties comprising the same. The City further agrees that following (and in no event later than 120 days after) the close of each Fiscal Year, it will cause an audit of such books and accounts to be made by an independent firm of Certified Public Accountants. Expenses incurred in making the annual audit of the operations of the System are to be regarded as Maintenance and Operating Expenses.

# **SECTION 25:** Special Covenants. The City hereby further covenants that:

- A. It has the lawful power to pledge the Net Revenues supporting the Bonds and has lawfully exercised this power under the laws of the State of Texas, including the power existing under Chapters 1207, 1371, and 1502, as amended, Texas Government Code, and the City's Home Rule Charter;
- B. The Bonds shall be equally and ratably secured by a junior lien on and pledge of the Net Revenues of the System in a manner that one Bond shall have no preference over any other Bond;
- C. Other than for the payment of the currently outstanding Senior Lien Obligations, Junior Lien Obligations, and the Subordinate Lien Obligations, the Net Revenues of the System have not in any manner been pledged to the payment of any debt or obligation of the City or of the System;
- D. As long as any Bonds, or any interest thereon, remain Outstanding, the City will not sell, lease, or encumber the System or any substantial part thereof (except as provided in Section 21 of this Ordinance) provided that this covenant shall not be construed to prohibit the sale of such machinery, or other properties or equipment which has become obsolete or otherwise unsuited to the efficient operation of the System;
- E. No free service (except water provided to the City for municipal fire-fighting purposes and certain stormwater utility service) of the System shall be allowed, and, should the City or any of its agencies or instrumentalities make use of the services and facilities of the System, payment of the reasonable value thereof shall be made, if necessary, by the City pursuant to Section 15; and
- F. To the extent that it legally may, the City further covenants and agrees that, so long as any of the Bonds, or any interest thereon, are Outstanding, no franchise shall be granted for the installation or operation of any competing utility systems other than those owned by the City, and the operation of any such systems by anyone other than the City is hereby prohibited.
- **SECTION 26:** <u>Limited Obligations of the City</u>. The Bonds are limited, special obligations of the City payable from and equally and ratably secured solely by a junior lien on and pledge of the Net Revenues of the System, and the Holders thereof shall never have the right to

demand payment of the principal or interest on the Bonds from any funds raised or to be raised through taxation by the City.

**SECTION 27:** Security of Funds. All money on deposit in the Funds or accounts for which this Ordinance makes provision (except any portion thereof as may be at any time properly invested as provided herein) shall be secured in the manner and to the fullest extent required by the laws of Texas for the security of public funds, and money on deposit in such Funds or accounts shall be used only for the purposes permitted by this Ordinance.

**SECTION 28:** Remedies in Event of Default. In addition to all the rights and remedies provided by the laws of the State of Texas, the City covenants and agrees particularly that in the event the City (a) defaults in the payments to be made to the Bond Fund or Reserve Fund, or (b) defaults in the observance or performance of any other of the covenants, conditions, or obligations set forth in this Ordinance, the Holders of any of the Bonds shall be entitled to seek a writ of mandamus issued by a court of proper jurisdiction compelling and requiring the governing body of the City and other officers of the City to observe and perform any covenant, condition, or obligation prescribed in this Ordinance.

No delay or omission to exercise any right or power accruing upon any default shall impair any such right or power or shall be construed to be a waiver of any such default or acquiescence therein, and every such right and power may be exercised from time to time and as often as may be deemed expedient. The specific remedy herein provided shall be cumulative of all other existing remedies and the specification of such remedy shall not be deemed to be exclusive.

**SECTION 40:** Ordinance a Contract; Amendments - Outstanding Bonds. The City acknowledges that the covenants and obligations of the City herein contained are a material inducement to the purchase of the Bonds. This Ordinance shall constitute a contract with the Holders from time to time, binding on the City and its successors and assigns, and it shall not be amended or repealed by the City so long as any Bond remains Outstanding except as permitted in this Section. The City may, without the consent of or notice to any Holders, from time to time and at any time, amend this Ordinance in any manner not detrimental to the interests of the Holders, including the curing of any ambiguity, inconsistency, or formal defect or omission herein. In addition, the City may, with the written consent of Holders holding a majority in aggregate principal amount of the Bonds then Outstanding affected thereby, amend, add to, or rescind any of the provisions of this Ordinance; provided that, without the consent of all Holders of Outstanding Bonds, no such amendment, addition, or rescission shall (1) extend the time or times of payment of the principal of and interest on the Bonds, reduce the principal amount thereof or the rate of interest thereon, or in any other way modify the terms of payment of the principal of or interest on the Bonds, (2) give any preference to any Bond over any other Bond, or (3) reduce the aggregate principal amount of Bonds required for consent to any such amendment, addition, or rescission.

## **SECTION 41:** <u>Management of System.</u>

A. Pursuant to the authority contained in Chapter 1502, as amended, Texas Government Code (formerly Texas Revised Civil Statutes Annotated Article 1115b, as amended), except as otherwise specifically provided in this Ordinance, the complete management and control of the System during such time as any Debt is outstanding shall be vested in a seven-member board

of trustees to be known as the "San Antonio Water System Board of Trustees". Such board is referred to in this Ordinance as the "Board." The Mayor of the City from time to time shall ex-officio be one of the members of the Board, and the other current members of the Board as of the date of passage of this Ordinance are Heriberto "Berto" Guerra, Jr. and Pat Merritt, each currently serving a term ending May 31, 2018; Patricia Jasso serving a term ending May 31, 2020; and Amy Hardberger, Eduardo Parra, and David McGee, each serving terms ending May 31, 2021. Notwithstanding the foregoing, the Members of the Board may be increased to a number greater than seven (7), to include the Mayor of the City as an ex-officio member, as otherwise appointed by the City.

- Members of the Board must be citizens of the United States and must either reside В. inside the corporate limits of the City or inside the area served by the System. No person who is related within the second degree of consanguinity or affinity (or as further restricted by the City's Home Rule Charter) to any Member of the Board or any member of the City Council shall be eligible for appointment as a Member of the Board. The term of office of each Member of the Board shall be four (4) years. All terms shall commence on a June 1 and shall terminate on May 31 four years later; provided, however, in the event a replacement for a Member has not been named by the City Council prior to the expiration of such Member's term, such Member shall serve until such Member's successor shall be appointed, and such successor's term shall terminate on May 31st of the year in which such term normally would have terminated if the City Council had appointed such successor prior to the termination of such Member's term. No person who has served as a Member of the Board for a total of two (2) terms shall be eligible for appointment as a Member of the Board. Any Member who is appointed to the Board to serve out an unexpired portion of another Member's term shall not be considered to have served a term unless the unexpired portion of the term so served is two (2) years or more.
- C. Removal of residence from the area served by the System by any Member of the Board shall cause such person to vacate office as a Member of the Board, and any Member of the Board (other than the Mayor of the City) who shall be continuously absent from all meetings of the Board for a period of four (4) consecutive months shall, unless such person has requested and been granted leave of absence by the unanimous vote of the remaining Members of the Board, be considered to have vacated such person's office as a Member of the Board.
- D. All vacancies in membership on the Board, whether occasioned by failure or refusal of any person to accept appointment or by resignation, failure to continue to qualify to serve, expiration of term of office, or otherwise, shall be filled by majority vote of all members of the City Council then holding office. Any Member of the Board other than the Mayor of the City may, by a two-thirds (2/3) vote of all members of the City Council then holding office, be removed from office, with or without cause. For purposes of this Section 41, the term *members of the City Council then holding office* shall be the number of persons authorized from time to time by the City's Home Rule Charter to be members of the City Council, whether or not all such positions are filled at any particular time.
- E. Except as otherwise specifically provided in this Ordinance, the Board shall have absolute and complete authority and power to control, manage, and operate the System and shall control the expenditure and application of the Gross Revenues of the System pursuant to this Ordinance. In connection with the control, management, and operation of the System and the

expenditure and application of the Gross Revenues therefrom, the Board shall be vested with all of the powers of the City with respect thereto, including all powers necessary or appropriate for the performance of all the covenants, undertakings, and agreements of the City contained in this Ordinance, and, with the exception of fixing rates and charges for service rendered by the System, shall have full power and authority to make rules and regulations governing the furnishing of services of the System to customers and for the payment of the same, and for the discontinuance of such services upon failure of customers to pay therefor and, to the extent authorized by law and by this Ordinance, shall have authority to make extensions, improvements, and additions to the System and to acquire by purchase or otherwise properties of every kind in connection therewith. The operational policies of the Board shall parallel those of the City Council insofar as practicable.

- F. The Board shall determine the rates, fees, and charges for services rendered and to be rendered by the System, with due consideration being accorded to the terms, covenants, and conditions contained in this Ordinance and the ordinances authorizing the issuance of any Additional Senior Lien Obligations. In the event any such determination reflects a necessity for the adjustment either by an increase or a reduction of such rates, fees, and charges, then the Board shall submit to the City Council a full report of the basis upon which such proposed adjustment is predicated, accompanied by a formal request from the Board for approval and adoption of the rates, fees, and charges recommended by the Board. If the City Council approves the adjustment thus recommended by the Board, it shall pass an appropriate ordinance placing such adjusted rates, fees, and charges in effect; provided, however, that the rates, fees, and charges for services rendered by the System shall never be reduced in such amounts as will impair the performance of any of the covenants contained in this Ordinance or in any ordinance authorizing the issuance of any Additional Senior Lien Obligations.
- G. The Mayor, with the concurrence of the City Council, annually shall appoint one of the other Members of the Board as the Chairman of the Board. The Board annually shall elect one of its Members as Vice-Chairman of the Board and shall appoint a Secretary and an Assistant Secretary, either or both of whom may, but need not be, a Member or Members of the Board. If a Member of the Board is not appointed as Secretary or Assistant Secretary, then an employee or employees of the Board may be so appointed. The Board may adopt rules for the orderly conduct of its meetings. The Board shall manage and conduct the affairs of the System in a manner consistent with practices ordinarily employed by the boards of directors of private utility corporations operating properties of a similar nature and with the same degree of prudence. The Board shall have at least one meeting monthly. All meetings of the Board shall be open to the public in accordance with the requirements of Chapter 551, as amended, Texas Government Code. The Board is authorized to adopt rules of procedure and standards of conduct for persons attending and participating in its meetings and any public hearings conducted by or on behalf of the Board.
- H. The Board shall appoint and employ all officers, employees, and professional consultants which it may deem desirable, including, without limitation, a chief executive officer of the System, attorneys, auditors, engineers, architects, and other advisers; provided, however, that the City Attorney shall be the chief legal adviser of the Board. The selection of additional attorneys shall be made in consultation with the City Attorney, but the decision of the Board shall be final. The Board may delegate administrative duties and authority to its employees and consultants. No officer or employee of the Board may be employed who shall be related within

the second degree of consanguinity or affinity (or as further restricted by the City's Home Rule Charter) to any Member of the Board or any member of the City Council.

- I. The Board shall obtain and keep continually in force an employees' fidelity and indemnity bond ("blanket" form), or its equivalent, written by a solvent and recognized insurer and covering losses to the amount of not less than One Hundred Thousand Dollars (\$100,000.00).
- J. The Board shall make such provision for an employee retirement plan or pensions for employees of the Board as it may in its discretion determine. The Board may continue in existence the retirement plans in effect on the date of adoption of the ordinance authorizing the issuance of the Series 1992 Bonds for the Waterworks System, the Wastewater Department of the City, and the Water Reuse Department of the City and may change the same from time to time as it may determine. The title to and ownership of funds set aside in accordance with an employee retirement plan shall be held in trust for the benefit of the members of such pension plan.
- K. The Members of the Board, other than the Mayor of the City, shall each receive annual compensation in the amount of \$2,500.00 or such additional amount as may be determined from time to time by the City Council. The Members of the Board shall be entitled to payment by the Board of their reasonable and necessary expenses for the discharge of their duties.
- L. The Members of the Board shall not be personally liable, either individually or collectively, for any act or omission in the performance of their duties as Members of the Board not willfully fraudulent or in bad faith. The Board may authorize the use of Board funds to provide defense for its Members or its employees for civil actions brought against them for any such acts and may hold such Members and employees harmless from any damages awarded against them in any civil action.
- M. The City Manager, or the City Manager's designee, shall be authorized to attend meetings of the Board, and the Board shall provide the City Manager with notice of such meetings in the same manner that such notice is given by the Board to its Members.
- N. The Board when expending funds for improvements and materials and supplies shall be governed by the then current provisions of applicable City policy and the laws of the State of Texas relating to notices to bidders, advertisement thereof, requirements as to the taking of sealed bids based upon specifications for such improvements or purchase, the furnishing of surety bonds by contractors, and the manner of letting contracts.
- O. The City Council reserves the right to require the Board, at the System's expense and payable from the Renewal and Replacement Fund, to conform its installations in the streets, alleys, and public ways of the City to any changes created by City construction projects; provided, however, such City-ordered relocation of System facilities at the System's expense shall be limited, in any Fiscal Year, to an amount not to exceed 5% of the Board's annual budget for Maintenance and Operating Expenses in such Fiscal Year. Relocation costs exceeding such 5% limitation shall be funded through direct payment of such excess costs by the City, through payment to the Board of such excess cost by the City, or through the issuance of Debt.
- P. No Member of the Board, or any officer, agent, or employee of the Board shall have a financial interest, direct or indirect, in any contract with the Board or shall be financially

interested, directly or indirectly, in the sale to the Board of any land, materials, supplies, or services except on behalf of the Board as an officer or employee or as permitted by the provisions of Chapter 171, as amended, Local Government Code, or any other similar general Texas law in effect from time to time, or the City's Home Rule Charter, whichever is most restrictive.

- Q. The Board shall prepare an annual budget to serve as a tool in controlling and administering the management and operation of the System. The annual budget shall reflect an estimate of Gross Revenues and an estimate of the disposition of these revenues in accordance with the flow of funds requirements of this Ordinance. The annual budget shall be presented and approved by the Board at least sixty (60) days prior to the beginning of the Board's Fiscal Year. Immediately following approval of the annual budget by the Board, it shall be submitted to the City Council for review and consultation. The Board may subsequently modify its approved budget by giving notice thereof to the City.
- R. The Board shall prepare and administer, and may amend from time to time, a master plan for the System (the *Master Plan*), addressing the water resource and capital improvement projects required to accommodate the projected growth and development of the service area of the System. The Master Plan (and any amendment thereof) shall be approved by the Board and submitted for consideration and approval by the City Council in accordance with applicable provisions of the City's Home Rule Charter then in effect.
- S. The Board shall provide the City Council with a complete briefing on any matter of litigation which is being contemplated involving the Board as a plaintiff against the City or any of its agencies, and City Council approval shall be obtained by the Board prior to the formal initiation of any such matter of litigation. Unless the City Attorney recommends City Council approval with respect to a particular matter of litigation proposed to be initiated by the Board, all other matters of litigation initiated by the Board may be approved by the Board without approval of the City Council.
- T. The Board shall establish an appeals process for disciplinary actions involving its employees. An appeals committee, composed of at least three (3) persons who are neither employees nor Members of the Board, shall be appointed by the Board, and such committee shall operate under rules established by the Board from time to time. Such committee shall make recommendations to the Chief Executive Officer of the System, with the final determination concerning disposition of a disciplinary action being made by the Chief Executive Officer of the System. The Board shall further establish Equal Employment Opportunity and Affirmative Action programs in compliance with applicable federal and State of Texas guidelines. All personnel policies established by the Board shall parallel those of the City in effect from time to time insofar as practicable.
- U. During each Fiscal Year, the Board shall prepare and formally present to the City Council a minimum of two (2) reports regarding the status of water resource planning and development, other water related issues being undertaken or contemplated by the Board, and other matters previously requested by the City Council.
- V. The City Council reserves the right, by ordinance, to abolish the Board and thereafter transfer control, maintenance, and operation of the System to a department of the City

in accordance with the provisions of the laws of the State of Texas and the City's Home Rule Charter. The City Council may so abolish the Board at any regular or special meeting of the City Council upon the affirmative vote of 3/4 of the members of the City Council then holding office. Such vote must be preceded by at least two (2) public hearings conducted by the City Council at least 30 days apart. Notice of such public hearings and the subject matter to be discussed shall be published at least one (1) time prior to each such hearing in a newspaper of general circulation within the City at least 15 days prior to the hearing. Such hearings may be conducted at a regular or special meeting of the City Council at its regular meeting place or in some other location designated by the City Council, and the calling of such hearings and the authorization of the publication of such notices may be by majority vote of all members of the City Council then holding office at any regular or special meeting of the City Council. The ordinance abolishing the Board shall name the effective date of the abolition of the Board and the transfer of maintenance, control, and operation of the System to the City. By the same procedure, the City Council may subsequently reconstitute the Board and thereafter transfer control, maintenance, and operation of the System to such Board as otherwise set forth in this Ordinance.

\* \* \* \*

## APPENDIX D

FORM OF CO-BOND COUNSEL'S OPINION



Norton Rose Fulbright US LLP 300 Convent Street, Suite 2100 San Antonio, Texas 78205 Kassahn & Ortiz, P.C. 9901 I.H. 10 West, Suite 800 San Antonio, Texas 78230

**FINAL** 

IN REGARD to the authorization and issuance of the "City of San Antonio, Texas Water System Junior Lien Revenue and Refunding Bonds, Series 2018A (No Reserve Fund)" (the *Bonds*), dated May 1, 2018 in the aggregate principal amount of \$208,825,000, we have reviewed the legality and validity of the issuance thereof by the City of San Antonio, Texas (the *City*). The Bonds are issuable in fully registered form only, in denominations of \$5,000 or any integral multiple thereof, and have Stated Maturities of May 15 in each of the years 2019 through 2040, May 15, 2043, and May 15, 2048, unless optionally or mandatorily redeemed prior to Stated Maturity in accordance with the terms stated on the face of the Bonds. Interest on the Bonds accrues from the dates, at the rates, in the manner, and is payable on the dates, all as provided in the ordinance (the *Ordinance*) authorizing the issuance of the Bonds. Capitalized terms used herein without definition shall have the meaning ascribed thereto in the Ordinance.

WE HAVE SERVED AS CO-BOND COUNSEL for the City solely to pass upon the legality and validity of the issuance of the Bonds under the laws of the State of Texas, the defeasance and discharge of the City's obligations being refunded by certain proceeds of the Bonds, and with respect to the exclusion of the interest on the Bonds from the gross income of the owners thereof for federal income tax purposes and for no other purpose. We have not been requested to investigate or verify, and have not independently investigated or verified, any records, data, or other material relating to the financial condition or capabilities of the City or the City's utility system and have not assumed any responsibility with respect to the financial condition or capabilities of the City or the disclosure thereof in connection with the sale of the Bonds. We express no opinion and make no comment with respect to the sufficiency of the security for or the marketability of the Bonds. Our role in connection with the City's Official Statement prepared for use in connection with the sale of the Bonds has been limited as described therein.

WE HAVE EXAMINED the applicable and pertinent laws of the State of Texas and the United States of America. In rendering the opinions herein we rely upon (1) original or certified copies of the proceedings of the City Council of the City in connection with the issuance of the Bonds, including the Ordinance, the Paying Agent/Registrar Agreement between the City and UMB Bank, N.A., Dallas, Texas, and the Escrow Deposit Letter (the Escrow Agreement) between the City and UMB Bank, N.A., Dallas, Texas, as escrow agent (the Escrow Agent), and the certification (the Sufficiency Certificate) of PFM Financial Advisors LLC, as co-financial advisor to the City; of the sufficiency of cash deposited with the Escrow Agent, and a resolution adopted by the Board of Trustees (the Board) of the San Antonio Water System (SAWS); (2) customary certifications and opinions of officials of the City and SAWS; (3) certificates executed by officers of the City and SAWS relating to the expected use and investment of proceeds of the Bonds and certain other funds of the City and SAWS, and to certain other facts within the knowledge and control of the City and SAWS; and (4) such other documentation, including an examination of the Bond executed and delivered initially by the City, and such matters of law as we deem relevant to the matters discussed below. In such examination, we have assumed the authenticity of all documents submitted to us as originals, the conformity to original copies of all documents submitted to us as certified copies, and the accuracy of the statements and

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information contained in such certificates. We express no opinion concerning any effect on the following opinions which may result from changes in law effected after the date hereof.

BASED ON OUR EXAMINATION, IT IS OUR OPINION that the Escrow Agreement has been duly authorized, executed, and delivered by the City and, assuming due authorization, execution, and delivery thereof by the Escrow Agent, is a valid and binding obligation, enforceable in accordance with its terms (except to the extent that the enforceability thereof may be affected by bankruptcy, insolvency, reorganization, moratorium, or other similar laws affecting creditors' rights or the exercise of judicial discretion in accordance with general principles of equity), and that the outstanding obligations refunded and to be discharged, paid, and retired with certain proceeds of the Bonds are regarded as being outstanding for purposes of the ordinances authorizing their respective issuance only for the purpose of receiving payment from the funds held in trust with the Escrow Agent, pursuant to the Escrow Agreement and in accordance with the provisions of Chapter 1207, as amended, Texas Government Code. In rendering this opinion, we have relied upon the Sufficiency Certificate as to the sufficiency of cash deposited with the Escrow Agent pursuant to the Escrow Agreement for the purposes of paying the outstanding obligations refunded and to be retired with the proceeds of the Bonds and the interest thereon.

BASED ON OUR EXAMINATION, IT IS FURTHER OUR OPINION that the Bonds have been duly authorized and issued in conformity with the laws of the State of Texas now in force and that the Bonds are valid and legally binding special obligations of the City enforceable in accordance with the terms and conditions described therein, except to the extent that the enforceability thereof may be affected by bankruptcy, insolvency, reorganization, moratorium, or other similar laws affecting creditors' rights or the exercise of judicial discretion in accordance with general principles of equity. The Bonds are payable from and equally and ratably secured, together with the currently outstanding Junior Lien Obligations, solely by a lien on and pledge of the Net Revenues, derived from the operation of the System that is junior and inferior to the lien thereon and pledge thereof securing the payment of the currently outstanding Senior Lien Obligations and any Additional Senior Lien Obligations hereafter issued by the City, but prior and superior to the lien thereon and pledge thereof securing the payment of the currently outstanding Subordinate Lien Obligations and any Additional Subordinate Lien Obligations or Inferior Lien Obligations hereafter issued by the City. The Bonds are issued as Junior Lien Obligations-No Reserve Fund and, as such, are not additionally secured by a lien on and pledge of the Reserve Fund. In the Ordinance, the City retains the right to issue Additional Senior Lien Obligations, Additional Junior Lien Obligations, Additional Subordinate Lien Obligations, and Inferior Lien Obligations, without limitation as to principal amount but subject to any terms, conditions, or restrictions as may be applicable thereto under law or otherwise. The Bonds do not constitute a legal or equitable pledge, charge, lien, or encumbrance upon any property of the City or SAWS, except with respect to the Net Revenues. The holders of the Bonds shall never have the right to demand payment of the Bonds out of any funds raised or to be raised by taxation.

IT IS FURTHER OUR OPINION THAT, assuming continuing compliance after the date hereof by the City and the Board with the provisions of the Ordinance and in reliance upon the Sufficiency Certificate as to the sufficiency of cash deposited with the Escrow Agent pursuant to the Escrow Agreement and upon the representations and certifications of the City and SAWS

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made in a certificate of even date herewith pertaining to the use, expenditure, and investment of the proceeds of the Bonds, under existing statutes, regulations, published rulings, and court decisions (1) interest on the Bonds will be excludable from the gross income, as defined in section 61 of the Internal Revenue Code of 1986, as amended to the date hereof (the *Code*), of the owners thereof for federal income tax purposes, pursuant to section 103 of the Code and (2) interest on the Bonds will not be included in computing the alternative minimum taxable income of the owners thereof who are individuals or, except as hereinafter described, corporations.

FOR TAXABLE YEARS THAT BEGAN BEFORE JANUARY 1, 2018, interest on the Bonds owned by a corporation will be included in such corporation's adjusted current earnings for purposes of computing the alternative minimum tax on such corporation, other than an S corporation, a qualified mutual fund, a real estate investment trust, a real estate mortgage investment conduit, or a financial asset securitization investment trust. The alternative minimum tax on corporations has been repealed for taxable years beginning on or after January 1, 2018.

WE EXPRESS NO OTHER OPINION with respect to any other federal, state, or local tax consequences under present law or any proposed legislation resulting from the receipt or accrual of interest on, or the acquisition or disposition of, the Bonds. Ownership of tax exempt obligations such as the Bonds may result in collateral federal tax consequences to, among others, financial institutions, life insurance companies, property and casualty insurance companies, certain foreign corporations doing business in the United States, S corporations with subchapter C earnings and profits, owners of an interest in a financial asset securitization investment trust, individual recipients of Social Security or Railroad Retirement Benefits, individuals otherwise qualifying for the earned income credit, and taxpayers who may be deemed to have incurred or continued indebtedness to purchase or carry, or who have paid or incurred certain expenses allocable to, tax–exempt obligations.

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 thereafter come to our attention or to reflect any changes in any law that may thereafter 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.

Norton Rose Fulbright US LLP

Kassahn & Ortiz, P.C.







