



**San  
Antonio  
Water  
System**



**Water Supply Fee Semiannual Report**



**July-December 2021**



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# Water Supply Fee Semiannual Report July-December 2021

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About the cover:

Top Right: Sunset at the Agua Vista Station looking at storage tank #1 and solids removal area. The Agua Vista Station receives about 48 million gallons of Vista Ridge water per day.

Left: A newly replaced outdoor spigot at a home that was affected by Winter Storm Uri. SAWS administered the Community Pipe Repair (CPR) program which assisted low-income households with plumbing repairs through 2021.

Bottom Right: A flagstone garden walkway with native Texas fall favorites including red sages, zinnias, mistflowers and golden rod.

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## Introduction

San Antonio Water System (SAWS) is pleased to present the July - December 2021 Water Supply Fee Semiannual Report to San Antonio City Council. This report is a requirement of Chapter 34 of the Municipal Code, Section 34-1349 and put in place by a 2005 initiative to ensure SAWS was achieving the development of the water supply plan. The requirement has never been altered and as such is submitted to City Council twice each year, covering the periods of January through June, and July through December.

SAWS was created by an act of the City Council in May 1992, through Ordinance 75686. SAWS serves over 2 million people. The service area covers 929 square miles primarily in Bexar County and portions of Atascosa, Comal, Kendall, and Medina counties.

This report documents the water resources activities pertaining to the implementation of San Antonio Water System's long-term planning efforts, with focus on activities during the period of July 1 through December 31, 2021. The report will:

- Review the progress on the Water Management Plan,
- Provide a status report on the utility's water production,
- Recap the water supplies developed and costs during the reporting period,
- Provide an update on the acquisition of potential additional water supplies,
- Summarize revenues generated from the water supply fee, capital spending on water supply projects, and,
- Summarize the maintenance and operational expenses for completed projects.

SAWS had a total potable demand of 249,990 acre-feet (AF) in 2021 and 127,164 AF during the second half of 2021. Of that total, 146,974 AF came from the Edwards Aquifer, 88,679 AF of which, went to distribution during the second half of 2021. During this reporting period, Edwards Aquifer supply accounted for approximately 70 percent of the total potable demand. One AF of water is equal to 325,851 gallons.

The current groundwater and surface water supply portfolio consists of:

- Edwards Aquifer
- Canyon Lake
- Carrizo Aquifer
- Lake Dunlap
- Lower Wilcox Aquifer
- Medina Lake & River Rights
- Recycled Water (non-potable)
- Simsboro Aquifer
- Trinity Aquifer

## EAA: Critical Period Update

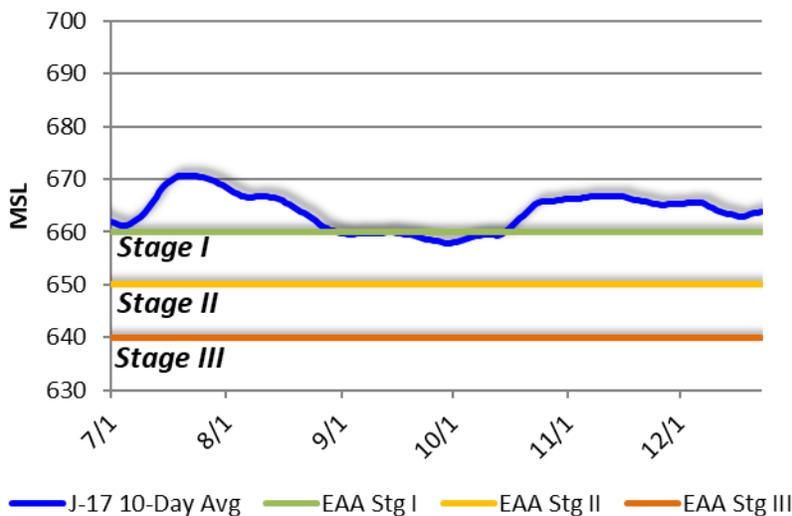
San Antonio recorded 17 inches of rain for the second half of the year, 2.63 inches above historical average of 14.37 inches. In total SAWS received 34.61 inches in 2021, 2.24 inches over the historical average of 32.37 inches.



SAWS finished the second half of 2021 with a 5.71% critical period drought cutback to its Edwards Aquifer supply through the Edwards Aquifer Authority (EAA). SAWS customers in Stage 1 drought restrictions through City of San Antonio ordinance, may water with an irrigation system or sprinkler once a per week before 11:00am or after 7:00pm on the designated watering day.

Entity	Start Date	End Date	Number of Days
EAA Critical Period	September 1 <sup>st</sup> , 2021	October 14 <sup>th</sup> , 2021	44
SAWS Drought Restrictions	September 1 <sup>st</sup> , 2021	November 2 <sup>nd</sup> , 2021	62

### Edwards



San Antonio J-17 Index well level for the reporting period is shown in the graph above. Edwards Aquifer 10-day average levels dropped below 660' mean sea level (msl) between September and October.

## Water Supply Summary

This section summarizes the status for each water resource project for the second half of 2021.

Supply	Acre-Feet Distributed (July-Dec 2021)	Activity
Edwards Aquifer	74,465	<ul style="list-style-type: none"> <li>Permitted inventory for 2021 is 269,441 AF</li> <li>Distributed 146,974 AF of Edwards Water, 51.2% of all potable and non-potable supplies</li> <li>Regulatory cutback was 5.71% through December 31, 2021</li> </ul>
Medina Lake and River System	0	<ul style="list-style-type: none"> <li>Medina Lake ended 2021 at 25.9% of capacity</li> </ul>
Direct Recycled Water	6,353 <ul style="list-style-type: none"> <li>3,309 (consumptive customers)</li> <li>2,627 (river flow)</li> <li>417 (Mitchell Lake)</li> </ul>	<ul style="list-style-type: none"> <li>System Supply: 25,000 AF</li> </ul>
Trinity Aquifer	7,149	<ul style="list-style-type: none"> <li>Above average precipitation in the region equated to increases in Trinity Aquifer recharge in Q2 of 2021. This led to greater production volumes in the second half of 2021</li> </ul>

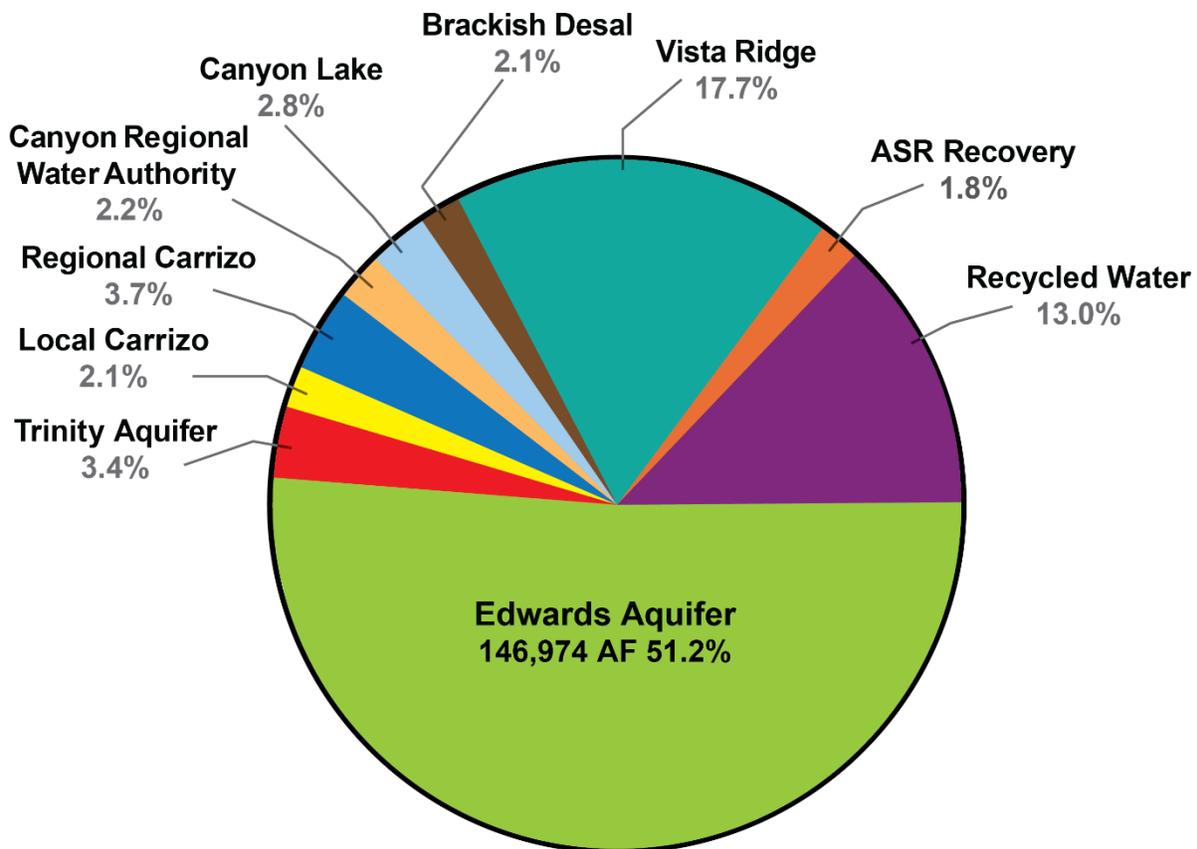
Supply	Acre-Feet Distributed (July-Dec 2021)	Activity
Canyon Regional Water Authority (CRWA)	3,289	<ul style="list-style-type: none"> <li>Received 100% of contracted volume in 2021</li> </ul>
Canyon Lake	3,950	<ul style="list-style-type: none"> <li>Canyon Lake ended 2021 at 99.5% of capacity</li> </ul>
H <sub>2</sub> Oaks Aquifer Storage and Recovery	ASR storage to distribution system: 0 AF Edwards Water Stored: 18,426 AF	<ul style="list-style-type: none"> <li>Record storage volume of Edwards Aquifer water on December 31, 2021: 192,317 AF</li> </ul>
H <sub>2</sub> Oaks Carrizo Aquifer	2,997	<ul style="list-style-type: none"> <li>Produced 30% of the 9,900 AF during this reporting period</li> </ul>
H <sub>2</sub> Oaks Brackish Groundwater Desalination Program	2,932	<ul style="list-style-type: none"> <li>Average production 5.2 MGD</li> </ul>
Regional Carrizo Project	6,065	<ul style="list-style-type: none"> <li>Includes SAWS Buckhorn wellfield production in Gonzales County plus water purchased from Schertz-Seguin Local Government Corporation</li> <li>Purchased 492 AF from SSLGC in 2021</li> </ul>
Vista Ridge	27,256	<ul style="list-style-type: none"> <li>Received 55% of the contractual 50,000 AF during this reporting period</li> </ul>

Planned Projects 2017-2025	Status
Conservation Programming	<p>Program highlights from the second half of 2021 include:</p> <ul style="list-style-type: none"> <li>• Sending over 160,000 personalized WaterSmart reports per month helping single family residential customers identify and participate in conservation opportunities. All low-income customers receiving an affordability discount that SAWS has an email for are auto-enrolled in WaterSmart reports.</li> <li>• 571 Plumbers to People and Conservation Makeover visits in the second half of 2021, with ongoing efforts to enroll more customers through collaboration with the Uplift Team</li> <li>• Be Ready Free Winterization Campaign was launched in November 2021 and proactively helped protect 226 vulnerable customers who received Community Pipeline Repair (CPR) assistance after Winter Storm Uri to ensure exposed pipes and hose bibs would be better protected for future severe weather events</li> <li>• 2,366 Irrigation Consultations completed at homes in 2021, averaging over 1,100 gallons per month in savings at each home</li> <li>• 267 households and 9 businesses used Irrigation Efficiency rebates in 2021</li> <li>• 228 WaterSaver Landscape and 26 WaterSaver PatioScape Coupons redeemed in the second half of 2021 to replace grass with drought-tolerant plants and patioscapes</li> <li>• Over 7,800 customers are signed up for the WaterSaver Rewards program, with virtual and in-person Rewards education opportunities provided by SAWS Conservation and non-profit partner organizations</li> <li>• Over 2,900 required accounts are in compliance with the Irrigation Check-Up regulation as of the end of 2021, resulting in 80% overall compliance</li> <li>• Over 700 flow sensor rebates were approved, and 132 smart irrigation controller coupons have been redeemed in the second half of 2021, helping customers better understand and control their water consumption</li> <li>• Conservation initiatives have successfully targeted the need for management of outdoor water demands</li> <li>• Programming to reduce planned average year consumption from 124 gallons per capita per day (GPCD) in 2017 to 111 GPCD in 2025.</li> </ul>

## Distribution to Customers

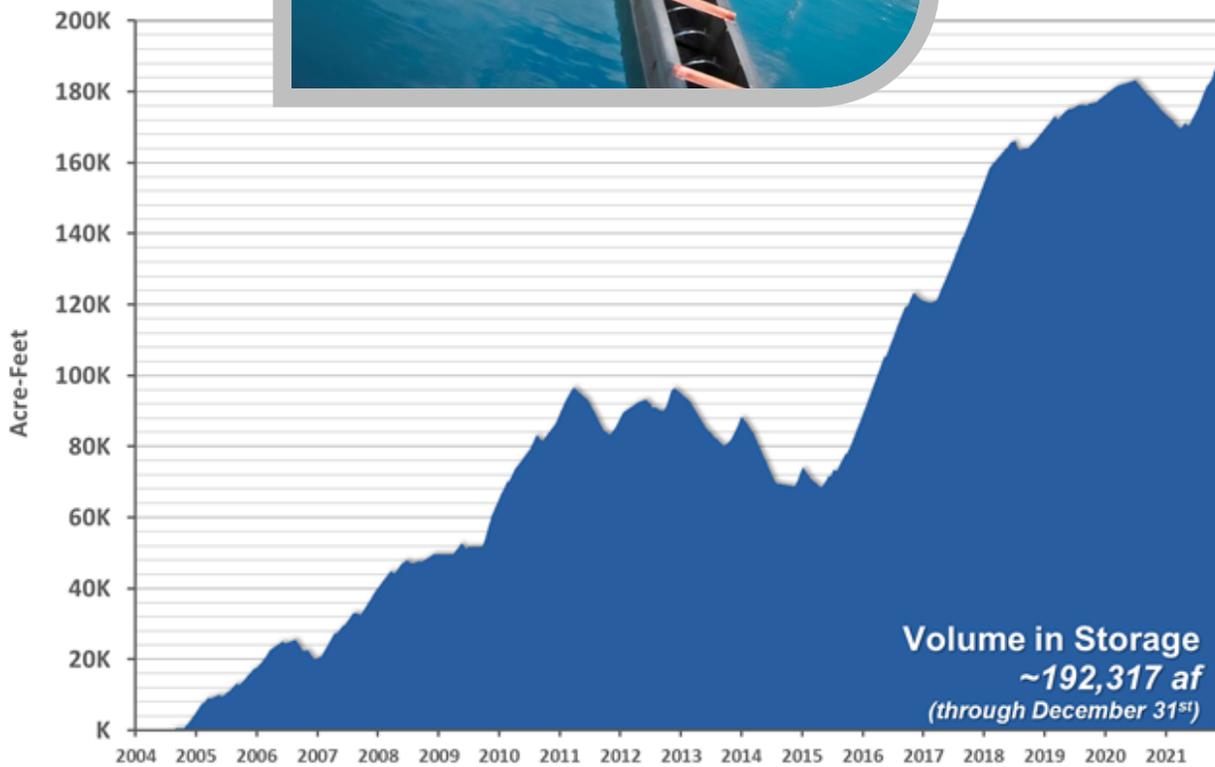
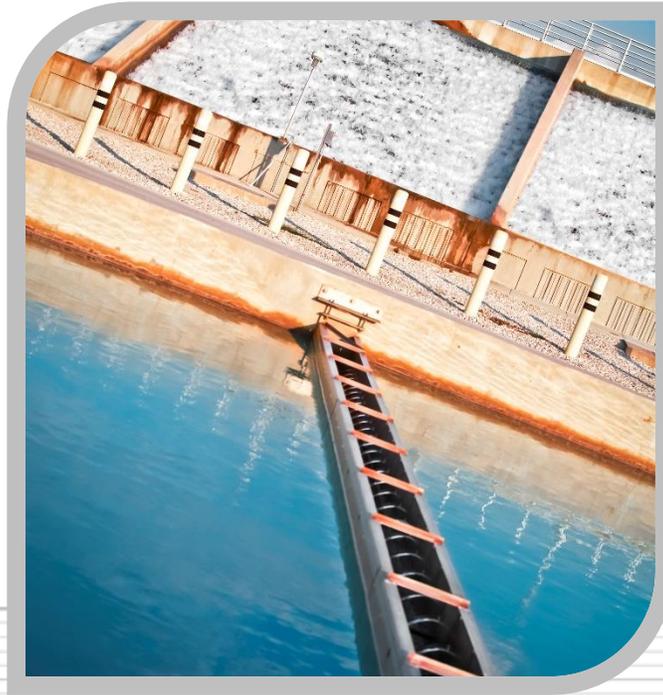
### 2021 Distribution of Potable and Non-Potable Water to Customers

In 2021, San Antonio Water System (SAWS) distributed a total potable water volume of 249,990 acre-feet (AF). This does not include the 20,907 AF of Edwards Aquifer water that was stored in the H<sub>2</sub>Oaks Aquifer Storage & Recovery facility. In addition, 37,183 AF of recycled water was supplied to our customers; 24,817 AF to CPS Energy and 12,366 AF to the remaining customers. The total water demand was supplied by the following sources:



\*The volumes in the above pie chart represent the volume distributed to SAWS customers for the full 2021 year and may differ from volumes in the water supply summary activity which are based on produced volumes for SAWS owned supplies.

While SAWS didn't recover any water from the Aquifer Storage and Recovery (ASR) facility, SAWS stored 18,426 AF of Edwards Aquifer water in ASR during this reporting period, which brought the total net volume of water stored to an all-time high of 192,317 AF on December 31, 2021.



Source: San Antonio Water System

## Financial Report

### Water Supply Fee

On October 19, 2000, the San Antonio City Council via Ordinance #92753 approved a funding mechanism for the construction and development of additional water resources to meet projected water demands for the SAWS service area for the next 50 years.

The Water Supply Fee assists in funding expenditures for the development of new water resources to include all operating, maintenance, research and development, and capital costs (including debt service when capital expenditures are debt funded). As mentioned earlier, SAWS has the largest direct recycled water system in the nation, which moderates the size of the Water Supply Fee by reducing the need for additional water supplies.



*The SAWS Agua Vista Station at sunset, looking at the lime silos with saturator tanks.*

The Water Supply Fee per 100 gallons in 2021 for each customer class is summarized below.

<b>RATE CLASS</b>	<b>Usage Block Thresholds Gallons</b>	<b>Assessed Fee RATE PER 100 GALLONS</b>
<i>Residential</i>	2,992	\$0.1585
	4,489	\$0.2772
	5,985	\$0.3563
	7,481	\$0.4357
	10,473	\$0.5150
	14,962	\$0.5942
	20,199	\$0.7129
	Over 20,199	\$1.0296
<i>General</i>	Base*	\$0.2989
	125% of Base	\$0.3438
	175% of Base	\$0.4482
	Over 175% of Base	\$0.5232
<i>Wholesale</i>	Base**	\$0.3892
	Over Base	\$1.1681
<i>Irrigation</i>	8,229	\$0.3911
	17,954	\$0.5474
	162,316	\$0.7039
	Over 162,316	\$0.8996

\* The Base Use for General Class is defined as 100 percent of the Annual Average Consumption.

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

## Water Supply Fee Financial Reports

The following tables provide an accounting of the collection and uses of the Water Supply Fee since its inception in 2001.

<b>San Antonio Water System Sources and Uses of Funds Water Supply 2001 – 2021 (\$ in Millions)</b>	
Water Supply Fee	\$2,173.93
Operating Transfer from Water Delivery	184.81
Non-operating income & Other	107.87
Recycle Water Revenues	93.50
Water Supply Impact Fees	340.56
Bond Proceeds	884.35
Water Supply O&M	(1,276.04)
Debt Service <sup>1</sup>	(818.95)
Capital Funding	<u>(1,385.83)</u>
Funds Provided	<u>304.20</u>
Restrictions on Cash	150.65
Designations on Cash	<u>98.34</u>
Unrestricted/Undesignated Funds	<u>\$ 55.21</u>

<sup>1</sup> Includes Principal, Interest and Bond Defeasance Payments.

**San Antonio Water System**  
**Operating & Maintenance Expenditures**  
**2001 – 2021**  
*(\$ in Millions)*

Operating and Maintenance Costs	
Western Canyon Project - GBRA	\$ 123.14
Oliver Ranch - Lease Payments & Production Costs	33.98
BSR – Lease Payments & Production Costs	6.97
Regional Carrizo - Water Sales Agreements & Other <sup>1</sup>	96.01
Brackish Desalination	18.49
Edwards - Lease Expense & Other	82.60
Aquifer Storage & Recovery Project	56.77
Aquifer Protection & Compliance	51.87
Vista Ridge	181.58
Recycled Water Operations	48.57
Canyon Regional	42.39
Medina Lake	17.42
Trinity Stein/Rogers Ranch	66.28
Conservation Program - net loss/(income)	(14.49)
Stormwater program - net loss	2.82
LCRA - Study Period and Other, Net of Cash Recovery <sup>2</sup>	13.77
Lower Guadalupe Water Supply Project	6.26
Simsboro Aquifer	4.41
Recharge Initiative	0.80
Other Water Resources Cost	22.53
Facilities Maintenance	51.34
Communication & Outreach	18.44
Legal - Water Law	9.69
Billing & Collections	75.59
Finance & Information Systems	68.94
Corporate Facilities	16.25
Human Resources, Safety, Other Benefits <sup>3</sup>	61.26
Other Support Services <sup>4</sup>	37.54
Transfer to COSA	74.82
<b>Total Operating &amp; Maintenance</b>	<b>\$1,276.04</b>

<sup>1</sup> Includes a \$12.4 million write-off of pipeline design costs made obsolete with the agreement with Schertz-Seguin Local Government Corporation to transport water from Gonzales County to SAWS.

<sup>2</sup> Total program cost net of cash recovered from LCRA settlement.

<sup>3</sup> Includes workers compensation and dependent and retiree health insurance.

<sup>4</sup> Includes executive management, Board of Trustees, Internal Audit, Legal (corporate) and other miscellaneous.

**San Antonio Water System**  
**Water Supply Capital**  
**Spending 2001 – 2021**  
*(\$ in Millions)*

	FUNDING		
	Cash Funding	Debt	Total
Water Supplies:			
Non-Edwards Water Supplies			
Western Canyon Project - GBRA	\$ 3.31	\$ 10.87	\$ 14.18
Trinity Aquifer Projects (Oliver Ranch/BSR)	12.49	-	12.49
Local Carrizo	1.31	13.51	14.82
Brackish Desalination	59.26	149.37	208.63
Regional Carrizo	56.00	63.81	119.81
Aquifer Storage & Recovery Project (ASR)	6.57	245.60	252.17
Expanded Carrizo	0.44	0.26	0.70
Recycled Water System	1.61	85.34	86.95
Total Non-Edwards	140.99	568.76	709.75
Edwards Aquifer Water Rights	87.72	153.16	240.88
Total Water Supply Capital Spending	228.71	721.92	950.63
Other Capital Spending:			
Integration	260.22	136.72	396.94
Land, Buildings & Equipment	32.95	5.31	38.26
	293.17	142.03	435.20
Total Capital Spending	\$ 521.88	\$ 863.95	\$ 1,385.83

<b>San Antonio Water System</b> <b>Cash Restrictions/Designations</b> <b>Water Supply</b> <b>2001 – 2021</b> <i>(\$ in Millions)</i>	
Restrictions on Cash:	
Operating Reserve	\$ 39.39
Reserve Fund	19.10
Construction Funds:	
Debt Funds <sup>1</sup>	17.20
Impact Fees <sup>2</sup>	<u>74.96</u>
	150.65
Designations on Cash:	
PGA Monitoring/WQEE/Conservation	19.18
Interest Mitigation Fund <sup>3</sup>	1.60
2021 & Prior CIP program (cash funds)	<u>77.56</u>
	98.34
Unrestricted/Undesignated Funds	<u>55.21</u>
Total Water Supply Funds Available	<u>\$ 304.20</u>

<sup>1</sup> Represents bond proceeds currently on hand. These proceeds have all been committed to be used on existing projects.

<sup>2</sup> Represents unspent impact fees. These have all been committed to fund CIP projects in the 2019 & prior CIP program or they will be used to help fund future CIP programs.

<sup>3</sup> Represents funds accumulated as a result of favorable variances in debt service. Funds may be used for CIP or to otherwise reduce debt service costs.

## Acronyms and Abbreviations

AF	Acre-Foot (325,851 gallons)
AFY	Acre-Feet per Year
ASR	Aquifer Storage & Recovery Facility / underground storage facility
CIP	Capital Improvement Program
CRWA	Canyon Regional Water Authority
EAA	Edwards Aquifer Authority
GPCD	Gallons per Capita per Day
MGD	Million Gallons per Day
MSL	Mean Sea Level
SAWS	San Antonio Water System
SCADA	Supervisory Control and Data Acquisition
WMP	Water Management Plan

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