



Water Supply Fee Semiannual Report

July-December 2020

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About the cover:

Top Left: The construction crew is in the process of digging a trench for the installation of the collection line from the Wilcox aquifer well BGD-14 toward the desalination plant.

Top Right: Gardening is an outlet for many and in 2020 over 18,000 San Antonian's received the GardenStyleSA newsletter for weekly gardening advice.

Bottom: More time was spent outdoors or learning about the outdoors during the COVID-19 pandemic, with over 5,500 SAWS customers signed up for the WaterSaver Rewards program and many participating in virtual education opportunities.

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Introduction

San Antonio Water System (SAWS) is pleased to present the July - December 2020 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 approximately 1.9 million people. The service area covers 933 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, 2020. 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 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 140,642 acre-feet (AF) during the second half of 2020. Included in this total is 83,222 AF of Edwards Aquifer production to distribution. During this reporting period, Edwards Aquifer supply accounted for approximately 59 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
- Simsboro Aquifer
- Trinity Aquifer

In 2020, the Vista Ridge Project was added to SAWS' diversified water supply portfolio. Environmentally, the diversification from this project results in substantially reduced dependence on San Antonio's historically predominate groundwater supply supporting endangered species.

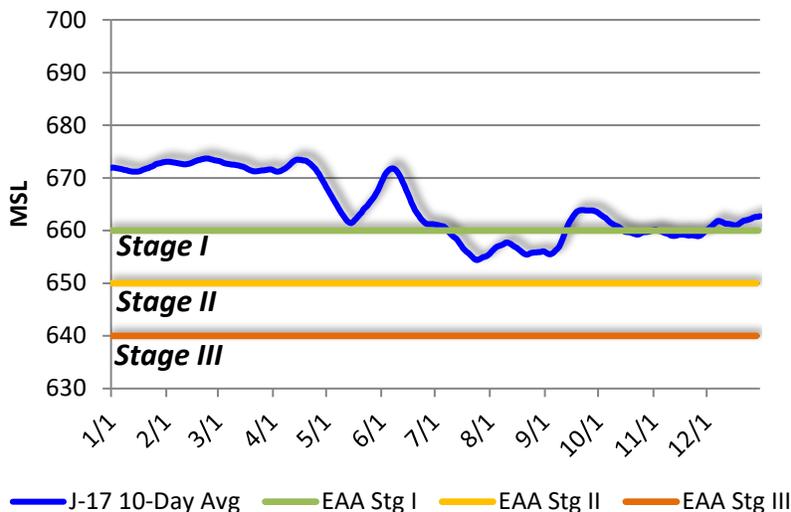
Over 2,500 irrigation consultations were completed, mostly no-contact, in 2020, promoting water conservation in landscapes.

SAWS ended 2020 with a 6.25% critical period cutback to its Edwards Aquifer supply, as the Edwards Aquifer Authority (EAA) declared Stage 1 critical period through the end of December. San Antonio recorded 6.66 inches of rain for the second half of the year, 9.50 inches below historical average of 16.16 inches. Total precipitation in 2020 was 20.70 inches, this is 11.56 inches below the 32.26 inches for the 1981-2010 historical average. SAWS ended December 31 with 114 days of drought restrictions, which restricted customers from using spray irrigation before 11a.m. or after 7 p.m. on any day.



San Antonio J-17 Index well levels for the reporting period are shown in the graph below. Edwards Aquifer 10-day average levels dropped below 660' mean sea level (msl) periodically through the second half of 2020.

Edwards



Water Supply Summary

This section summarizes the status for each water resource project for the first half of 2020.

Supply	Acre-Feet Distributed (July-Dec. 2020)	Activity
Edwards Aquifer	83,222	<ul style="list-style-type: none"> Permitted inventory for 2020 is 271,146 AF Regulatory cutbacks through December 31, 2020
Medina Lake and River System	0	<ul style="list-style-type: none"> Medina Lake ended 2020 at 42 percent of capacity and with below average rainfall for the second half of 2020.
Direct Recycled Water	8,957 <ul style="list-style-type: none"> 4,419 (consumptive) 3,139 (river flow) 1,399 Mitchell Lake 	<ul style="list-style-type: none"> System Supply: 25,000 AF Contracted consumptive commitments: 12,024 AF (excludes volumes for streamflow augmentation) Volume available for consumptive use: 12,963 AF
Trinity Aquifer	2,734	<ul style="list-style-type: none"> Decreased precipitation in the region led to lower than average Trinity Aquifer recharge in 2020 which led to lower production volumes Received 6,601 AF in a dry year or 33% out of a maximum available 20,000 AF during a wet year

Supply	Acre-Feet Distributed (July-Dec. 2020)	Activity
Canyon Regional Water Authority (CRWA)	3,900	<ul style="list-style-type: none"> Received 6,288 AF or 99% of the contractual volume of 6,300 AF in 2020
Canyon Lake	3,805	<ul style="list-style-type: none"> SAWS received 8,072 AF in 2020 which is 100% of the volume made available to SAWS from GBRA
H ₂ Oaks Aquifer Storage and Recovery	ASR storage to distribution system: 9,570 AF Edwards Water Stored: 17 AF	<ul style="list-style-type: none"> Total volume of stored Edwards water on December 31, 2020: 173,527 AF <ul style="list-style-type: none"> Total volume of Edwards water stored/credited on behalf of the EAHCP 2013-2020: 126,000 AF Infrastructure repairs limited HCP storage in the second half of 2020
H ₂ Oaks Carrizo Aquifer (Bexar County)	4,266	<ul style="list-style-type: none"> Produced 6,149 AF or 62% out of 9,900 AF available
H ₂ Oaks Brackish Groundwater Desalination Program	3,696	<ul style="list-style-type: none"> Producing at 6.6 mgd Produced 6,706 AF or 60% out of 11,200 AF available Construction of the electrical/SCADA building, yard piping, well site facilities, and flush ponds for both BGD-14 and Test Well 1 (TW-1) was initiated All collection system piping from TW-1 and BDG-14 has been completed
Regional Carrizo Project	5,648	<ul style="list-style-type: none"> Includes SAWS Buckhorn wellfield production in Gonzales County plus water purchased from Schertz-Seguin Local Government Corporation Produced 11,505 AF or 98% of the permitted 11,688 AF available Purchased 486 AF from SSLGC in 2020

Planned Projects 2017-2025	Status
<p>Central Water Integration Pipeline & Vista Ridge Production</p>	<ul style="list-style-type: none"> • CWIP – Construction for the CWIP, the consortium of 8 projects required to integrate Vista Ridge water into the existing SAWS distribution system, is complete. • CWIP – Following completion of the tunnel project (CWIP Segment 5-1) in July 2020, water distribution from the Agua Vista Station in Stone Oak to the Basin Pump Station over 10 miles away began, allowing SAWS to diversify the water supply for over 20% of customers and lessen dependence on the Edwards Aquifer. • Vista Ridge - With tunnel completion, Vista Ridge deliveries increased throughout the summer reaching daily max volume in late September. • 23,801 acre-feet distributed July – December 2020
<p>Conservation Programming</p>	<p>Program highlights from 2020 include:</p> <ul style="list-style-type: none"> • Continuing WaterSmart Software Pilot, which is open to all residential customers. Sending over 75,000 personalized reports per month helping customers identify and participate in conservation opportunities. About one-third of customers enrolled in the program are customers designated as low-income customers receiving an affordability discount • 1,328 requests for help through Plumbers to People and Conservation Makeover in the first half of 2020, with ongoing efforts to enroll more customers through collaboration with the Uplift Team • 2,585 Irrigation Consultations completed at homes in 2020, averaging over 1,100 gallons per month in savings at each home. 87% of these were no-contact consultations due to the Covid-19 Pandemic. • 262 households and 75 businesses used Irrigation Efficiency rebates in 2020 • 1,374 WaterSaver Landscape and 180 WaterSaver PatioScape Coupons redeemed in 2020 to replace grass with drought-tolerant plants and patioscapes • Over 5,500 customers are signed up for the WaterSaver Rewards program, with virtual Rewards education opportunities occurring weekly since the Covid-19 pandemic began • Over 2,900 required accounts are in compliance with the Irrigation Check-Up regulation in 2020, resulting in 83% overall compliance • Over 6,000 flow sensor rebates have been approved and 357 smart irrigation controller coupons have been issued in 2020, helping customers better understand and control their water consumption • Conservation initiatives have successfully targeted the need for management of outdoor water demands • Programming to reduce planned average year consumption from 124 gallons per capita per day (GPCD) in 2017 to 111 GPCD in 2025.

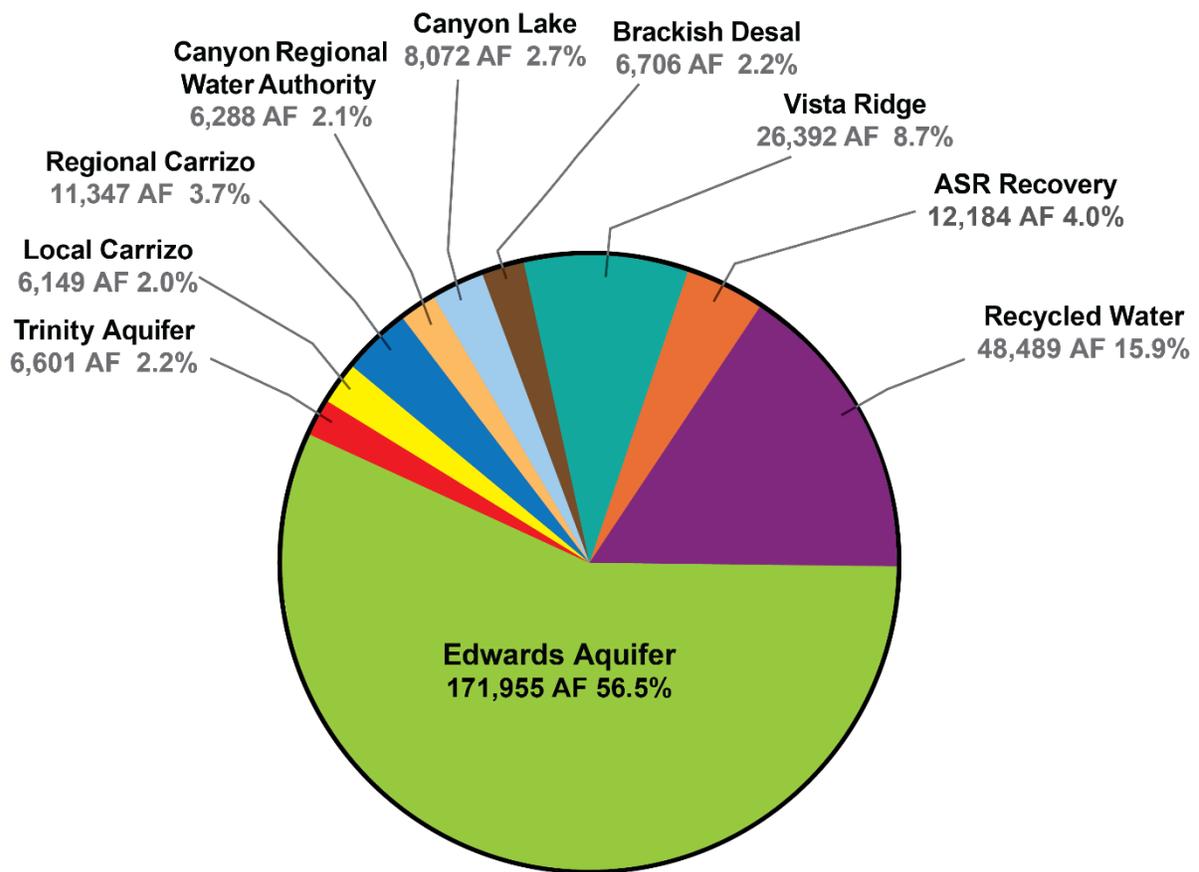
Planned Projects 2026-2040 (2017 WMP assumptions)	Status
Conservation Programming	<ul style="list-style-type: none"> • Programming to reduce average year consumption from 110 GPCD in 2026 to 96 GPCD in 2040 • Strategies to achieve reduction will include continued investment in conservation education, incentives, and reasonable regulation • There will be continued development of programs that help residential and commercial customers manage their water usage. This will accelerate adoption of water efficient technology, encourage use of technology and other techniques to monitor leaks and education to encourage adoption of behavioral changes that save water

Planned Projects 2041-2070 (2017 WMP assumptions)	Status
Conservation Programming	<ul style="list-style-type: none"> • Programming to reduce average year consumption from 96 GPCD in 2041 to 88 GPCD in 2070 • Strategies to achieve reduction will include continued investment in conservation education, incentives, and reasonable regulation • There will be continued development of programs that help residential and commercial customers manage their water usage. This will accelerate adoption of water efficient technology, encourage use of technology and other techniques to monitor leaks and education to encourage adoption of behavioral changes that save water
Brackish Groundwater Desalination Program	<ul style="list-style-type: none"> • Future phases will deliver up to an additional 22,400 AFY of water, for a project total of up to 33,600 AFY • All additional phases will be constructed outside Bexar County • Construction is anticipated to begin in the late 2040s depending on demand • Future expansion may deliver an additional 50,000 AFY scheduled for the 2060s
Expanded Carrizo (Bexar County) Project	<ul style="list-style-type: none"> • Future phases are anticipated to provide an additional 7,000 AF annually for each phase for a total of 21,000 AFY • Construction is anticipated to begin in the late 2040s • Project can be designed and constructed quickly, relative to other projects

Distribution to Customers

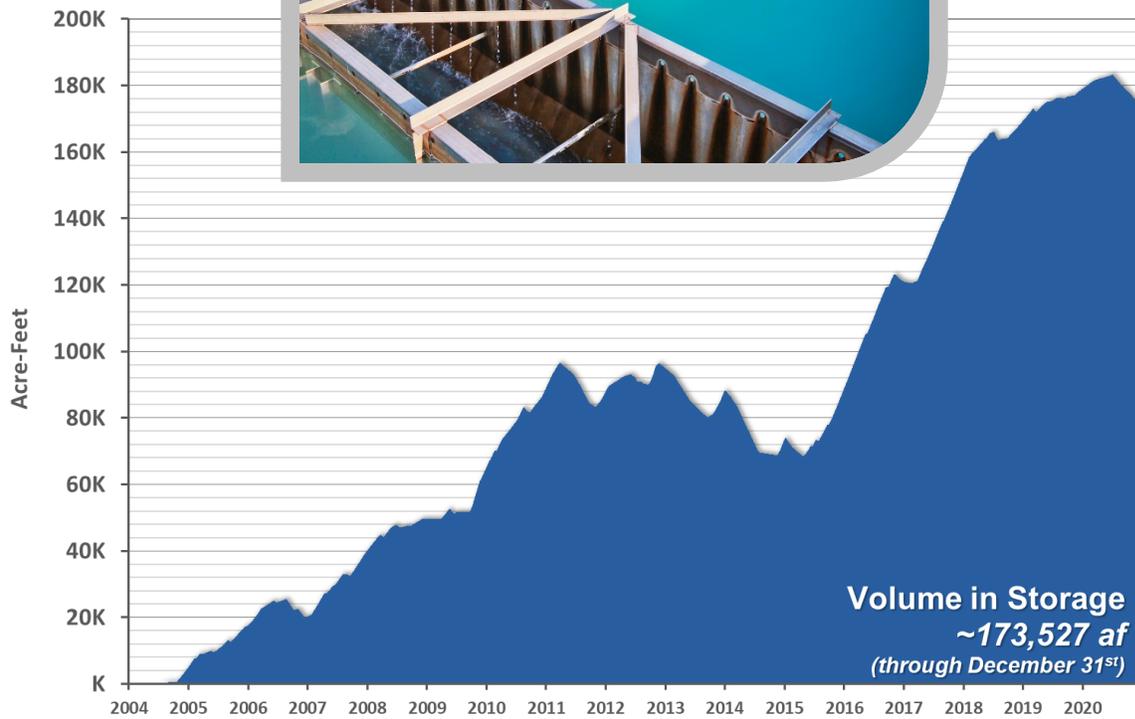
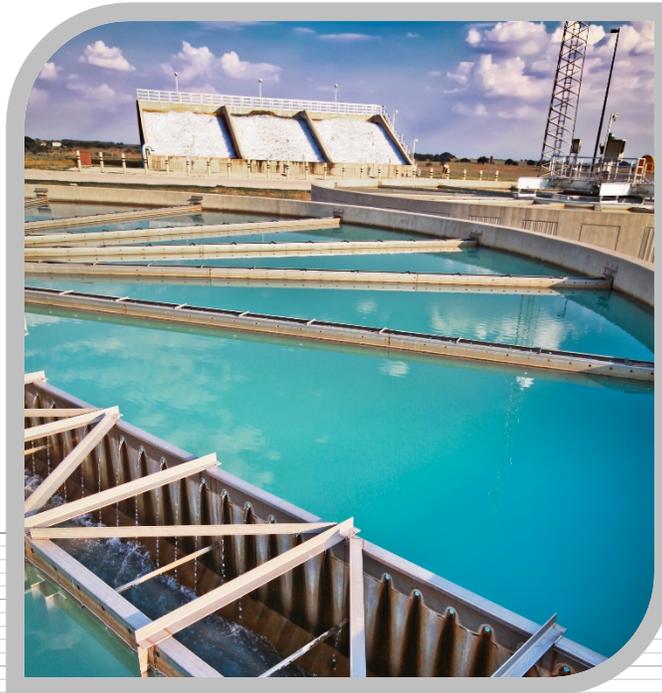
2020 Distribution of Potable and Non-Potable Water to Customers

In 2020, San Antonio Water System (SAWS) distributed a total potable water volume of 255,694 acre-feet (AF). This does not include the 6,831 AF of Edwards Aquifer water that was stored in the H₂Oaks Aquifer Storage & Recovery facility. In addition, 48,489 AF of recycled water was supplied to our customers; 33,257 AF to CPS Energy and 15,232 AF to the remaining customers. The total water demand was supplied by the following sources:



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

While SAWS recovered 9,570 AF from the Aquifer Storage and Recovery (ASR) facility, SAWS stored 17 AF of Edwards Aquifer water in ASR during this reporting period, which brought the total net volume of water stored to 173,527 AF on December 31, 2020.



Source: San Antonio Water System

Financial Report

Water Supply Fee

On Oct. 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 Water Supply Fee per 100 gallons in 2020 for each customer class is summarized on the following page.



Recycled water pipes at a construction site.



RATE CLASS	Usage Block Thresholds Gallons	Assessed Fee RATE PER 100 GALLONS
<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.

San Antonio Water System Sources and Uses of Funds Water Supply 2001 – 2020 (\$ in Millions)	
Water Supply Fee	\$1,951.38
Operating Transfer from Water Delivery	179.18
Non-operating income & Other	102.93
Recycle Water Revenues	87.33
Water Supply Impact Fees	285.41
Bond Proceeds	882.21
Water Supply O&M	(1,082.65)
Debt Service ¹	(748.17)
Capital Funding	<u>(1,344.34)</u>
Funds Provided	<u>313.28</u>
Restrictions on Cash	126.07
Designations on Cash	<u>125.39</u>
Unrestricted/Undesignated Funds	<u>\$ 61.82</u>

¹ Includes Principal, Interest and Bond Defeasance Payments.

San Antonio Water System
Operating & Maintenance Expenditures
2001 – 2020
(\$ in Millions)

Operating and Maintenance Costs	
Western Canyon Project - GBRA	\$ 117.22
Oliver Ranch - Lease Payments & Production Costs	32.27
Trinity Stein/Rogers Ranches	56.06
BSR - Lease Payments & Production Costs	6.97
Regional Carrizo - Water Sales Agreements & Other ¹	87.75
Canyon Regional	34.52
Brackish Desalination	15.23
Medina Lake	14.40
Edwards - Lease Expense & Other	78.79
Aquifer Storage & Recovery Project	53.17
Aquifer Protection & Compliance	48.81
Vista Ridge	79.23
Recycled Water Operations	46.49
Conservation Program - net loss/(income)	(11.09)
Stormwater program - net loss	2.69
LCRA - Study Period and Other, Net of Cash Recovery ²	13.77
Lower Guadalupe Water Supply Project	6.26
Simsboro Aquifer	4.41
Recharge Initiative	0.80
Other Water Resources Cost	21.13
Facilities Maintenance	43.02
Communication & Outreach	16.84
Legal - Water Law	9.33
Billing & Collections	69.85
Finance & Information Systems	62.53
Corporate Facilities	15.17
Human Resources, Safety, Other Benefits ³	55.91
Other Support Services ⁴	35.67
Transfer to COSA	65.45
Total Operating & Maintenance	\$1,082.65

¹Includes 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.

²Total program cost net of cash recovered from LCRA settlement.

³Includes workers compensation and dependent and retiree health insurance.

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

San Antonio Water System
Water Supply Capital
Spending 2001 – 2020
(\$ 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	55.95	149.33	205.28
Regional Carrizo	56.00	63.81	119.81
Aquifer Storage & Recovery Project (ASR)	5.28	245.60	250.88
Expanded Carrizo	0.44	0.26	0.70
Recycled Water System	1.44	84.95	86.39
Total Non-Edwards	136.22	568.33	704.55
Edwards Aquifer Water Rights	87.73	153.18	240.91
Total Water Supply Capital Spending	223.95	721.51	945.46
Other Capital Spending:			
Integration	226.04	136.72	362.76
Land, Buildings & Equipment	30.82	5.30	36.12
	256.86	142.02	398.88
Total Capital Spending	\$ 480.81	\$ 863.53	\$ 1,344.34

San Antonio Water System Cash Restrictions/Designations Water Supply 2001 – 2020 (\$ in Millions)	
Restrictions on Cash:	
Operating Reserve	\$ 34.76
Reserve Fund	10.92
Construction Funds:	
Debt Funds ¹	9.91
Impact Fees ²	<u>70.48</u>
	126.07
Designations on Cash:	
PGA Monitoring/WQEE/Conservation	15.66
Interest Mitigation Fund ³	1.32
2020 & Prior CIP program (cash funds)	<u>108.41</u>
	125.39
Unrestricted/Undesignated Funds	<u>61.82</u>
Total Water Supply Funds Available	<u>\$ 313.28</u>

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

² 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.

³ 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
CRWA	Canyon Regional Water Authority
CWIP	Central Water Integration Pipeline
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

